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### **Linking Self-Rated Social Inclusion to Social Behaviour. An empirical study of students with and without special education needs in secondary schools**

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Successful inclusive education creates a learning environment that supports not only the cognitive abilities of all children but also their social and emotional development. The present study focuses on the development of social participation of students with and without special education needs (SEN). A longitudinal study with two measurement times was conducted. The first measurement (T1) took place at the end of 5<sup>th</sup> grade, the second (T2) one year later. The sample consisted of 35 SEN students and 108 Non-SEN students from mainstream classes in Graz, Austria. For assessing the self-perception of social inclusion, Items from the “dimensions of integration” questionnaire (FDI 4-6; Haeberlin, Moser, Bless and Klaghofer 1989) were used. Social participation does not seem to be a very stable phenomenon; its retest reliability was only .47 for SEN students and .54 for Non-SEN students. Results indicate that children with SEN experienced less social participation than children without SEN at T1 and T2. To identify the predictors for social participation, a multiple regression analysis was conducted. Next to social participation at T1, indirect aggressive behaviour (self-assessed) also appears to predict social participation at T2.

Keywords: social participation; longitudinal study; social behaviour; students with special needs; mainstream schools

## Introduction

Due to the UN-Convention on the Rights of Persons with Disabilities, a clear international trend towards inclusion<sup>1</sup> has been observed (Boban and Hinz 2009; Bürlü 2009). Furthermore, this trend can be noticed in an increasing rate of inclusive education in different countries (e.g. Schwab, Gebhardt and Gasteiger-Klicpera, 2013). Although inclusion of children with disabilities in schools is on the rise in many European countries, the only slowly increasing rate shows that most countries will need several years to achieve the aim of inclusive schooling (European Agency 2009). Moreover, the aim of inclusive education consists not only in placing all children in the same classes but in ameliorating social participation of people with and without special education needs (SEN) (Avramidis 2010; Bossaert, Colpin, Pijl and Petry 2011; Huber 2006).

A review of the literature by Bossaert et al. (2011) showed the relationship between social participation, social integration and social inclusion. Some authors use these terms as synonyms as they are often overlapping (see also Koster, Nakken, Pijl and Van Houten 2009). According to Bossaert et al. (2011), the concept of social participation includes four main issues: relationships between the students, frequency of interactions, perception of pupils with special education needs (SEN) and acceptance by classmates.

Increasing social participation among children with SEN is one of the major aims of inclusion because studies show that each of the above mentioned main issues are problematic. Regarding the acceptance by classmates, several studies showed that pupils with SEN feel less socially integrated and more often segregated compared to their peers without SEN. Children with SEN, on average, also have fewer friends (Frostad and Pijl 2007; Gasteiger-Klicpera, Klicpera and Hippler 2001; Huber 2008; Klicpera and Gasteiger-Klicpera 2003; Koster, et al. 2009; Pijl, Frostad, and Flem 2008; Pijl and Frostad 2010; Ruijs and Peetsma 2009). Furthermore, they also display more loneliness than children without SEN (Pijl, Skaalvik and Skaalvik 2010). Nevertheless, even if pupils with SEN rate their own social participation lower than pupils without SEN, the majority of SEN students rate their own social participation as satisfactory (Koster, Pijl, Nakken, and Houten 2010).

However, the long-term perspective of social participation for children with SEN is not as positive as it is for children without SEN. Students with SEN have fewer stable friendships than their peers without SEN (Frostad, Mjaavatn, and Pijl 2011). They tend to hold this position or it becomes even more negative, whereas students without SEN show a positive development. About 20% of students without SEN had no best friend at the second measurement time. Moreover, these authors showed that the SEN-status (being labeled with SEN or not) as well as peer acceptance are predictors of friendship stability. Koster et al. (2010, 60) conclude that “isolation is a fairly stable phenomenon” for children with special needs. In general, social participation seems to be unstable. Chan and Poulin (2007) showed a short-term instability in adolescents’ self-reported friendship networks. Berndt, Hawkins, and Hoyle (1986) attributed the instability of friendships among children to the quality of their friendships. They compared children with stable friendships and children with unstable friendships and drew the conclusion that children with unstable friendships rate the pro-social behaviour of their friends lower. Along these lines, Bowker (2004) concludes that negative social behaviour and a lack of positive social behaviour may cause unstable friendships.

Although there are many studies which deal with social participation, it remains unclear which variables influence the development of social participation in children with and without SEN. Clear evidence that social behaviour plays a prominent role in social participation can be found in the work of Mand (2007) or Gasteiger-Klicpera et al. (2001). In the first-mentioned study, students with behaviour problems were disliked in both inclusive and special education systems. According to

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<sup>1</sup> The terms ‘integration’ and ‘inclusion’ often are used differently. Depending on the cultural background, they are difficult to differentiate. For this reason, several studies use the terms in a synonymous way, as the review of Avramidis and Norwich (2002) shows. In some American studies, inclusion is understood as collective school attendance of children (of the same age) with and without disabilities (Reynolds and Fletcher-Janzen 2000). However, this corresponds rather to the German understanding of integration (Sander 2005). In German-speaking areas, inclusion is understood as an optimised form of integration, in which all children are regarded as individuals with different initial positions. Differences are perceived as benefits (Sander 2005).

Schwab, Gebhardt, and Gasteiger-Klicpera (2013), social participation of children is mainly determined by social behaviour as well as social competences. Research from the sociometric field clearly evidences that popular children are more helpful and cooperative, whereas socially rejected children show significantly more aggressiveness than socio-metric average children (Newcomb, Bukowski, and Pattee 1993; Rubin, Bukowski, and Parker 1998; Gürtler 2005; Hobi-Ragaz, 2008). Huber (2006) summarised international studies (generally and for pupils with SEN) and concluded that social competences, social withdrawal, aggressiveness and cognitive abilities are important factors for social inclusion in school classes. What remains unclear is which specific aspects of social behaviour and social competences influence the development of social participation in mainstream classes.

In light of the above literature, this paper addresses the following research questions:

- (1) Do children with special education needs in regular secondary schools perceive less social participation than children without special education needs?
- (2) Is the self-perception of social participation a stable phenomenon?
- (3) Which dimensions of social behaviour affect the development of the self-perception of social participation?

## **Method**

### *Procedure*

The data set for this study is taken from the study “Schulische Integration im Längsschnitt – Kompetenzentwicklung bei SchülerInnen mit und ohne SPF in der Sekundarstufe I – SILKE” (A longitudinal study of inclusive education– development of competences of students with and without SEN in secondary schools<sup>2</sup>; see also Gebhardt, Schwab, Krammer, and Gasteiger-Klicpera 2012; Gebhardt, Schaupp, Schwab, Rossmann, and Gasteiger-Klicpera 2012; Schwab et al., 2013). Students from eight integrative classes (and one special class, which was excluded from further analysis in this article) were surveyed in Graz (Austria) regarding their academic performance and social inclusion. The data were collected at two measurement times. The participating students completed questionnaires in June 2011 (T1 – end of fifth grade) and June 2012 (T2 – end of sixth grade). The tests were carried out with all students in integrative arrangements, including students with and without SEN. The assessments took place during the first two lessons of two consecutive school days. Depending on the class, the assessments took 70-100 minutes per day. When necessary, assistants supported SEN students on a one-to-one basis. In addition, for each class two teachers (a regular and a special needs teacher) agreed to fill out a questionnaire about every student taking part in the study.

It is important to mention that inclusion in Austria does not depend on the student’s disability severity-grade but mainly on the school organisation. There are regions where almost all students, including those with severe intellectual and multiple disabilities, learn in inclusive classes, whereas in other federal states a lot of students with learning disabilities frequent special classes. The decision where a child with special needs will be educated is made by parents. Integrative classes in Austria have three to five students with SEN and it is a standard practice to have two teachers (one regular teacher and one special teacher) in these classes. Most of the students with SEN in integrative settings in Austria have learning disabilities regarding one or more subjects (e.g., German language and/or Mathematics). This type of disability is similar to the ICF (International Classification of Functioning, Disability and Health, WHO 2001) category B, students with Learning Difficulties (WHO 2001).

### *Sample*

In total 179 students participated at T1, and 177 students participated at T2. All schools in Graz (Styria’s capital city) with at least one inclusive class in the fifth grade were invited to take part in the study. About 50% of the schools agreed to participate. The only special school in Graz also participated at the study, but will not be considered here. Informed consent was obtained from all

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<sup>2</sup> Austrians’ students start school at the age of six. They attend primary school during four years and then they attend the secondary level-one for four years (generally at the age of 10 to 14).

parents/caregivers and, as is obligatory for all studies conducted with students in Austria, approval was obtained from the Regional School Authority. As the analyses focused on the stability of social participation, only students who completed the questionnaires at both measurement times were included in the final sample and therefore used in the subsequent analyses. Hence, the final sample consisted of 143 students (mean age at T1 = 11.54, SD = 0.75). The sample comprised both regular students ( $N=108$ ) and SEN students ( $N=35$ ). The SEN students were not divided into subgroups in this study.

To determine whether students who failed to complete the questionnaires at both measurement times differed from those in the final sample, independent t-tests were performed on some relevant variables (gender, age, social participation). The results showed no systematic bias in the final sample in any of these variables.

## Measures

### *Self-perception of social inclusion*

According to the conceptualisation of Bossaert et al. (2011), one of the main aspects of social participation is the students' self-perception of their own social participation. Self-perception can be operationalised in different ways, e.g., satisfaction in school, loneliness or self-perception of social acceptance, or social interaction. This study will focus on the self-perception of social inclusion, using five items from the subscale social inclusion of the questionnaire "dimensions of integration" (FDI 4-6; Haeberlin, Moser, Bless, and Klaghofer 1989). The original scale consists of 15 items. At the first measurement time, all 15 items (e.g. "I like being with my classmates") were administered. The internal consistency for the scale is .79. Regarding the amount of questions the children already had to answer and the associated time restrictions (see e.g., Schwab, 2014), it was believed most viable to make a short scale with only five items. The five items evaluate the self-perception of social acceptance (e.g. "In our class we are all good friends") as well as the self-perception of the social interactions (e.g. "I would like to spend me free time in afternoon with my classmates"). The term self-perception of social inclusion was used to describe this scale. The internal consistency for the short scale (item 2, 8, 14, 16 and 32) was acceptable at both measurement times (.78 at T1 and .73 at T2; for more information about the short scale, see Schwab, 2014). For the following results only the short scales will be presented. The answer format was a 5-point rating scale with anchors from 0 = not true to 4 = very much.

### *Social behaviour*

Social behaviour was measured with the questionnaire "Leben in der Klasse" (Life in class – LIC; Gasteiger-Klicpera 2001). This questionnaire consists of six scales. The first part of the questionnaire deals with the student's own behaviour towards classmates (direct aggressions, 4 items; indirect aggressions, 4 items; pro-social behaviour, 4 items). The second part concerns experience with peer behaviours (direct victimisation, 5 items; indirect victimisation, 5 items; classmates pro-social behaviour, 5 items). This questionnaire was developed on the basis of the Children's Self-Experience Questionnaire (Crick and Grotpeter 1996).

Table 1. Overview of the students' questionnaire (LIC)

Subscale	Assessment	Number of items	Internal consistency	exemplary item
direct aggression	self assessment	4	.79	Some students start brawls. How often do you do that?
indirect aggression	self assessment	4	.72	Some students do not talk to their classmates, when they are angry. How often do you do that?
pro-social behaviour	self assessment	4	.82	Some people tell others friendly things. How often do you do that?
direct victimisation	self assessment of	5	.77	How often do classmates kick you or pull your hair?

indirect victimisation	treatment by peers self assessment of	5	.57	How often are you excluded from games or joint adventures?
pro-social behaviour of classmates	treatment by peers self assessment of	5	.76	How often does a classmate do something you are pleased about?

For the LIC the answer format was also a 5-point rating scale from 0 = never to 4 = very often.

The *teacher questionnaire* has a similar format as the LIC and asks about the students' behaviour towards his or her classmates. In this questionnaire, too, the scales "direct aggressions" (3 items), "indirect aggressions" (2 items), "pro-social behaviour" (3 items), and "victimisation" (3 items) are integrated. Internal consistency (Cronbach's alpha) of the scales ranges from .87 to .90.

### *Social Competences*

The social competences were assessed with a teacher questionnaire. Teachers rated their students' social competences on the basis of the Interpersonal Competence Questionnaire from Buhrmester, Furman, Wittenberg, and Reis (1988). The scales "Emotional Support and Conflict Management" (6 items, e.g. "Being able to say and do things to support a close companion when s/he is feeling down."), "Getting to know and influencing others" (6 items, e.g. "Carrying on conversations with someone new who you think you might like to get to know.") and "Confiding in others" (3 items, e.g. "Revealing something intimate about yourself while talking with someone you're just getting to know."). All reached satisfying reliabilities ( $\alpha = .89-.95$ ; Gasteiger-Klicpera and Klicpera 1999). Additionally, teachers appraised the level of popularity (state of popularity) and social exclusion among classmates (state of exclusion) with one item each on a five-point rating scale.

## **Results**

### *Self-perception of social participation*

Table 2 presents data on the self-perception of social participation at T1 and T2. At the first measurement time the means of the two groups, SEN and Non-SEN students is above the theoretical scale mean of 2. Results of a multivariate analysis of variance with the self-perception of social participation at T1 and T2 as dependent variables and SEN-status (Non-SEN vs. SEN) as independent variables showed a significant main effect ( $F [2, 140] = 3.39, p < .05, \eta^2 = .05$ ). Regular students rate their social participation, on average, significantly higher at both measurement times than SEN students ( $F_{T1} [1, 141] = 4.87, p < .05, \eta^2 = .03$ ;  $F_{T2} [1, 141] = 5.36, p < .05, \eta^2 = .04$ ).

Table 2. Self-perception of social participation at T1 and T2.

Wave	Group	N	Mean	SD
T1	Non-SEN	108	2.66	0.87
	SEN	35	2.26	1.13
T2	Non-SEN	108	2.76	0.81
	SEN	35	2.39	0.87

### *Stability of social participation*

Separate t-tests for Non-SEN and SEN students showed that neither of the groups had a statistically significant change in social participation from T1 to T2 (t Non-SEN: -1.21,  $df = 107$ , n.s., t SEN = -

0.71,  $df = 34$ , n.s.). The change from T1 to T2 (T2 minus T1) varies from -2.6 to 2.8, the mean-change for Non-SEN students is 0.10 ( $SD=0.83$ ), that for SEN students is 0.13 (1.05).

The re-test-reliability for Non-SEN students is .54 ( $p<.01$ ), re-test-reliability for SEN students is .47 ( $p<.01$ ).

### *Predictors of social participation*

Before we investigate which variable can predict social participation, an overview of the descriptive statistics is given.

Table 3 gives an overview of the self and the peers' social behaviour at T1. Self-assessed direct aggressive behaviour does not differ between students with and without SEN (effect size  $d$  is -0.04). However, students without SEN show less indirect aggressive behaviour than those with SEN (medium effect). Furthermore, students without SEN rate their pro-social behaviour higher than students with SEN (large effect). The results of the peer behaviours show that students without SEN face indirect victimisation less often than students with SEN. Regarding direct victimisation, no significant differences are found. Finally, students without SEN experienced more pro-social behaviour from their peers than students with SEN. The effect sizes concerning peer behaviours are all of medium magnitude.

Table 3. Self-assessments of direct and indirect aggressive behaviour, pro-social behaviour and peer-behaviour according direct and indirect victimisation and pro-social behaviour (Means, standard deviations, t-values, degrees of freedom) in students without ( $N=108$ ) and with SEN ( $N=35$ ).

	Students without SEN M (SD)	Students with SEN M (SD)	t(df)	Cohen's d
<b>Self-Assessment (SA)</b>				
Direct aggressive behaviour	0.75 (0.82)	0.78 (0.85)	-0.18 (141)	-0.04
Indirect aggressive behaviour	0.47 (0.45)	0.91 (1.05)	-2.44** (38.09)	-0.54
Pro-social behaviour (SA)	2.70 (1.03)	1.96 (0.86)	3.80** (141)	0.78
<b>Peers Behaviour (P)</b>				
Direct victimisation	0.94 (0.78)	1.30 (1.15)	-1.74 (44.39)	-0.37
Indirect victimisation	0.70 (0.72)	1.24 (1.04)	-2.82** (45.09)	-0.60
Classmate's prosocial behaviour	2.34 (0.95)	1.90 (1.00)	2.37** (141)	0.45

\*\* $p<.01$ , \* $p<.05$ ;

Regarding the social behaviour and social competences assessed by the teachers, the teacher ratings showed no significant differences in direct and indirect aggressive behaviour between students with and without SEN (small effect sizes; see Table 4). According to the teachers, students without SEN more often showed pro-social behaviour than their classmates with SEN (medium effect size). Furthermore, students without SEN seem to be less affected by victimisation than students with SEN (medium effect size).

Teachers rated the social competences of Non-SEN students as more positive than those of students with SEN. Regarding the scale "Helping others and resolving conflicts", students without SEN are rated as being more competent than students with SEN. The same effect is observed for the ability of "Getting to know and influencing others" (both medium effect sizes).

Table 4. Teachers' ratings of direct and indirect aggressive behaviour, pro-social behaviour, victimisation and social competences (Mean values, standard deviations, t-values, degrees of freedom) in students without and ( $N=108$ ) and with SEN ( $N=35$ ).

	Students without	Students with SEN	t (df)	Cohen's d
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	SEN M (SD)	M (SD)		
Teacher Assessment (TA)				
Direct aggressive behaviour (TA)	0.89 (1.05)	1.11 (1.12)	-1.05 (138)	-0.20
indirect aggressive behaviour (TA)	0.97 (0.99)	0.81 (1.09)	0.81 (138)	0.15
Prosocial behaviour (TA)	2.31 (1.05)	1.84 (1.06)	2.24* (136)	0.45
Victimisation (TA)	0.84 (0.88)	1.23 (0.95)	-2.17* (136)	-0.43
Helping others and resolving conflicts (TA)	3.07 (1.02)	2.50 (0.76)	3.46** (75.08)	0.63
Getting to know and influencing others (TA)	3.06 (0.87)	2.53 (0.88)	4.50** (137)	0.61
Confiding in others (TA)	3.13 (0.88)	2.95 (1.02)	1.03 (137)	0.19

\*\*p<.01, \*p<.05;

Correlation analysis showed generally low, but significant correlations between the social behaviour and the social participation, as well as the social competences and the social participation at T1 and T2 (cf. table 5). First of all, SEN status correlates significantly with social participation at T1 and T2.

#### Correlations with social participation at T1

Regarding social behaviour, one's own pro-social behaviour, as well as classmates' pro-social behaviour correlates positively with social participation. Concerning teacher assessment, negative correlations exist between direct aggressive behaviour and victimisation, respectively, and social participation. Teacher-assessed social competences appear unrelated to social participation.

#### Correlations with social participation at T2

As before, one's own pro-social behaviour as well as classmate's pro-social behaviour correlates positively with social participation. Also correlations between self-assessed indirect aggressive behaviour and social behaviour were significant. As already mentioned, a negative correlation exists between teacher-assessed victimisation and social participation. Contrary to T1, significant correlations were found between social competences and social participation at T2.

Table 5. Correlations between the social behaviour and the social competences, respectively, and the self-perception of social participation at T1 and T2

	Self-perception of social participation T1	Self-perception of social participation T2
SEN	-.18*	-.19*
Self-Assessment (SA)		
Direct aggressive behaviour	-.02	.02
Indirect aggressive behaviour	-.08	-.20*
Pro-social behaviour	.35**	.27**
Peers Behaviour (P)		
Direct victimisation	-.10	-.12
Indirect victimisation	-.05	-.09
Classmate's prosocial behaviour	.54**	.41**
Teacher Assessment (TA)		
Direct aggressive behaviour	-.17*	-.03
indirect aggressive behaviour	-.01	.06
Prosocial behaviour	.11	.13
Victimisation	-.26**	-.21*
Helping others and resolving conflicts	.13	.19*
Getting to know and influencing others	.10	.20*
Confiding in others	.03	.13

\*\*p<.01, \*p<.05

The stepwise regression analysis with social participation at T2 as the dependent variable, and social participation at T1 (1<sup>st</sup> step), social behaviour and social competences (2<sup>nd</sup> step) and SEN status (3<sup>rd</sup> step) as independent variables is summarised in Table 6. The results show that the final regression model explained 29.5% of the variance: the first model explained 26.7% [ $F(1, 128) = 46.66, p < .01$ ; cf. Table 5] and the second model explained an additional 2.8% [ $F(1, 127) = 5.02, p < .05$ ]. Social participation at T2 was positively predicted by social participation at T1 and negatively predicted by one's own indirect aggressive behaviour. The 3<sup>rd</sup> step in the regression analysis proved to be not significant (and hence is not included in Table 6), meaning that SEN status does not contribute significantly to the prediction.

Table 6. Predicting students' self-perception of social participation at T2 by measures of social participation at T1 (step 1), social behaviour and social competences (step 2)

	$R^2$	$\Delta R^2$	$b$	$SE$	$Beta$	$t$
Step 1	.267					
Step 2	.295	.028				
Social participation at T1			.445	.067	.496	6.61**
Indirect aggressive behaviour (SA)			-.214	.096	-.168	-2.24*

\*\*  $p < .01$ , \*  $p < .05$

## Discussion

This study addressed the self-perception of social inclusion of students with and without special needs in regular secondary schools. The first research objective was to analyze the amount of social inclusion of students with and without SEN. Measurements took place at the end of the 5<sup>th</sup> grade (T1) and one year later, at the end of the 6<sup>th</sup> grade (T2). In summary, the results showed that students with SEN felt less socially integrated than their classmates without SEN, at both measurement times. This result is in line with previous studies (e.g. Huber 2008; Koster, et al. 2010; Pijl and Frostad 2010). Nevertheless, the means of the self-perception social inclusion scale at both measurement times were above the theoretical scale mean. Therefore, it can be assumed that SEN students, as well as Non-SEN students, generally feel socially integrated. Moreover, the effect size of the mean differences was very low.

Secondly, the question was raised whether the self-perception of social inclusion is a stable phenomenon. In both groups (SEN and Non-SEN) the mean self-estimated social inclusion did not change over one year. However, much intra-group variation existed, which was shown by the relatively low correlations between T1 and T2.

This study also addressed the predictors of social inclusion's the development. The question was raised if the social behaviour effects the development of self-rated social inclusion. Findings from several studies indicated that SEN students showed less pro-social and more negative social behaviour compared to their peers (Gasteiger-Klicpera et al. 2001; Haeberlin et al. 1999; Huber 2006; Nabuzoka and Smith 1993). The present study confirms these findings. For example, Non-SEN students show less indirect aggressive behaviour (self-assessed) than children with SEN. They rate their pro-social behaviour higher than students with SEN and teachers, too, rate the pro-social behaviour of Non-SEN students higher than that of SEN students. Moreover, teachers rated the social competences of Non-SEN students more positively than those of students with SEN. Regarding the correlations between social behaviour and social competences, respectively, and social inclusion, the present study showed significant results. In particular, the SEN status correlates negatively with social participation at T1 and T2. However, is it really the SEN status that correlates with lower social inclusion? As Mand (2007) showed, students with behavioural problems were disliked in both, inclusive and special education classes. According to literature, popular students with learning disabilities show more pro-social behaviour than less popular students with learning disabilities (Haeberlin et al. 1999; Randoll 1991). In order to answer this question, a stepwise regression was conducted. The results showed that, besides self-rated social inclusion at T1, indirect aggressive behaviour (self-assessed) also predicted



social inclusion (self-rated) at T2. Being labeled as a SEN student or not was not a significant predictor. This finding suggests that the poorer social inclusion of pupils with SEN is not so much caused by a stigmatisation process, but rather by specific social behaviours of students with SEN.

When reviewing the findings of this investigation, the reader should bear in mind some of the study's limitations. First, the sample of the study is not representative for all of Austria; it includes only students from Graz, a city in a region with a high inclusion rate. Although about 40% of the SEN students of this grade participated, some types of SEN (e.g. students with visual impairments) were not represented in the sample, thus limiting the comparisons between categories of SEN. However, comparisons between SEN categories would not be meaningful on the basis of such a low number of students with SEN. In this respect, no judgments can be made about the (self-assessed) social inclusion of SEN students with different kinds of disabilities. A further limitation is inherent to the design, as social participation was only assessed by a five items scale. Thus, only one dimension of social participation, the self-perception of social inclusion, was explored. The results do not provide any insights into relationships or interactions (see Bossaert et al. 2011).

## Conclusion

Summarizing, the social behaviour of students in integrative classes is very important for the (self-perception of) social inclusion. Students with SEN show slightly lower values in social inclusion. However, they show higher negative social behaviour and less positive social behaviour. Results of the present study suggest that in mainstream classes, addressing the social behaviours of all students should gain importance. Only one aspect of social behaviour, namely indirect aggression, was a significant predictor for social inclusion in this study. According to Lindsay and Edwards (2012), successful disability awareness interventions are breaking “down stereotypes and creating awareness of the barriers that with people with disabilities encounter” (p. 21). According to the present results breaking down stereotypes does not seem to be the answer for gaining higher social participation for SEN students. Interventions should try to improve the social behaviour, especially the indirect social behaviour of all students. For example, anti-aggression programmes like the mediator training of Gasteiger-Klicpera and Klein (2006) could be included in the school programme.

For future research, it will be necessary to longitudinally accompany students in mainstream classes in order to be able to observe their development in social concerns (social behaviour, social competences and social participation) and to conceive arrangements for a well-functioning inclusive education. Good inclusive education should include a lot of possibilities for social learning, as well as interactions that focus on the participation of all pupils.

However, social participation is a complex construct and therefore intervention concepts to support social participation are not easily developed and implemented, as there are no simple solutions. As Pijl, Frostad and Flem (2008) indicated, the question which kind of support is most effective in which situation is yet fairly unclear. All actors at every level, i.e., school administration, school directors and teachers, are aware of the lesser social participation of SEN students, but this is often seen as a negligible problem. The present study shows that the problem should be considered and thus gives an important indication for the inclusive debate.

## References

- Avramidis, E. 2010. Social relationships of pupils with special educational needs in the mainstream primary class: peer group membership and peer-assessed social behaviour, *European Journal of Special Needs Education*, 25,4, 413-429.
- Berndt, T. J., Hawkins, J. A., and Hoyle, S. G. 1986. Changes in friendship during a school year: Effects on children's and adolescents' impressions of friendship and sharing with friends. *Child Development*, 57, 1284-1297.
- Boban, I., and Hinz, A. 2009. Inklusive Pädagogik zwischen allgemeinpädagogischer Verortung und sonderpädagogischer Vereinnahmung: Anmerkungen zur internationalen und deutschen Debatte.

- In: S. Börner, A. Glink, B. Jäpelt, D. Sanders, and A. Sasse (Eds.), *Integration im vierten Jahrzehnt. Bilanz und Perspektiven* (pp. 220-228). Bad Heilbrunn: Klinkhardt.
- Bossaert, G., Colpin, H. Pijl, S.P., and Petry, K. 2011. Loneliness among students with special educational needs in mainstream seventh grade, *Research in Developmental Disabilities*, 33, 1888-1897.
- Bowker, A. 2004. Predicting friendship stability during early adolescence. *Journal of Early Adolescence*, 24, 85-112.
- Buhrmester, D., Furman, W., Wittenberg, M., and Reis, H. 1988. Five domains of interpersonal competence in peer relationships, *Journal of Personality and Social Psychology*, 55, 991-1008.
- Bürli, A. 2009. Integration/Inklusion in Großbritannien. In: A. Bürli (Ed.), *Integration und Inklusion aus internationaler Sicht* (pp. 95-108). Bad Heilbrunn: Klinkhardt.
- Chan, A., and F. Poulin. 2007. Monthly changes in the composition of friendship networks in early adolescence. *Merrill-Palmer Quarterly* 53: 578-602.
- Cole, A. D., Vandercook, T., and Rynders, J. 1988. Comparison of two peer interaction programmes: Children with and without severe disabilities, *American Educational Research Journal*, 25, 415-439.
- Crick, N. R., and Grotpeter, J. K. 1996. Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology*, 8, 367-380.
- European Agency. 2009. Entwicklung eines Satzes von Indikatoren für die inklusive Bildung in Europa. [Development of a set of indicators for inclusive education in Europe]. <http://european-agency.org/publications/ereports/development-of-a-set-of-indicators-for-inclusive-education-in-europe/indicators-DE.pdf>.
- Frostad, P., and Pijl, S. J. 2007. Does being friendly help in making friends? The relation between the social position and social skills of pupils with special needs in mainstream education, *European Journal of Special Needs Education*, 22, 15-30.
- Frostad, P., Mjåavatn, P. E., and Pijl, S. J. 2011. adolescents with special educational needs (SEN) in regular schools in Norway. *London Review of Education*, 9:1, 83-94.
- Gasteiger-Klicpera, B., and Klein, G. (2006). *Das Friedensstifter Training. Grundschulprogramm zur Gewaltprävention*. München: Ernst Reinhardt.
- Gasteiger-Klicpera, B., and Klicpera, C. 1999. Soziale Kompetenz bei Kindern mit sozialen Anpassungsschwierigkeiten, *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*, 27(2), 93-102.
- Gasteiger-Klicpera, B., Klicpera, C., and Hippler, K. 2001. Soziale Anpassungsschwierigkeiten bei lernbehinderten Schülern und Schülern mit speziellen Lernbeeinträchtigungen: Eine Literaturübersicht, *Heilpädagogische Forschung*, 17, 72-87.
- Gebhardt, M., Schwab, S., Schaupp, H., Rossmann, P., and Gasteiger-Klicpera, B. 2012. Heterogene Gruppen in mathematischen Grundfertigkeiten. Eine explorative Erkundung der Fähigkeiten im Grundrechnen in Integrationsklassen der 5. Schulstufe. *Zeitschrift für Inklusion*, 1-2. <http://www.inklusion-online.net/index.php/inklusion/article/view/155/147> (accessed March 01, 2013).
- Gebhardt, M. Schwab, S., Krammer, M., and Gasteiger-Klicpera, B. 2012. Achievement and integration of students with special needs (SEN) in the fifth grade. *Journal of Special Education and Rehabilitation*, 13, 7-19.
- Gürtler, C. 2005. *Soziale Ungleichheit unter Kindern: Über die Rolle von Kind- und Elternhausmerkmalen für die Akzeptanz und den Einfluss eines Kindes in seiner Schulklasse*. Dissertation: Potsdam.
- Haeberlin, U., Bless, G., Moser, U., and Klaghofer, R. 1989. Integration in die Schulklasse: Fragebogen zur Erfassung von Dimensionen der Integration von Schülern: FDI 4-6. In: U. Haeberlin (Ed.). *Beiträge zur Heil- und Sonderpädagogik*, 8. Beiheft zur Vierteljahresschrift für Heilpädagogik und ihre Nachbargebiete (pp. xx) Bern: Haupt.
- Haeberlin, U., Bless, G., Moser, U., and Klaghofer, R. 1999. *Die Integration von Lernbehinderten: Versuche, Theorien, Forschungen, Enttäuschungen, Hoffnungen* (Volume 3). Bern: Haupt.
- Hobi-Ragaz, G. 2008. Reproduktion sozialer Ungleichheit? Die Bedeutung von Eltern-, Kind- und Familienmerkmalen für den sozialen Status unter gleichaltrigen der mittleren Kindheit. In: M. Eisner, and D. Ribeaud (Eds.), *Forschungsbericht aus der Reihe z-proso Zürcher Projekt zur sozialen Entwicklung von Kindern Zürich, August 2008, Bericht Nr. 07* (pp. xx).

- [http://www.ife.uzh.ch/fckeditor\\_downloads/file/Zproso/04\\_Publikationen/02\\_Forschungsberichte/02\\_Vollstaendige\\_Berichte/FB\\_Nr7\\_GHobiRagaz.pdf](http://www.ife.uzh.ch/fckeditor_downloads/file/Zproso/04_Publikationen/02_Forschungsberichte/02_Vollstaendige_Berichte/FB_Nr7_GHobiRagaz.pdf) (accessed March 01, 2011).
- Huber, C. 2006. *Soziale Integration in der Schule?! Eine empirische Untersuchung zur sozialen Integration von Schülern mit sonderpädagogischem Förderbedarf im gemeinsamen Unterricht*. Marburg: Tectum.
- Huber, C. 2008. Jenseits des Modellversuchs: Soziale Integration von Schülern mit sonderpädagogischem Förderbedarf im Gemeinsamen Unterricht: Eine Evaluationsstudie. *Heilpädagogische Forschung*, 34, 2-14.
- Klicpera, C., and Gasteiger-Klicpera, B. 2003. Soziale Erfahrungen von Grundschulern mit sonderpädagogischem Förderbedarf in Integrationsklassen: Betrachtet im Kontext der Maßnahmen zur Förderung sozialer Integration. *Heilpädagogische Forschung*, 2, 61–71.
- Koster, M., Nakken, H., Pijl, S. J., and Van Houten, E. J. 2009. Being part of the peer group: A literature study focussing on the social dimension of inclusion in education. *International Journal of Inclusive Education*, 13, 117–140.
- Koster, M., Pijl, S. J., Nakken, H., and Van Houten, E. (2010). Social participation of students with special needs in regular primary education in The Netherlands. *International Journal of Disability, Development and Education*, 57(1), 59-75.
- Lindsay, S. and Edwards, A. 2012. A systematic review of disability awareness interventions for children and youth. *Disability and Rehabilitation*, Early Online: 1–24. DOI: 10.3109/09638288.2012.702850
- Mand, J. 2007. Social position of special needs pupils in classroom: A comparison between German special schools for pupils with learning difficulties and integrated primary school classes, *European Journal of Special Needs Education*, 22, 7–14.
- Nabuzoka, D., and Smith, P. K. 1993. Sociometric status and social behaviour of children with and without learning difficulties, *Journal of Child Psychology and Psychiatry*, 34, 1435-1448.
- Newcomb, A. F., Bukowski, W. M., and Pattee, L. 1993. Children's peer relations: A meta-analysis of popular, rejected, neglected, controversial and average sociometric status, *Psychological Bulletin*, 113, 99-128.
- Pijl, S. J., and Frostad, P. .2010. Peer acceptance and self-concept of students with disabilities in regular education, *European Journal of Special Needs Education*, 25(1), 93-105.
- Pijl, S. J., Frostad P., and Flem A. 2008. The social position with special needs in regular schools, *Scandinavian Journal of Educational Research*, 52(4), 387-405.
- Pijl, S.J., Skaalvik, E.M., and Skaalvik, S. 2010. *Students with Special needs and the Composition of Their Peer Group*. *Irish Educational Studies*, 29, 57-70.
- Randoll, D. 1991. *Lernbehinderte in der Schule: Integration oder Segregation*. Köln, Wien: Böhlau
- Reynolds, C. and Fletcher-Janzen, E. 2000. *Encyclopedia of Special Education* (3 volumes). New York: Wiley.
- Rubin, K. H., Bukowski W. M., and Parker, J. G. 1998. Peer Interactions, Relationships, and Groups. In: N. Eisenberg (Ed.), *Handbook of Child Psychology: Social, emotional, and personality development* (pp. 619-700). New York: Wiley.
- Ruijs, N. M., and Peetsma, T. D. 2009. Effects of inclusion on students with and without special educational needs reviewed, *Educational Research Review*, 4, 67–79.
- Sanders, A. 2005. Konzepte einer inklusiven Pädagogik. *Zeitschrift für Heilpädagogik*, 55, 5, 240-244.
- Schwab, S. 2014. *Schulische Integration, soziale Partizipation und emotionales Wohlbefinden in der Schule. Ergebnisse einer empirischen Längsschnittstudie*. Münster: Lit. Verlag.
- Schwab, S., Gebhardt M., and Gasteiger-Klicpera, B. 2013. Predictors of social inclusion of students with and without SEN in integrated settings. *Croatian Review of Rehabilitation Research*, 49, 106-114.
- Avramides, E. and Norwich, B. 2002. Teacher's attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, 17, 129-147.
- World Health Organisation. 2001. *International Classification of Functioning, Disability and Health*. Geneva: World Health Organisation.