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# SOCIOMETRIC STATUS AND SELF-IMAGE OF CHILDREN WITH SPECIFIC AND GENERAL LEARNING DISABILITIES IN DUTCH GENERAL AND SPECIAL EDUCATION CLASSES

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**Abstract.** This study focused on the relationship between both achievement level and diagnostic label and sociometric status and self-image of students in Dutch elementary education. In particular, differences between students with specific learning disabilities (SLD) and students with general learning disabilities (GLD) were studied, in regular as well as in special education. A total of 1,300 students participated, 861 in general and 439 in (separate) special education schools. Students with GLD were more often rejected and had a lower self-image than students with SLD. These results seemed to hold mainly for girls and for students with GLD in general education. No argument in favor of or against inclusive education can be advanced based on the results of this study, but the findings highlight the potential role of low achievement in peers' dislike of girls. Moreover, the results suggest the importance of investigating subgroups of students with LD in future research.

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Fifteen years ago the Dutch government released the publication *Going to School Together Again (Weer samen naar school; Ministerie van Onderwijs & Wetenschappen, 1990)*, which constituted the first step toward inclusive education in the Netherlands. The direct inspiration for this policy change was increasing costs due to growing numbers of students referred to special education (Ministerie van Onderwijs & Wetenschappen, 1990). The goal of the new policy was twofold: (a) to make an effort to refer as few students as

possible to (expensive) special education services by transferring available expertise from special to general education; and (b) to encourage the integration of as many students as possible from special education back into general education through effective intervention (Ministerie van Onderwijs, Cultuur & Wetenschappen, 2003; Smeets, 2003).

Although the main motivation behind this policy was to stabilize or even reduce the number of students in special education (cf. Meijer, Peschar, & Scheerens,

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1995; Ministerie van Onderwijs, Cultuur en Wetenschappen, 2000), it was also in line with new developments recommended by international organizations such as the Organization for Economic Cooperation and Development (OECD, 1986) and UNESCO (1988, 1990), which had already taken place in the early 1980s in countries such as the United States (Crockett & Kauffman, 1999), Italy (Fillipini-Gaudiano, 1991), Australia and New Zealand (Forlin & Forlin, 1996, 1998a, 1998b). According to a number of international conventions (e.g., *Rights of the Child*; United Nations, 1989), placement of children in (separate) special education schools began to be viewed as an infringement on the right to equal educational opportunities (Alston, Parker, & Seymour, 1992; Baehr & Gordenker, 1992).

The right to inclusive education was inspired by research based on the contact hypothesis (Allport, 1954; Maras & Brown, 2000). This hypothesis states that children who experience difficulties in learning will benefit both cognitively and social-emotionally by receiving their education among functionally unimpaired peers, because contact per se between able and disabled children has positive effects on their attitudes toward and opinions of each other.

With regard to cognitive development, several studies support this view (Baker, Wang, & Walberg, 1995; Cole, Waldron, & Majd, 2004; Peetsma, Vergeer, Roeleveld, & Karsten, 2001). However, with regard to social-emotional well-being (as indicated by sociometric status and self-image), a number of studies have raised questions concerning the benefits of inclusive education for children with learning disabilities (LD). Since the landmark sociometric study of Bryan (1974), it has repeatedly been shown that children with LD in general education are not well liked by their peers. For example, when children are asked to categorize their classmates as either rejected, ignored, or popular, children with LD are overrepresented in the ignored and rejected groups and underrepresented in the popular group (Bakker & Bosman, 2003; Bakker & van de Griendt, 1999; Frederickson & Furnham, 1998; Kuhne & Wiener, 2000; Le Mare & De la Ronde, 2000; Ochoa & Olivarez, 1995; Stone & La Greca, 1990; Vaughn, Elbaum, & Schumm, 1996; Wiener, Harris, & Shirer, 1990). Thus, results from sociometric studies contradict the contact hypothesis.

It remains unclear what causes this limited level of acceptance. Two assumptions have been tested: (a) the students' level of academic achievement, and (b) status as "a child with LD" contributing to a lower level of acceptance. Bakker and Bosman (2003) found evidence that supported the former assumption, whereas Wiener et al. (1990) provided evidence for the latter. Bakker and Bosman (2003) also showed that the sociometric status

and self-image of Dutch children with LD was remarkably more positive in special education schools than in general education settings. These findings suggest that with regard to social well-being, students with LD might be better off in separate schools for special education. One must be careful not to draw conclusions too quickly, however, because the study did not investigate whether sociometric status of students in special education (with a diagnostic label) was also related to academic achievement. Moreover, the status of the LD of the Dutch students was not assessed.

In the Netherlands a distinction is made between students with specific LD (SLD) and students with general LD (GLD), based on the IQ-achievement discrepancy criterion. Specifically, students with SLD lag behind (usually in one domain: reading, spelling, or arithmetic) despite normal IQ (> 85), whereas students with GLD have low academic performance in more than one domain, accompanied by a below-normal IQ. GLD in the Netherlands is similar to the group that used to be referred to in the United States as students with mild mental retardation, and in the UK as students with mild and moderate learning difficulties. SLD in the Netherlands is similar to the group that is referred to in the United States as students with LD; and in the UK as students with specific learning difficulties. Labeling conventions in the UK and the Netherlands are more similar than those between the UK and the United States, and between the United States and the Netherlands. In the Netherlands, a diagnostic label is more or less identical to classification by disability. Researchers use the generic term SLD, but practitioners refer to a child as having, for example, dyslexia or dyscalculia. A diagnostic label is necessary for a student to become eligible for services. However, it does not guarantee remedial help, because this depends on the availability of remedial resources.

Referral to a special school in the Netherlands is the responsibility of a professional committee, which makes the decision based on a paper dossier of the student provided by a special education pedagogue (a remedial specialist with an academic degree) or a child psychologist. Whether or not a student (SLD and GLD alike) is referred to a special school does not just depend on the student's difficulties. A number of additional factors are also at play: Is the regular school sufficiently equipped to provide additional or remedial help? Is the regular school prepared to invest in students who require more help (schools in the Netherlands are entitled to refuse students on many grounds)? Is there a waiting list for the special school? What is the parents' opinion with respect to referral? However, perhaps the biggest deciding factor is the attitude of the committee with respect to referral.

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The prediction is that in the future, schools for special education will include only students with GLD, whereas the needs of students with SLD will be cared for in general education (Peetsma et al., 2001). However, we are far from this situation. Presently the majority of students with LD are educated in special schools (the results of this study clearly confirm this picture), which mimics the situation in the UK.

To conclude this description of the Dutch situation, the severity of students' learning disabilities in special and regular schools is similar, and teachers in special education do not necessarily have additional training (only 30%). By comparison, hardly any teacher in general education has completed specialized training. However, the fact that the entire population in special education schools has a problem indicates that the teaching load is a great deal more complicated and heavier than in regular education. In sum, the above suggests that type of education (i.e., general vs. special), level of academic achievement, and disability status (general vs. specific) all may affect students' sociometric status and social well-being in the Netherlands.

As noted earlier, the results of the vast amount of sociometric research point consistently toward the general position of vulnerability of children with LD in general education. However, when social-emotional well-being is defined as the self-perception or self-image of the student, the results are less clear-cut. Some studies show that the self-image of children with LD in general education is more negative than that of their typically achieving peers (Bakker & Bosman, 2003; La Greca & Stone, 1990), whereas others seem to contradict these findings. Various researchers have observed that children with LD in general education have a realistic, and thus negative, perception of their own academic performance, but that this did not necessarily impact their feelings of self-worth or their perception of their relationship with classmates. These children judge their self-image as highly as that of their typically or average-achieving peers (Banerji & Dailey, 1995; Bear, Minke, Griffin, & Deemer, 1998; Gans, Kenny, & Ghany, 2003; Stiehr Smith & Nagel, 1995). It is possible that these results can be explained by the nature of inclusive education in the United States, where the bulk of this research was done.

Approximately 99% of children with LD in the United States receive their education within the walls of a regular school and 60% of them receive a form of special education, in either a resource room or in a special class (Crocket & Kauffman, 1999). In contrast, in the Netherlands, the vast majority of students with LD (SLD as well as GLD) are educated in separate special schools, which exclusively admit children with learning disabilities. The fact that all students in the United States have

to deal with one another gives those with LD an opportunity to judge themselves in relation to both similarly achieving peers and typically achieving peers, as hypothesized in Festinger's (1954) theory of reference groups. In addition, and maybe more important, it gives them the opportunity to develop friendships in the relatively protective environment of the resource room or a special class. Both possibilities could have a positive effect on their self-image, and thereby could explain the positive findings concerning the self-image of children with LD in the United States. The predominantly segregated situation in the Netherlands and the UK, on the other hand, may explain why the self-image of children with LD in general education is lower, not only with respect to feelings of competence, but also with respect to self-worth and relationships with classmates (Bakker, 2002; Bakker & Bosman, 2003; Kelly & Norwich, 2004). Due to placement policies, the majority of LD students in the Netherlands and the UK cannot compare themselves with similarly achieving peers nor with typically achieving peers.

Again, this raises the question of whether these results hold exclusively for children with LD, or for all lower achieving students in general education. Whatever the case, attending special education is no guarantee of a more positive self-image. For example, a British study by Kelly and Norwich (2004) revealed that children with (general) LD in special education have more confidence in their cognitive abilities, but have a similar self-image as children with (general) LD in general education. These findings are in agreement with those of Bakker and Bosman (2003) concerning the self-image of children with LD in the Netherlands: Children in special education show more self-confidence, but perceive their relationship with peers just as negatively as children in a comparable group in general education. Finally, there is a tendency for the youngest children, and for girls in special education in particular, to judge their relationships more negatively.

#### *Purpose of This Study*

In the Netherlands, relatively little comparative research has been conducted on the sociometric status and self-image of children with LD in general and special education. Results of such a study could well be different from the results of similar studies in the United States, which dominate the international literature on this topic. One reason is that education in the Netherlands is organized differently than in the United States. Another reason is that the majority of studies on the sociometric status and self-image of children have been performed only with students with SLD (e.g., dyslexia), excluding children with GLD. This holds for both children in special and general education who,

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although not diagnosed as having an LD, are still low academic achievers. In the present study, these three groups of students, both in general and special education, will be examined. In order to assess the effect of the diagnostic label (provided by a special education pedagogue or psychologist) as opposed to the level of achievement on sociometric status and self-image measurements, low, average and above-average achievers in special and general education will also be compared.

## METHOD

### *Participants*

A total of 25 schools was approached (15 regular, 10 special education), of which 18 (11 general, 7 special education) agreed to participate. They constituted a population of 1,300 students (861 in general and 439 in special education). The number of boys and girls in general education was approximately equal (49.5%, and 50.5%, respectively), whereas in special education boys outnumbered girls (65.1%, and 34.9%, respectively). These figures represent rather accurately the gender distribution within general and special education in the Netherlands. All schools were located in medium-sized cities in the south of the Netherlands, with children from both urban and rural regions. All levels of SES were likely to be represented, because of the selection of the schools; however, no information was available regarding numbers of high-, middle-, or low-SES children. Similarly, information about intelligence levels was not available. Schools in the Netherlands are subject to stringent criteria with respect to providing information regarding IQ and SES levels in an effort to protect the privacy of their students. The majority of students (95%) were from an ethnic Dutch background. The remaining group constituted children from mainly Moroccan and Turkish immigrant parents. All information required by the CLD Research Committee that was available was provided (see Rosenberg et al., 1994).

The students in general education were recruited from grades 3 (22%, mean age = 9 years), 4 (23%; mean age 10 = years), 5 (31%; mean age = 11 years), and 6 (24%; mean age = 12 years). The mean number of students in general education was 25 students per class (min = 21; max = 31). The students in special education attended predominantly middle (40%; mean age = 9-10 years) and higher grades (55%; mean age = 11-12 years), and a relatively small number (5%) attended a class that was a combination of middle to high grades. The mean number of students in special education was 16 students per class (min = 13; max = 19).

### *Instruments and Procedures*

Four questionnaires were developed for the purpose of the study. Two questionnaires, to be filled out by stu-

dents, assessed sociometric status and self-image. The remaining two, to be filled out by the teachers, were used to measure the performance level and the nature of students' LD. For the assessment of sociometric status, students were given a questionnaire with six questions. They were asked to indicate which three classmates they would and which three they would not like to play with during recess, which three classmates they would and which three they would not invite to their birthday party, and which three classmates they would and which three they would not want to sit next to in class.

The self-image questionnaire contained 23 questions. Some were developed specifically for this study, others came from the Dutch version of the Perceived Competence Scale for Children by Harter (Veerman, Straathof, Treffers, van der Berg, & ten Brink, 1997) and the Loneliness Scale by Asher, Hymel, and Renshaw (1984). These were supplemented with items based from the School Questionnaire by Smits and Vorst (1991). The questions were presented in the form of statements that could be answered by the student on the basis of a 4-point scale. Results from an explorative factor analysis (with VARIMAX rotation) showed that the constructed questionnaire measured four factors. It appeared that 39.6% of observed variance could be explained by these factors: Relationships with classmates (13.2%), feelings of self-worth (10.1%), feelings of competence (9.2%), and self-image concerning school tasks (7.0%). The reliability of the four dimensions, as estimated by Cronbach's alpha, were .93, .89, .92, and .81, respectively (see the Appendix for the results of the factor analysis).

Information regarding performance level and the nature of students' LD was acquired from the teachers by means of two questionnaires. One questionnaire was used to categorize students according to performance levels based on their most recent report card grades. Teachers generally decide upon report card grades based on their own educational tests (no standardized tests are used to make up report card grades). Whether these grades are also partly based on general impressions or on comparisons with specific classmates is unknown. The other questionnaire was used to categorize students according to diagnostic label, that is, type of learning disability.

In general education, teachers were first asked to categorize each student into one of three performance categories: low-achieving, average-achieving, and above-average achieving. Next, they were asked to search the school files of the students and check if they were officially diagnosed with LD and, if so, whether their disabilities were SLD as opposed to GLD. This resulted in the following categorizations: Students with GLD and students with SLD; and for students without

**Table 1**

***Distribution of Students in General and Special Education by Performance Level and Diagnostic Label Crossed with Gender***

Category	Boys		Girls		Total	
	N	%	N	%	N	%
<b>General Education</b>						
<b>Performance Level</b>						
Low achieving	65	15.3	71	16.4	136	15.8
Average achieving	147	34.5	193	44.6	340	39.6
Above-average achieving	115	27.0	95	21.9	210	24.4
<b>Diagnostic Label</b>						
General LD	36	8.5	38	8.8	74	8.6
Specific LD	63	14.8	36	8.3	99	11.5
Total	426	49.6	433	50.4	859	100.0
<b>Special Education</b>						
<b>Performance level</b>						
Low achieving	71	24.9	43	28.1	114	26.0
Average achieving	151	53.0	84	54.9	235	53.7
Above-average achieving	63	22.1	26	17.0	89	20.3
Total	285	65.1	153	34.9	438	100.0
<b>Diagnostic Label</b>						
General LD	134	47.3	79	51.6	213	48.9
Specific LD	112	39.6	53	34.6	165	37.8
Low achieving	37	13.1	21	31.7	58	13.3
Total	283	64.9	153	35.1	436	100.0

LD: low-achieving students, average-achieving students, or students with above-average achievement. The upper part of Table 1 presents the results of this categorization process.

Teachers in special education were first asked to categorize students into three groups, based on the diagnostic label present in the school files: Students with GLD, students with SLD, and low-achieving students (without an LD diagnosis). The diagnostic label "low achieving" is specific to students in special education. Not all children have a clear GLD or SLD label, but because a diagnostic label is required to be admitted to special education, they receive the label low achieving. Next, teachers were asked to categorize the same students exclusively on the basis of school performance (their latest report card grades) into the following categories: low-achieving, average-achieving, and above-average

achieving. The lower part of Table 1 shows the results of this categorization process. The order in which the teachers were asked to categorize the students (performance level first and diagnostic label second in general education, and diagnostic label first and performance level second in special education) was based on the assumption that it would be more natural to provide the most obvious information first.

**Analyses**

To assess students' sociometric status, a method developed by Coie, Dodge, and Coppotelli (1982) was used. For each student, an acceptance score, a rejection score, and a social influence score (the sum of the acceptance and rejection scores) was determined. Based on these three scores, students were categorized into one of four sociometric status groups: popular, controversial, ig-

nored, or rejected. Students who could not be placed in one of these groups were considered to have average status. Acceptance and rejection scores are relative measures, given that they are dependent on class size. Therefore, a score was considered high when the number of positive or negative judgments of a student exceeded the 80th percentile. A score was considered low when the number of positive or negative judgments of a student were lower than the 20th percentile.

For both general and special education, chi-square tests were used to determine the relationship between students' sociometric status, on the one hand, and their

diagnostic label and performance level, on the other. This relationship was investigated separately for boys and girls. To study the potential effects of age on this relationship, two age groups were defined: 7-9 and 11-13 years old. For both general and special education, ANOVA tests were performed with diagnostic label, performance level, and gender as between subjects factors to determine effects on students' self-image. In addition, specific deviation contrast tests were used to investigate the extent to which the observed effects held for certain groups by comparing the mean scores of the compared groups against the overall mean. Effect sizes

**Table 2**

***Cross-Tabulations in Percentages of Gender, Sociometric Status, Performance Level, or Diagnostic Label of Students in General Education (N = 859)***

Category/Gender	Sociometric Status					Average
	Popular	Controversial	Ignored	Rejected	Average	
General LD	Boys	13.9	8.3	13.9	27.8	36.1
	Girls	2.6	2.6	31.6	34.2	28.9
	Total	8.1	5.4	23.0	31.3	32.4
Specific LD	Boys	14.3	4.8	17.5	15.9	47.6
	Girls	19.4	2.8	13.9	13.9	50.0
	Total	16.2	4.0	16.2	15.2	48.5
Low Achieving	Boys	10.8	4.6	12.3	27.7	44.6
	Girls	5.6	0.0	14.1	31.0	49.3
	Total	8.1	2.2	13.2	24.4	47.1
Average Achieving	Boys	15.0	6.8	14.3	16.3	47.6
	Girls	16.6	1.6	17.1	7.3	57.5
	Total	15.9	3.8	15.9	11.2	53.2
Above-Average Achieving	Boys	13.9	2.6	16.5	12.2	54.8
	Girls	28.4	0.0	23.2	3.2	45.3
	Total	20.5	1.4	19.5	8.1	50.5
Total	Boys	13.8	5.2	15.0	17.8	48.1
	Girls	16.4	1.2	18.9	13.2	50.3
<b>Total</b>		<b>15.1</b>	<b>3.1</b>	<b>17.0</b>	<b>15.5</b>	<b>49.2</b>

**Table 3**

***Cross-Tabulations in Percentages of Gender, Sociometric Status, and Diagnostic Label of Students in Special Education (N = 436)***

Category/Gender	Sociometric Status					Average
	Popular	Controversial	Ignored	Rejected		
General LD	Boys	9.0	6.0	18.7	14.2	52.2
	Girls	15.2	1.3	6.3	16.5	60.8
	Total	11.3	4.2	14.1	15.0	55.4
Specific LD	Boys	17.0	3.6	16.1	7.1	56.3
	Girls	13.2	1.9	17.0	13.2	54.7
	Total	15.8	3.0	16.4	9.1	55.8
Low Achieving	Boys	5.4	2.7	13.5	13.5	64.9
	Girls	14.3	0.0	23.8	23.8	38.1
	Total	8.6	1.7	17.2	17.2	55.2
Total	Boys	11.7	4.6	16.9	11.3	55.5
	Girls	14.4	1.3	12.4	16.3	55.6
Total		12.6	3.4	15.4	13.1	55.5

were calculated for all contrasts (Cohen's *d*) and interpreted according to Cohen's (1988) classification: An effect is considered small if *d* ranges between .20 and .50, medium, if *d* ranges between .50 and .80, and large, if *d* is larger than .80. Age was used as a covariate to test for its effect on self-image scores. A significance level of .05 was used in all analyses.

## RESULTS

### *Sociometric Status*

**General education.** The sociometric categorization of boys and girls in general education is represented in Table 2. As illustrated, with the exception of children with GLD, approximately 50% of children in general education were judged as average, independent of performance level, diagnostic label, and gender. These students were not judged to be particularly unusual by their classmates, in either a positive or a negative sense. They were not viewed as popular, ignored, rejected, or controversial.

Generally, the chi-square test (students categorized as controversial were excluded because of low frequency) revealed a relationship between performance level and diagnostic label, on the one hand, and sociometric status, on the other, but only for girls,  $\chi^2(12) = 66.45, p < .001$ . A separate analysis on boys revealed no relationship between performance level, diagnostic label, and sociometric status,  $\chi^2(12) = 11.49, p = .55$ . Girls who achieved above average tended to be judged as being popular (28%), whereas low-achieving girls were more likely to be judged as rejected (31%). This same relationship was observed in girls with GLD; only a few of them were judged as popular. The status of girls with SLD is remarkable in that their status was judged differently than that of girls with GLD: 19.4% of girls with SLD were judged as popular as opposed to only 2.6% of girls with GLD.

Further analyses showed that in addition to differences between genders, there were also effects of age. In particular, in the older age group (11-13 years old) there

was a clear relationship between performance level and diagnostic level, on the one hand, and sociometric status, on the other,  $\chi^2(16) = 32.02, p = .01$ . This relationship was less pronounced in the younger age group (7-9 year),  $\chi^2(16) = 24.49, p = .07$ .

**Special education.** Similar to the findings in general education, approximately half of the children in special education were judged as average, and only a few children were judged as controversial (see Table 3). Considerably more children were categorized as ignored (15.4%). The chi-square test (again students categorized as controversial were excluded) revealed no significant relationship between performance level and diagnostic level, on the one hand, and sociometric status, on the other,  $\chi^2(6) = 6.13, p = .41$ . Students were distributed evenly over the categories of sociometric status, regardless of whether they were categorized as low achievers or having GLD or SLD. This was the case for both boys and girls and for both age groups.

When only the performance level of the students in special education was considered (see Table 4), the relationship between performance and sociometric status approached significance,  $\chi^2(6) = 12.24, p = .06$ . Further analyses showed that this relationship held only for girls,  $\chi^2(6) = 12.97, p = .04$ . Of the girls who had above-average achievement, nearly 27% were judged as popular and only 4% were judged as rejected. In the group of low-achieving girls, the opposite pattern was observed: More than 25% were judged as rejected and more than 11% were judged as popular. The age of the students in special education bore no relationship to sociometric status.

### Self-Image

**General education.** Table 5 shows the effects of performance level and diagnostic label on self-image for students in general education. The effect of performance level and diagnostic label on relationship with classmates was significant,  $F(4, 846) = 3.00, p = .02$ . Comparing the mean scores of the different groups by

**Table 4**

***Cross-Tabulations in Percentages of Gender, Sociometric Status, Performance Level of Students in General Education (N = 438)***

Category/Gender		Sociometric Status				
		Popular	Controversial	Ignored	Rejected	Average
Low Achieving	Boys	7.0	2.8	19.7	19.7	50.7
	Girls	11.6	0.0	4.7	25.6	58.1
	Total	8.8	1.8	14.0	21.9	53.3
Average Achieving	Boys	13.2	4.6	13.9	8.6	59.6
	Girls	11.9	2.4	17.9	15.5	52.4
	Total	12.8	3.8	15.3	11.1	57.0
Above-Average Achieving	Boys	12.7	6.3	20.6	9.5	50.8
	Girls	26.9	0.0	7.7	3.8	61.5
	Total	16.9	4.5	16.9	7.9	53.9
Total	Boys	11.6	4.5	16.8	11.5	55.4
	Girls	14.3	1.3	12.4	16.3	55.5
Total		12.5	3.4	15.2	13.2	55.5

**Table 5**

*Mean Scores (SD in Parentheses) on the Self-Image Dimensions of Boys and Girls in General Education Crossed with Performance Level or Diagnostic Label (N = 849)*

Category/Gender		Self-Image Dimensions			
		Relationships with Classmates	Feelings of Self-Worth	Feelings of Competence	School Tasks
General LD	Boys	2.23 (.49)	2.39 (.54)	1.56 (.47)	1.83 (.67)
	Girls	2.06 (.41)	2.28 (.60)	1.30 (.42)	1.93 (.43)
	Total	2.14 (.45)	2.33 (.57)	1.43 (.46)	1.88 (.56)
Specific LD	Boys	2.30 (.41)	2.39 (.48)	1.59 (.48)	2.04 (.62)
	Girls	2.20 (.52)	2.21 (.56)	1.47 (.39)	1.94 (.62)
	Total	2.26 (.46)	2.32 (.52)	1.54 (.45)	2.01 (.62)
Low Achieving	Boys	2.23 (.53)	2.40 (.56)	1.66 (.42)	2.11 (.54)
	Girls	2.13 (.56)	2.21 (.60)	1.47 (.49)	2.07 (.55)
	Total	2.18 (.55)	2.30 (.59)	1.56 (.46)	2.09 (.55)
Average Achieving	Boys	2.28 (.45)	2.40 (.51)	1.67 (.41)	2.26 (.43)
	Girls	2.21 (.60)	2.27 (.58)	1.54 (.43)	2.22 (.48)
	Total	2.24 (.54)	2.33 (.56)	1.60 (.42)	2.24 (.46)
Above-Average Achieving	Boys	2.29 (.50)	2.46 (.43)	1.82 (.43)	2.33 (.43)
	Girls	2.35 (.41)	2.32 (.57)	1.74 (.43)	2.33 (.41)
	Total	2.32 (.47)	2.40 (.51)	1.78 (.43)	2.33 (.42)
Total	Boys	2.27 (.47)	2.41 (.50)	1.69 (.44)	2.19 (.52)
	Girls	2.21 (.54)	2.27 (.58)	1.55 (.45)	2.17 (.51)
Total		2.24 (.51)	2.34 (.55)	1.62 (.45)	2.18 (.51)

using deviation scores showed that students with GLD had a lower mean self-image score concerning relationship with classmates than the overall mean of all groups,  $t(846) = -2.12, p = .03, d = -0.20$ . The above-average achieving students, on the other hand, scored higher on this dimension of self-image than the overall group mean,  $t(846) = 2.81, p = .005, d = -0.20$ . The mean scores of the other groups (including the group of students with SLD) did not differ significantly from the overall mean with respect to the self-image dimension of relationship with classmates. In addition, students' ages had

an effect on this measure of self-image: Averaged over performance level and diagnostic label, the older children scored higher on self-image concerning relationship with classmates than younger students,  $\beta = .10, t(846) = 3.00, p = .02$ . No effect of gender was observed on this dimension of self-image,  $F(1, 846) = 1.62, p = .20$ .

With respect to feelings of self-worth, no effects of performance level and diagnostic label were found in general education,  $F(4, 846) = 0.86, p = .49$ . Girls had a lower score on feelings on self-worth than boys independent of performance level and diagnostic label

( $M_{\text{girls}} = 2.26$ ,  $SD = .58$ ,  $M_{\text{boys}} = 2.41$ ,  $SD = .50$ ),  $F(1, 846) = 13.81$ ,  $p = .0001$ ,  $d = -0.28$ . No effects of age were observed,  $\beta = 0.07$ ,  $t(846) = 1.92$ ,  $p = .06$ .

Concerning feelings of competence, significant effects were found for performance level and diagnostic label,  $F(4, 846) = 11.81$ ,  $p = .001$ . Post-hoc tests revealed that this effect was due predominantly to the difference between students with GLD and the other groups,  $t(846) = -3.36$ ,  $p = .001$ ,  $d = -0.42$ . Girls scored lower on feelings of competence than boys independent of performance level and diagnostic label ( $M_{\text{girls}} = 1.54$ ,  $SD = .45$ ,  $M_{\text{boys}} = 1.69$ ,  $SD = .44$ ),  $F(1, 846) = 20.73$ ,  $p = .000$ ,  $d = -0.33$ . Age also had an effect on feelings of competence: Scores decreased with increasing age,  $\beta = -.10$ ,  $t(846) = -2.92$ ,  $p = .004$ .

Performance level and diagnostic level had a significant effect on the dimension self-image and school tasks,  $F(4, 846) = 16.85$ ,  $p < .001$ . Comparing the mean scores of the different groups by using deviation scores revealed that both students with GLD,  $t(846) = -4.67$ ,  $p$

$= .000$ ,  $d = -0.58$ , and students with SLD,  $t(846) = -2.33$ ,  $p = .020$ ,  $d = -0.33$ , scored lower than the overall mean. Above-average achievers scored higher than the overall mean,  $t(846) = 6.72$ ,  $p < .001$ ,  $d = 0.29$ , just as students with average performance did,  $t(846) = 4.54$ ,  $p < .001$ ,  $d = 0.12$ . Neither effects of gender,  $F(1, 846) = 0.43$ ,  $p = .513$ , nor of age,  $\beta = .02$ ,  $t(846) = 0.59$ ,  $p = .56$ , were observed.

**Special education.** As illustrated in Tables 6 and 7, there were no effects of diagnostic label or of performance level on the self-image dimension of relationship with classmates for students in special education, both  $F$ 's  $< 1$ . Also, there were no differences between boys and girls concerning this dimension of self-image,  $F(1, 418) = 3.14$ ,  $p = .08$ . However, for age, a positive effect on relationship with classmates was observed,  $\beta = 0.13$ ,  $t(418) = 2.62$ ,  $p = .009$ . Thus, older students showed a more positive self-image than younger students.

With respect to feelings of self-worth, significant interaction effects were found between age and performance level,  $F(2, 418) = 4.74$ ,  $p = .009$ , and between

**Table 6**

*Mean Scores (SD in Parentheses) on the Self-Image Dimensions of Boys and Girls in Special Education Crossed with Diagnostic Label (N = 420)*

Category/Gender		Self-Image Dimensions			
		Relationships with Classmates	Feelings of Self-Worth	Feelings of Competence	School Tasks
General LD	Boys	2.26 (.44)	2.43 (.57)	1.78 (.48)	2.23 (.57)
	Girls	2.15 (.46)	2.16 (.67)	1.59 (.46)	2.12 (.49)
	Total	2.22 (.45)	2.33 (.62)	1.71 (.48)	2.19 (.55)
Specific LD	Boys	2.17 (.51)	2.31 (.56)	1.71 (.51)	2.22 (.51)
	Girls	2.16 (.45)	2.33 (.68)	1.66 (.53)	2.15 (.51)
	Total	2.16 (.49)	2.32 (.60)	1.69 (.52)	2.20 (.51)
Low Achieving	Boys	2.23 (.45)	2.30 (.56)	1.71 (.37)	2.29 (.43)
	Girls	2.01 (.59)	2.32 (.53)	1.60 (.55)	2.25 (.51)
	Total	2.16 (.50)	2.31 (.55)	1.67 (.44)	2.28 (.45)
Total	Boys	2.22 (.47)	2.37 (.57)	1.74 (.48)	2.23 (.53)
	Girls	2.13 (.48)	2.24 (.66)	1.62 (.49)	2.15 (.50)
<b>Total</b>		<b>2.19 (.47)</b>	<b>2.32 (.60)</b>	<b>1.70 (.49)</b>	<b>2.20 (.52)</b>

Table 7

Mean Scores (SD in Parentheses) on the Self-Image Dimensions of Boys and Girls in Special Education Crossed with Performance Level (N = 422)

Category/Gender		Self-Image Dimensions			
		Relationships with Classmates	Feelings of Self-Worth	Feelings of Competence	School Tasks
Low Achieving	Boys	2.14 (.48)	2.33 (.60)	1.67 (.45)	2.25 (.56)
	Girls	2.22 (.46)	2.17 (.73)	1.71 (.47)	2.21 (.41)
	Total	2.18 (.47)	2.27 (.66)	1.69 (.45)	2.23 (.50)
Average Achieving	Boys	2.24 (.43)	2.32 (.55)	1.71 (.49)	2.22 (.52)
	Girls	2.10 (.47)	2.28 (.61)	1.55 (.49)	2.09 (.54)
	Total	2.19 (.45)	2.31 (.57)	1.65 (.50)	2.17 (.53)
Above-Average Achieving	Boys	2.26 (.53)	2.52 (.53)	1.88 (.47)	2.24 (.53)
	Girls	2.11 (.53)	2.21 (.70)	1.67 (.53)	2.23 (.49)
	Total	2.22 (.53)	2.43 (.60)	1.82 (.49)	2.24 (.51)
Total	Boys	2.22 (.47)	2.37 (.56)	1.74 (.48)	2.23 (.53)
	Girls	2.13 (.48)	2.24 (.66)	1.62 (.49)	2.15 (.50)
Total		2.19 (.47)	2.32 (.60)	1.70 (.49)	2.20 (.52)

gender and diagnostic label,  $F(2, 418) = 3.14, p = .05$ . The interaction between age and performance level revealed that, within the group of low-achieving students, older students had more negative feelings of self-worth than younger students,  $\beta = -0.09, t(418) = -2.07, p = .04$ , whereas, within the average-achieving group, the opposite pattern was observed: Older students showed scores higher on feelings of self-worth than did younger children,  $\beta = 0.08, t(418) = 2.23, p = .03$ . Within the above-average achieving group, there was no effect of age on feelings of self-worth,  $\beta = 0.04, t(418) = 0.85, p = .40$ . The interaction effect between age and diagnostic label showed that boys with GLD had more positive feelings of self-worth than girls with GLD ( $M_{\text{girls}} = 2.16, SD = .67, M_{\text{boys}} = 2.43, SD = .57, t(418) = -3.18, p = .002, d = -0.44$ ), whereas for both students with SLD and low-achieving students, there were no differences between boys and girls ( $M_{\text{girls}} = 2.33, M_{\text{boys}} = 2.31; t(418) = 0.16, p = .87, d = .03$ , and  $M_{\text{girls}} = 2.32, M_{\text{boys}} = 2.30, t(418) = 0.08, p = .94, d = .04$ , respectively).

Concerning feelings of competence, there was no effect of diagnostic label ( $F(1, 418) = 0.26, p = .76$ ). However, an effect of performance level was found,  $F(2, 418) = 3.60, p = .001$ . Average-achieving students scored lower than the total group,  $t(418) = -2.05, p = .041, d = 0.12$ , and above average-achieving students scored higher than the total group,  $t(418) = 2.48, p = .014, d = 0.25$ . Remarkably, the low-achieving students scored at the same level as the total group,  $t(418) = -0.90, p = .37, d = -0.02$ . As in general education, feelings of competence were lower for girls than for boys ( $M_{\text{girls}} = 1.62, SD = .49, M_{\text{boys}} = 1.74, SD = .48; F(1, 418) = 5.58, p = .019, d = -0.25$ ). Finally, no effect of age on feelings of competence was observed,  $F(1, 418) = 1.36, p = .24$ . Further, no significant effects of age,  $F(1, 418) = 0.68, p = .41$ , gender,  $F(1, 418) = 2.63, p = .11$ , performance level,  $F(1, 418) = 0.82, p = .44$ , or of diagnostic label,  $F(1, 418) = 0.96, p = .38$ , emerged on the self-image dimension school tasks in special education.

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## DISCUSSION

The sociometric status and self-image of several of groups of Dutch students in general as well as (separate) special education were compared. A discussion of implications for policy and daily educational practice follows.

With respect to the distribution of sociometric status in general education, three findings are of particular interest. First, sociometric status relates only to performance level and diagnostic label for older students. Apparently, younger students do not judge their classmates on the basis of performance level. There are strong indications that when young children judge their classmates negatively, the basis for negative judgments is not the LD *per se* but rather the (externalized) behavioral problems that often accompany LD (Bakker, Denessen, & Bosman, 2005). Only at an older age do children begin to judge their classmates on the basis of performance level, perhaps because they have a more accurate insight into their own cognitive functioning, as shown in previous studies (Renick & Harter, 1989).

Second, boys and girls are judged differently by their classmates. While the sociometric status of boys is not related to their performance level or diagnostic label, the sociometric status of girls does relate to these variables. Kistner and Gatlin (1989a, 1989b) and La Greca and Stone (1990) also concluded that girls, more so than boys, are judged merely on the basis of their academic achievements. Kistner and Gatlin attributed this phenomenon to society's expectation concerning girls' academic achievement. According to these authors, the expectations for girls are much more clearly defined than for boys; therefore, deviations from these expectations are more noticeable, and as a result girls are judged more on the basis of performance level.

Third, the sociometric status of girls with GLD most closely resembles that of girls who have low achievement without LD, whereas the sociometric status of girls with SLD is most comparable to that of average-achieving girls. Apparently, the SLD of the latter students are not reason enough for them to be judged differently. These results are difficult to reconcile with the results of, in particular, American studies regarding the social status of children with LD in inclusive education (Kuhne & Wiener, 2000; Le Mare & De la Ronde, 2000; Ochoa & Olivarez, 1995; Stone & La Greca, 1990; Vaughn et al., 1996; Vaughn, Hogan, Haager, & Kouzekanani, 1992; Wiener et al., 1990). This research shows consistently that students with SLD are mostly categorized as rejected, whereas the present study shows that this pattern is observed only for girls with GLD. As noted, children with GLD are classified in the United States as students with mental retardation or as students with generally low achievement (Scruggs & Mastropieri,

2002). It is not possible to determine whether the diverging results are due to differences in the definitions of LD or differences in diagnostic practice between the Netherlands and the United States (cf. Dumont, 1990; Scruggs & Mastropieri, 2002). Assuming that children with SLD (e.g., only problems with reading and spelling, or only with math) perform in the other domains comparably to typically achieving group members, this might explain why girls with SLD are judged more positively than girls with GLD who perform low on all domains. Whatever the cause, the results of this study emphasize the importance of distinguishing between GLD and SLD in future research with respect to well-being.

The distribution of sociometric status in special education as opposed to general education did not relate to diagnostic label. In other words, students with SLD were not judged more positively than students with GLD. Surprisingly, students in special education evaluated their judgments on performance level. As in general education, the acceptance of girls in special education is dependent upon performance level. Above-average achieving girls were judged relatively more often as popular, whereas low-achieving girls were more often judged as rejected. Thus, the well-defined expectation toward academic performance of girls (Kistner & Gatlin, 1989a) is apparently not restricted to the context of general education.

With regard to self-perception or self-image, interesting differences and similarities between general and special education were apparent. Specifically, for both boys and girls in general education there was a relationship between performance level and diagnostic label and the perception of their relationship with classmates (the most important aspect of self-image). The best-achieving students judged their relationship with classmates more highly than did the other groups, and students with LD judged this relationship more negatively. Not just with respect to sociometric status, but also for self-image, children with SLD did not assume an exceptional position in the group. In comparison to students with GLD, they were not only more accepted but also seemed to be aware of this higher level of acceptance. In addition, self-perception and reality did not always go hand in hand. Although GLD did not affect the level of acceptance by classmates for boys, boys perceived themselves as being less accepted. This finding converges with the results of Le Mare and De la Ronde (2000) and Vaughn et al. (1992). Both studies showed that students' self-perception of their relationship with classmates did not always relate to actual acceptance. This might indicate that some students with LD are aware of being stigmatized and that this stigma is a more important criterion for them than their classmates'

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attitudes toward them (cf. Jenkins & Heinen, 1989). In contrast to this finding is the perception of above-average achieving boys, which more correctly reflects their position in the group. A similar pattern emerged in girls with GLD and girls with above-average performance. In both cases these students' self-perception of their relationship with classmates did relate to their status in the group, being negative for girls with GLD and positive for girls with above-average achievement.

In special education, however, the students' perception of their relationship with classmates did not relate to diagnostic label. Their performance level did not affect this perceived relationship either. Nevertheless, in one respect there was a similarity between special and general education: Younger children perceived their relationship with classmates as remarkably more negative than did older students. The fact that self-image of younger students in special education with respect to relationship with classmates is not a reliable reflection of their actual social position in the group is explained by Bakker and Van de Griendt (1999) as being due to the relatively short time spent in special education. That is, even after being referred to special education, students seem to continue to compare themselves with their former classmates in general education as opposed to older children, who use their classmates in special education as a reference group.

There was no relationship between feelings of self-worth (the second most important component of self-image), performance level, and diagnostic label in general education. This suggests that feelings of self-worth are not affected by school failure or diagnostic label (see also, Cosden, Elliott, Noble, & Kelemen, 1999; Gans et al., 2003; Stiehr Smith & Nagle, 1995). These authors suggest, in accordance with Grolnick and Ryan (1990), that students with LD, and perhaps all students with low performance judge their feelings of self-worth on life domains other than cognitive ones. In this respect, Stiehr Smith and Nagle (1995) point at the experienced support of parents and teachers, whereas Gans et al. (2003) and Cosden et al. (1999) point at performance in sports and physical appearance. The latter aspect is of particular interest, because it could offer a potential explanation for the finding that girls in general education show lower feelings of self-worth than boys. This latter finding has also been observed more frequently (Harter, Whitesell, & Junkin, 1998; Kling, Hyde, Showers, & Buswell, 1999). In a recent study, Frost and McKelvie (2004) suggested that the often observed difference in self-worth between boys and girls can be explained by the importance attributed by society to the physical appearance of women and the fact that girls are already aware of these societal standards in the early school years.

Another possible explanation for the lower self-worth of girls is provided by the results of the present study. Girls lag behind boys in feelings of competence, the third component of self-image, again independent of performance level and diagnostic label. This holds for girls in general education as well for girls in special education. It is possible that for many girls, lack of feelings of competence is a source of low self-worth. Additional differences in feelings of competence between students emerged. In special education these differences seemed random or, in any event, not related to performance level or diagnostic label. In general education, however, feelings of competence of children with GLD were more negative than those of all other groups. Again, there is a difference between students with general as opposed to SLD in the advantage of the latter group.

Given these findings, it is all the more remarkable that in general education no differences between these two groups were found with respect to self-image concerning school tasks. Both groups with LD judge themselves negatively in comparison to other students in general education, in particular in comparison to average and above-average achievers. Apparently, a realistic perception of one's (low) academic achievement is not by definition related to (low) feelings of competence. It could be argued that the self-image profile of students with SLD in general education in this study offers a good illustration of the image that is held of these students according to current definitions of SLD: They perform below their level of competence (Dumont, 1990; Scruggs & Mastropieri, 2002).

In special education, as opposed to general education, no differences were found in self-image based on school tasks. Kelly and Norwich (2003) observed similar results in the UK. Students with LD in general education cannot avoid comparing themselves to students who they perceive as performing better, and consequently feel less competent with respect to school tasks. Students in special education, on the other hand, can only judge themselves in comparison to students with a similar performance level, which leads to a more positive self-perception concerning school tasks. Nevertheless, it seems odd that students in special education appear to use a different set of dimensions when judging themselves than when judging their classmates. Thus, sociometric results showed that students in special education, just like students in general education, do indeed perceive performance level differences in their group. Another potential explanation, suggested by Kelly and Norwich (2004) and Renick and Harter (1989), is that children with LD in the protective, perhaps overprotective, environment of special education tend to underestimate the level of their own LD. A potential consequence of this is that they may have less intrinsic motivation to overcome their LD.

### Implications for Practice

Regardless of one's opinion of inclusive education, the results of this study do not provide sufficient evidence to alter that opinion. Children with GLD in general education are comparable to children with low academic achievement without a diagnostic label, and self-image with respect to classmates in special education is not related to diagnostic label or performance level, albeit girls with GLD show lower feelings of self-worth and competence than boys. The results of a meta-analysis of 36 empirical studies by Elbaum (2002) converge with these findings. Elbaum assessed self-concept of students in four different school settings: general education class, resource room, self-contained classroom, and special school. None of the comparisons revealed significant difference in self-concept, except for students in special schools, whose self-concept was significantly better than that of students in a self-contained classroom in a regular school. Elbaum's conclusion that there is no systematic relationship between LD students' self-concept and educational placement is just as valid with respect to our study, and endorses our viewpoint that it remains unclear whether special

education provides a more protective environment. However, this does not imply that individual students are not affected by the decision on their educational placement, as Elbaum continues to argue. Our findings and those of Elbaum emphasize all the more that each decision requires a careful process that includes all parties involved, not in the least the student with LD.

To conclude, it is impossible to remove perceptions of competence from students' school experience. Children will continue to judge themselves and others on a number of dimensions. However, the rigidity with which these judgments are made appears to be partly under the control of schools and teachers. Although more research needs to be done to arrive at more definitive conclusions, it appears that such things as the quality of feedback given to incorrect answers has an effect on the atmosphere of competitiveness in the class and, thereby, indirectly, on the social acceptance of students who, for whatever reason, have LD (Bear et al., 1998; Larrivee, 1985). Policy makers should be aware of this. Policy that encourages competition between schools and at the same time attempts to promote inclusive education seems to be working at cross-purposes.

## APPENDIX

### Dimensions of Self-Image after Varimax Rotation

	Factor**				<i>h</i> <sup>2</sup>
	I	II	III	IV	
I feel left out.* (11)	-.67	-.13	-.09	-.16	.50
I am teased often by my classmates.* (17)	-.66	-.02	.04	-.11	.45
I have a lot of friends. (14)	.63	.21	.33	-.08	.55
I feel alone.* (7)	-.58	-.16	-.06	-.19	.40
I would like to have more friends.* (19)	-.55	-.10	.14	-.21	.37
I usually have someone to play with. (22)	.54	.22	.26	-.18	.45
I find it hard to make friends.* (8)	-.53	-.06	.02	-.19	.32
I think there are nice boys and girls in my class. (4)	.47	.28	.11	-.17	.34
I am happy to be the way I am. (16)	.23	.75	.16	.08	.65
I am happy to be the kind of child that I am. (21)	.16	.74	.11	.03	.59
I am pretty satisfied with myself. (6)	.06	.64	.26	.07	.48
I would often rather be someone else.* (3)	-.29	-.50	.10	-.25	.40
I don't like the way my life is going.* (10)	-.27	-.44	.06	-.26	.33
I almost always know the answer to questions. (18)	.05	.01	.67	.15	.48
I am good at playing games. (1)	-.02	.05	.56	.03	.31
I think I am just as smart as other children of my age. (20)	.06	.18	.53	.27	.39
I can finish my school work quickly. (13)	.16	-.06	.53	.25	.37
I can make other people smile. (12)	.12	.05	.48	-.13	.26
I think I can do whatever the teacher asks. (9)	-.16	.10	.45	-.08	.24
I don't do very well in school.* (15)	-.11	-.16	-.13	-.65	.47
I am often worried about whether I do my school work well.* (2)	-.10	.12	-.01	-.62	.42
I am not very good at sports.* (5)	-.10	-.19	-.04	-.38	.19
I am not very good at math or language.* (23)	-.01	-.12	-.11	-.42	.13
Explained variance in percentages	13.20	10.10	9.20	7.00	39.60

\*Negatively formulated statements were recoded after factor analysis.

\*\*Factor I refers to relationship with classmates; Factor II refers to feelings of self-worth; Factor III refers to feelings of competence, and Factor IV refers to self-image concerning school tasks. The position of each statement in the questionnaire is given by the number in parentheses.

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