ORIGINAL ARTICLE

The impact of including children with intellectual disability in general education classrooms on the academic achievement of their low-, average-, and high-achieving peers

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Abstract

Background  This study aimed at assessing the impact of including children with intellectual disability (ID) in general education classrooms with support on the academic achievement of their low-, average-, and high-achieving peers without disability.

Method  A quasi-experimental study was conducted with an experimental group of 202 pupils from classrooms with an included child with mild or moderate ID, and a control group of 202 pupils from classrooms with no included children with special educational needs (matched pairs sample). The progress of these 2 groups in their academic achievement was compared over a period of 1 school year.

Results  No significant difference was found in the progress of the low-, average-, or high-achieving pupils from classrooms with or without inclusion.

Conclusions  The results suggest that including children with ID in primary general education classrooms with support does not have a negative impact on the progress of pupils without disability.

Keywords: developmental disability, inclusive education, mainstreaming, achievement

Introduction

Currently, the notion that students with intellectual disability (ID) should be schooled in general education classrooms is supported by international conventions, such as the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006) and the UNESCO Salamanca Statement on Principles, Policy and Practice in Special Needs Education (UNESCO, 1994). In addition, many countries have adopted legislations favouring inclusive education for children with disability (Ainscow & César, 2006; European Agency for Development in Special Needs Education [EADSNE], 2003; Vislie, 2003). Nevertheless, considerable differences can be observed in the implementation of inclusive education not only across countries, but even across regions of the same country (EADSNE, 2003; Ferguson, 2008; OECD, 2004). Some countries have developed broad inclusive practices; others educate most of the children with disability in separate settings (EADSNE, 2003; Ferguson, 2008; OECD, 2004).

Switzerland is one of the less inclusive countries in Western Europe (EADSNE, 2010). In 2007, 5.8% of the pupils of compulsory school age were schooled in special classes or special schools (EADSNE, 2010). This rate is high in comparison to the average separation rate in European countries, which was around 2% in 2000 (EADSNE, 2003). In most Swiss provinces, the majority of children with ID attend special schools or special classes in public schools (EADSNE, 2012). However, it is likely that this situation will change. A reorganisation of special education has recently taken place in Switzerland. In 2008, the responsibility for funding and organising special needs education for children with disability was transferred entirely from the Federal Invalidity Insurance to the Swiss provinces. Currently, several provinces have entered into an agreement which
commits them to promoting inclusive practices for students with disability, as recommended in the Swiss Federal Act on Equal Rights for People with Disabilities, which came into force in 2004 (Swiss Conference of Cantonal Ministers of Education, 2007). Hence, various projects aiming at including children with ID in general education classrooms have been implemented in several provinces of Switzerland over the past few years (EADSNE, 2012).

Beyond the ethical arguments, the development of inclusive practices for children with ID is also supported by empirical evidence. Studies indicate that inclusion in a general education classroom with support is an appropriate alternative to education in separate settings for children with ID, as it allows these students to make more or as much progress in their academic achievement and adaptive behaviour (Cole, Waldron, & Majd, 2004; Cole & Meyer, 1991; Fisher & Meyer, 2002; Freeman & Alkin, 2000; Peetsma, Vergeer, Roeleveld, & Karsten, 2001; Saint-Laurent, Fournier, & Lessard, 1993; Sermier Dessemontet, Bless, & Morin, 2012; Sloper & Turner, 1996; Turner & Alborz, 2003). Moreover, numerous studies have demonstrated that the attitudes of typically developing students toward persons with disability become more positive as a result of the inclusion of children with disability (Maikowski & Podlesh, 2009; Siperstein, Norins, & Mohler, 2007). This is particularly relevant, given that positive attitudes toward persons with disability are considered to play an important role in their social acceptance and social participation (Ouellette-Kuntz, Burge, Brown, & Arsenault, 2010; Scior, 2011; Siperstein et al., 2007). Yet, despite these benefits, parents, teachers, and decision-makers are often worried by the possibility of negative effects of the inclusion of children with disability on the academic achievement of students without disability (Brackenreed, 2008; Peck, Carlson, & Helmstetter, 1992; Subban & Sharma, 2006).

Kalambouka, Farrell, Dyson, and Kaplan (2007) conducted a systematic review of the research on the impact of placing children with different categories of special educational needs (SEN) in general education classrooms on the academic achievement of students without disability. Studies were classified as finding positive, negative, and neutral outcomes. For the inclusion of pupils with cognitive and learning difficulties in primary schools, the authors found 12 studies reporting neutral academic outcomes, four reporting positive academic outcomes, and no study reporting negative academic outcomes. Only three studies conducted in secondary schools were found. Two of them reported neutral academic outcomes, and one was classified by Kalambouka et al. (2007) as finding negative academic outcomes. It should be noted that three of the reviewed studies (two in primary school settings and one in a secondary school setting) focused on the impact of including students with cognitive and learning difficulties on the physical skills of children without disability and not on traditional academic skills such as literacy, mathematics, or science.

In their review of research, Ruijs and Peetsma (2009) reported on four studies that examined the impact of including children with SEN on the academic achievement of children without disability. These studies had not been included in the review by Kalambouka et al. (2007). Three of them reported positive academic outcomes for including children with SEN, mainly learning disability, in elementary schools (Cole, Waldron, & Majd, 2004; Demeris, Childs, & Jordan, 2007) or secondary schools (Rouse & Florian, 2006). Researchers speculated that this positive effect might be the result of the implementation of strategies and teaching techniques that aimed at meeting diverse needs (Demeris et al., 2007; Rouse & Florian, 2006). One study reported a slightly negative academic outcome (Farrell, Dyson, Polat, Hutcheson, & Gallannaugh, 2007). Its findings indicated that students from primary schools that included a higher proportion of children with SEN attained marginally lower levels of academic achievement than students from primary schools that included a lower proportion of children with SEN. However, the findings of this latter study, as well as those of the two studies finding positive outcomes (Demeris, Childs, & Jordan, 2007; Rouse & Florian, 2006), suggest that the proportion of children with SEN included in classes or schools is less important than other differences between the schools. Farrell et al. (2007) carried out qualitative case studies in order to identify these differences. They compared academically high-performing and low-performing schools with high proportions of children with SEN. No clear pattern could be found.

Among the studies described in the reviews by Kalambouka et al. (2007) and Ruijs and Peetsma (2009), only four studies were conducted specifically on the impact of including children with ID or developmental disability on the academic achievement of their peers without disability. All of these studies were conducted at the primary school level. As we are focusing on the impact of including children with ID, these studies will be described more precisely. Hunt, Staub, Alwell, and Goetz (1994) used a pretest–posttest design to compare the achievement of targeted mathematics objectives of 10 pupils without disability enrolled in inclusive cooperative learning groups, and 10 pupils without disability enrolled in cooperative learning groups that did not include
pupils with disability. In the inclusive cooperative groups, one included child had severe intellectual and physical disabilities, and one had multiple and severe disabilities, and one had an autism spectrum disorder (ASD) and a severe intellectual disability. No statistically significant difference between the progress of the experimental and control group was found. Rankin et al. (1999) investigated the effect of including one student with ID in teacher-directed learning groups of three to four students on the vocabulary and reading comprehension skills of 15 pupils without disability. The five children included had mild to profound ID. Two children had also quadriplegia and one had an ASD. Within the context of an adapted alternating treatments design, a general education teacher taught one group that included a fourth student who had an ID. The other group included a fourth general education student instead of a student with disability. The results demonstrated that the gain scores of the students without disability were similar in both conditions. Sharpe, York, and Knight (1994) conducted a quasi-experimental study with pretest–posttest. They compared the reading, language arts, and mathematic skills of two groups of pupils recruited in one elementary school. The experimental group comprised 35 pupils from classrooms that included one or two children with ID. The included children had mild, moderate, or profound ID. One of them had a severe emotional disorder. The control group comprised 108 pupils from classrooms where no child with ID was included. The results of the study revealed no statistically significant differences between the academic achievement of the two groups. McDonnell et al. (2003) compared the academic achievement of two groups of students from five elementary schools using a posttest control group design. The experimental group comprised 324 students without disability who were enrolled in classrooms that included a child with a developmental disability. Five of the included children had ID, five had developmental delays, three had multiple disabilities, and one had an ASD. Students’ average IQ was 54.6, ranging from “not testable” to 78. The control group comprised 221 students without disability who were enrolled in classrooms that did not include students with developmental disability. The results showed no significant difference in the reading, language arts, and mathematic skills of the two groups.

In the study by Gandhi (2007), which was not included in either of the reviews by Kalambouka et al. (2007) and Ruijs and Peetsma (2009), relations between inclusion-related variables and the reading achievement of students without disability were examined using a dataset of Grade 3 students in the United States. The following variables were taken into account: class size, teachers’ years of experience, teachers’ training in special needs education, presence of a paid aide in the classroom, and frequency of meetings between the classroom teacher and the special education teacher. The results showed that controlling for these background variables, the inclusion of children with ID or other types of SEN in general education classrooms appeared to make no difference in the reading achievement of students without disability. Gandhi (2007) found one exception to this general conclusion: students without disability from classrooms including students with ASD without the support of a paid aide performed worse in reading than their peers from non-inclusive general education classrooms. However, students without disability from classrooms including students with ASD with the support of a paid aide outperformed their peers from non-inclusive classrooms. The findings also revealed a significant positive correlation between the frequency of meetings between the general education teachers and the special education teachers, and the reading achievement of children without disability in classrooms including mostly children with ID, speech/language impairments, or a natural proportion of children with SEN (mainly children with specific learning disability or speech/language disorders).

In summary, prior studies indicate overall that including children with disability in primary general education classrooms has no negative impact on the academic achievement of their peers without disability. However, it is difficult to draw clear conclusions about the impact of the students’ type of disability because the majority of studies involved samples of students who either had a variety of disabilities or were individual students with more than one single type of disability (Kalambouka et al., 2007). Studies conducted specifically on the impact of including children with ID on the academic achievement of their peers without disability are scarce and most of them have small samples. Moreover, it is difficult to judge whether certain types of inclusion arrangements were associated with better academic outcomes, because in the studies reviewed, the inclusion arrangements were not always clearly described (Kalambouka et al., 2007; Ruijs & Peetsma, 2009). An examination of the studies where these arrangements are described reveals large differences between them and even differences in the sample of single studies as regards the number of children with disability included in each general education classroom (1 to 9), the amount of time spent by the children with disability in the general education classroom, and the extent of available support. Furthermore, in the reviewed studies the impact of including...
children with disability on the academic achievement of low-, average-, or high-achieving children without disability was not assessed (Ruijs & Peetsma, 2009). Huber, Rosenfeld, and Fiorello (2001) found that the implementation of inclusive practices (development of student support teams, whole-language reading instruction, literature-based reading, a maths program stressing hands-on experiences and manipulatives, curriculum-based assessment, curriculum adaptation strategies, and integrated curriculum) seemed to benefit the low-achieving students without disability, while higher achieving students lost ground. However, they did not assess the differential effect of merely including children with disability in general education classrooms. This is an important issue, because the neutral results found by previous studies could conceal a differential effect of inclusion on these groups of pupils (Ruijs & Peetsma, 2009). In the current study we aim to address this issue by investigating the following research question: Do low-, average-, or high-achieving pupils without disability schooled in primary classrooms where one child with ID is included with support make as much progress in their academic achievement as similar pupils in classrooms where no children with SEN are included?

**Methods**

**Research design**

A quasi-experimental study with a pretest and a posttest was conducted in order to investigate the impact of the inclusion of children with ID in general education classrooms on the academic progress of their low-, average-, and high-achieving peers. The academic achievement of the participants was assessed with an academic achievement test at the beginning and at the end of one school year (September 2008 and May 2009). A group intelligence test was also conducted at the pretest in order to control this variable. Ethical approval for the study was obtained from the Swiss National Science Foundation.

**Participants**

To form the experimental group, second-year primary classes with an included child with ID were recruited from three Swiss provinces through the centres providing support for children with ID. A total of 20 classes corresponding to these criteria were identified. Most of the teachers (18/20) agreed to participate in the study. To form the control group, 50 schools were selected randomly in the three provinces in Switzerland where the experimental group was recruited. Through the directors of these schools, second-year primary classes with no included children with SEN were identified. A total of 30 classes were found. Most of the teachers (28/30) agreed to participate in the study. The participation rate was thus 93%. A total of 280 pupils in classes with a child with ID and 500 pupils in classes without children with SEN participated in the pretest. Among these participants, 25% of the children with the lowest scores at the academic achievement test were considered as being low achievers, and 25% of the children with the highest scores were considered as being high achievers. The other 50% of the children were considered as being average achievers.

Based on this initial sample, children from the experimental group were paired with children from the control group. The matching criteria were gender, socioeconomic status (low, average, or high), mother tongue (same as the language taught in school or foreign), age (± 6 months), IQ (± 10), and academic achievement at the pretest (low, average, high). A total of 213 pairs could be formed. Of these pairs, 11 were lost because of participants moving to another school or being absent at the posttest. The final research sample was composed of 202 pairs, making a total of 404 participants. The participants had an average age of 7.9 years (SD = .04) at the beginning of the study. Half of the participants were girls and half were boys. Most of the participants (73%) had an average socioeconomic status. Over one quarter of them (27%) had a foreign mother tongue. The sample had an average IQ of 106.4 with a standard deviation of 13.4. The characteristics of the experimental group and control group are presented in Table 1. No statistically significant difference was found between these two groups for IQ, \( t(201) = -1.20, p = .231 \), age, \( t(201) = - .913, p = .363 \), and academic achievement at the pretest, \( t(201) = 1.62, p = .107 \).

The participants in the experimental group were in classes of 18–23 pupils \( (M = 19) \) in which one child with ID was included. The children with ID had IQs between 43 and 75 \( (M = 61.6, SD = 8.8) \), and most had no associated impairments. Two of the children with ID had a mild cerebral palsy and one was described as having a behavioural disorder. None of the children with ID had an ASD, sensory losses, or severe physical disability. Each child with ID received 4\( \frac{1}{2} \) to 6\( \frac{1}{2} \) hours \( (M = 5) \) of support from a special education teacher per week. Support was provided in the general education classroom and/or in a separate special education classroom. Children with ID spent at least 70% of their time in the general education classroom. The participants in the control group were in classes of 18–25 pupils \( (M = 20) \) where no child was identified as having
SEN (intellectual disability, developmental disability, learning disability, speech/language disorder, behavioural/emotional disorder, or sensory disability).

**Measures**

The academic achievement of the participants was assessed with an academic achievement test designed to measure the progress of Swiss pupils in literacy and mathematics during their second and third primary school years (Bless, Schüpbach, & Bonvin, 2004). This test was validated with a sample of 278 Swiss children. The items in the literacy test yielded difficulty indices between 0.1 and 0.9 and discrimination indices between 0.1 and 0.7. The items in the mathematics test yielded difficulty indices between 0.01 and 0.9 and discrimination indices between 0.1 and 0.5. The literacy and mathematics tests have an internal consistency coefficient of 0.9. In our sample, the internal consistency of the literacy and mathematics tests was also good (0.9). The test was administered by the teachers to their pupils following the standardised procedure specified by its authors. The scores on the literacy and the mathematics tests were added to provide a global academic achievement score.

The cognitive abilities of the participants were assessed with a partial adaptation of the Culture Fair Intelligence Test – Scale 1 (CFT-1; Cattell, Weiß, & Osterland, 1997). The CFT-1 has an internal consistency coefficient of 0.9 (Cattell et al., 1997). The manual presents evidence for inner validity as well as convergent validity with other intelligence tests. This group intelligence test was administered to the participants by trained professionals following the standardised procedure specified by its authors.

The socioeconomic status of the participants was calculated on the basis of their parents’ profession. This information was encoded according to the International Standard Classification of Occupations (ISCO-08; International Labor Office, 2008) and then converted into socioeconomic status indices with the International Socio-Economic Index (ISEI) of occupational status (Ganzeboom, De Graaf, & Treiman, 1992).

**Results**

A mixed between-within subjects analysis of variance was conducted to assess the impact of type of classroom (with or without inclusion) on participants’ academic progress over one school year. The results indicate that there was no statistically significant difference between the progress of low-, average-, and high-achieving pupils in classrooms with or without inclusion, $F(2, 398) = 1.22, p = .295$. There was a substantial main effect for time, with all groups showing substantial progress over 1 school year, $F(1, 398) = 1956.58, p < .001$, partial eta squared = .831. The academic achievement scores obtained at the pretest and posttest by the low, average, and high achievers of the experimental group and the control group are presented in Table 2.

### Table 1. Description of the experimental group and the control group

<table>
<thead>
<tr>
<th></th>
<th>Pupils of classes</th>
<th>Pupils of classes</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>including a child</td>
<td>with no child</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>$n = 101$</td>
<td>$n = 101$</td>
</tr>
<tr>
<td>Boys</td>
<td>$n = 101$</td>
<td>$n = 101$</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>7.9</td>
<td>7.9</td>
</tr>
<tr>
<td>$SD$</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>$n = 22$</td>
<td>$n = 22$</td>
</tr>
<tr>
<td>Middle</td>
<td>$n = 147$</td>
<td>$n = 147$</td>
</tr>
<tr>
<td>Low</td>
<td>$n = 33$</td>
<td>$n = 33$</td>
</tr>
<tr>
<td>Mother tongue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same as taught in school</td>
<td>$n = 147$</td>
<td>$n = 147$</td>
</tr>
<tr>
<td>Foreign</td>
<td>$n = 55$</td>
<td>$n = 55$</td>
</tr>
<tr>
<td>IQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>106.6</td>
<td>106.2</td>
</tr>
<tr>
<td>$SD$</td>
<td>13.6</td>
<td>13.3</td>
</tr>
<tr>
<td>Level of academic achievement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low achievers</td>
<td>$n = 55$</td>
<td>$n = 55$</td>
</tr>
<tr>
<td>Average achievers</td>
<td>$n = 101$</td>
<td>$n = 101$</td>
</tr>
<tr>
<td>High achievers</td>
<td>$n = 46$</td>
<td>$n = 46$</td>
</tr>
</tbody>
</table>
This study are also similar to studies which indicate that the inclusion of children with SEN in general education classrooms does not have a negative impact on the academic achievement of the students without disability (Gandhi, 2007; Kalambouka et al., 2007; Ruijs & Peetsma, 2009). However, the findings of the present study do not confirm the positive effect of inclusion on the academic achievement of children without disability found by some studies (Cole et al., 2004; Demeris et al., 2007; Rouse & Florian, 2006). This may be due to the fact that inclusive practices, defined as a process of restructuring schools so that they respond to the diversity of all pupils in their locality (Armstrong, Armstrong, & Spandagou, 2010; Booth & Ainscow, 2002; Mittler, 2000), were not necessarily implemented in the schools and classrooms that were part of the experimental group for this study. In the classrooms participating in this study, it seems probable that the interventions of the special education teacher and the adaptations made by the elementary school teachers were both focused on the child with ID and not exploited for the benefit of the other pupils in the classroom.

Table 2. Scores in academic achievement at pretest and posttest for the experimental and control group

<table>
<thead>
<tr>
<th></th>
<th>t1</th>
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<th>t2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Low achievers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils of classes including a child with ID (n = 55)</td>
<td>23.3</td>
<td>5.7</td>
<td>51.1</td>
<td>10.6</td>
</tr>
<tr>
<td>Pupils of classes with no child with SEN (n = 55)</td>
<td>22.1</td>
<td>6.5</td>
<td>51.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Average achievers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils of classes including a child with ID (n = 101)</td>
<td>40.3</td>
<td>6.5</td>
<td>63.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Pupils of classes with no child with SEN (n = 101)</td>
<td>41.0</td>
<td>6.4</td>
<td>66.7</td>
<td>12.5</td>
</tr>
<tr>
<td>High achievers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pupils of classes including a child with ID (n = 46)</td>
<td>59.9</td>
<td>9.0</td>
<td>79.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Pupils of classes with no child with SEN (n = 46)</td>
<td>63.6</td>
<td>9.9</td>
<td>81.5</td>
<td>8.6</td>
</tr>
</tbody>
</table>

There were two children whose progress was well above the majority of other participants (outliers). Both had a foreign mother tongue and were low achievers at the pretest. One of them was in a classroom where a child with ID was included and the other in a classroom without inclusion. There were six children whose progress was well below the majority of other participants (outliers). Three of them were average or high achievers at the pretest and enrolled in classrooms where a child with ID was included. The other three were average or high achievers at the pretest enrolled in classrooms without inclusion. Given the fact that the 5% trimmed mean (24.42) and the mean value (24.52) for the progress of the participants are very close and that the values for the progress of these outliers are not too different from the remaining distribution, the outliers were not considered to be a possible source of distortion of the statistics.

Discussion

The main question of this study was whether the inclusion of children with ID in primary classrooms with support had an impact on the academic achievement of their low-, average-, and high-achieving peers. The results of this study suggest that this is not the case. The progress of primary students without disability, regardless of their level of academic achievement, seems not to be compromised by the inclusion of a child with mild or moderate ID in their classroom with $4^{1/2}$ to $6^{1/2}$ hours of support from a special education teacher per week.

This result is consistent with previous studies assessing the impact of including children with ID in general education classrooms (McDonnell et al., 2003; Sharpe et al., 1994) or in learning groups (Hunt et al., 1994; Rankin et al., 1999) on the academic achievement of students without disability. The findings of this study are also similar to studies which indicate that the inclusion of children with SEN in general education classrooms does not have a negative impact on the academic achievement of the students without disability (Gandhi, 2007; Kalambouka et al., 2007; Ruijs & Peetsma, 2009). However, the findings of the present study do not confirm the positive effect of inclusion on the academic achievement of children without disability found by some studies (Cole et al., 2004; Demeris et al., 2007; Rouse & Florian, 2006). This may be due to the fact that inclusive practices, defined as a process of restructuring schools so that they respond to the diversity of all pupils in their locality (Armstrong, Armstrong, & Spandagou, 2010; Booth & Ainscow, 2002; Mittler, 2000), were not necessarily implemented in the schools and classrooms that were part of the experimental group for this study. In the classrooms participating in this study, it seems probable that the interventions of the special education teacher and the adaptations made by the elementary school teachers were both focused on the child with ID and not exploited for the benefit of the other pupils in the classroom.

The interpretation of these findings must take into account the strengths and limitations of the study. The high participation rate (93%), the comparability of the experimental group and the control group for different relevant control variables, the pretest and posttest design, and the use of standardised measures can be considered as strengths. Limitations are, first, that while the classes in the experimental group comprised only one pupil with ID, the possible presence of children with other types of SEN in these classes was not monitored. Second, the quality of the teaching was not controlled for. Information about the prior training and instructional practices of the elementary school teachers and special education teachers and about the quality of their collaboration was not available. Such information might have been useful for an in-depth understanding of the results. Third, the
results of this study might not be applicable to secondary school settings. They may also not be applicable to the inclusion of children with ID with more severe limitations and associated impairments, such as ASD, severe behaviour disorder, or severe physical disability. Indeed, as the findings of the study by Gandhi (2007) suggest, the type of disability, in interaction with the support provided, might influence what occurs in the classroom. This requires further research.

In conclusion, the findings of this study, together with those of previous studies, indicate that the inclusion of children with ID in primary regular education classrooms with support is not detrimental to the academic progress of students without disability. This finding is of critical importance, as it could help to alleviate fears among parents, teachers, and educational authorities, and might support efforts made to develop inclusive practices for children with ID. However, further research is needed to address the impact of including students with ID, or more generally students with disability, on the academic achievement of students without disability in secondary school settings. Future studies should not only assess the impact of the mere placement of students with disability in general education classrooms, but also the influence of other important variables, such as the extent and type of support provided, and the extent and quality of collaboration between the general education teachers and special education teachers. In addition, the empirical knowledge on school and teacher effectiveness might also be a valuable resource when designing future studies.

Conflict of interest: None.

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