Author(s): Saloviita, Timo

Title: How common are inclusive educational practices among Finnish teachers?

Year: 2018

Version: Accepted version (Final draft)

Please cite the original version:

Saloviita, T. (2018). How common are inclusive educational practices among Finnish teachers?. International Journal of Inclusive Education, 22(5), 560-575. https://doi.org/10.1080/13603116.2017.1390001

How Common Are Inclusive Educational Practices among Finnish Teachers?

Timo Saloviita

University of Jyväskylä

Timo Saloviita, Department of Teacher Education, University of Jyväskylä

Correspondence concerning this article should be addressed to: Timo Saloviita, Department of Teacher Education, University of Jyväskylä, P.O. Box 35, 40014 Jyväskylän yliopisto, Finland. E-mail: timo.saloviita@jyu.fi

Abstract

Several instructional strategies have been recommended for use in heterogeneous classrooms, but the frequency of their actual use has remained largely unknown. Therefore, an electronic survey was sent to Finnish comprehensive school teachers (N =2,276) in order to assess the prevalence of three selected inclusive strategies: co-teaching, group work and differentiation. The results showed that co-teaching was used by 42% and group work by 43% of the teachers at least on a weekly basis, while differentiation was used regularly by 83% of teachers. The application of all strategies was strongly associated with teacher category, with subject teachers using them less frequently than classroom teachers or special education teachers. There was a linear trend indicating that these teaching strategies were more prevalent in bigger municipalities and among younger teacher groups. Their use was also more prevalent among female than male teachers. Additionally, among classroom teachers, their usage was associated with a more positive attitude towards inclusive education. Among classroom and subject teachers, their use was also associated with a higher sense of teacher efficacy. It is suggested that subject teachers in particular need to use more versatile teaching strategies to strengthen their ability to cope with student diversity.

Keywords*:* inclusive education; Finland; co-teaching; group work; differentiation, teachers

How Common are Inclusive Educational Practices among Finnish Teachers?

Introduction

Having emerged as a radical paradigm shift during the early nineties, the idea of inclusive education became universally known when the United Nations Educational, Scientific, and Cultural Organization (UNESCO) adopted it as one of its main themes for educational policy in its Salamanca Statement (UNESCO 1994). This was not just a new word being introduced, but about a new way of thinking about the relationship between individual capacities and the characteristics of the environment. When the abilities of a student did not correspond with the demands of the environment, the old paradigm sought a solution from the student's side; the student was expected to change in order to qualify for the regular environment. Therefore, successful rehabilitation was seen as the key instrument leading to integration. The problem with this way of thinking was that the requirements for successful rehabilitation condemned people with more severe disabilities to a permanent segregation, as they were seldom able to attain the standards of readiness required for the mainstream classroom (Taylor 1988).

The new inclusive paradigm turned the challenge for change upside-down by insisting that, in the first instance, it is the duty of schools to accommodate the diverse needs of children. The schools need to adapt so that they are able to welcome all children into mainstream classrooms, including the most disabled (UNESCO 1994). The focus of the new concept was thus on disabilities, and especially on severe disabilities.

The Salamanca Statement did not contain any comprehensive review of the modifications that would be needed for schools to become inclusive. As a general term, these modifications were referred to as 'child-centered pedagogy' (UNESCO 1994, viii). The

accommodations needed for heterogeneous classrooms were, of course, an issue that had already been discussed for decades before the Salamanca Statement. Nowadays, the educational literature covers a multitude of approaches considered helpful in promoting inclusion (e.g. Cohen 1994; Conderman, Bresnahan and Pedersen, 2009; EADSNE 2003; Huebner, 2010; Johnsons and Johnson, 2000; Koegel, Koegel and Dunlap 1996; McLeskey, Waldron,Spooner and Algozzine 2014; Thousand, Villa and Nevin 2007; UNESCO 2009).

Ways to Promote Inclusive Education

One of the recommended strategies is co-teaching, which means that at least two professionals share the teaching responsibility in the same classroom (European Agency for Development in Special Needs Education [EADSNE], 2003; Conderman, Bresnahan and Pedersen 2009; Fattig, and Tromey Tailor 2009; Murawski and Goodwin 2014). Co-teaching has become a cornerstone of inclusive education in Italy, the country with the most comprehensive inclusive school system in the world since the seventies. In Italy, special education teachers, called support teachers, are expected to work in mainstream classrooms with responsibilities and authority equal to that of the other teachers (Devecchi et al. 2012).

Another frequently mentioned means for supporting inclusion is the use of peer-assisted learning strategies (EADSNE 2003). These include a group of methods such as class-wide peer tutoring (Carter, Asmus and Moss 2014), and cooperative learning based on group work (Cohen 1994; Johnson and Johnson 1999; Kagan 1992). Peer-assisted strategies make individual differentiation easier than it is with teacher-centered whole-class instruction. Possibly a still greater benefit of peer-assisted methods is that they help create positive relationships between students. A common observation has been that physical integration does not in itself lead to social integration. This simple finding is not new (Kirk and Johnson

1951). Students with disabilities tend to remain on the margins of the class community even in the most welcoming of classrooms (Gibb, Tunbridge, Chua and Federickson 2007; Koster, Pilj, Nakken and van Houten 2010).

A third means of supporting inclusive education is differentiation, which means that educational processes are adapted to the individual ability levels of the students. Differentiation is expected to contain all aspects of learning, beginning with the differentiation of content, continuing with instructional processes and ending with learning products and their evaluation (Giangreco 1997; Tomlinson 2005; UNESCO 2004). In many countries the right to differentiated education is confirmed by laws stipulating the duty to write individualized education plans (IEP). The obligation to write IEPs was determined, for instance, in the United States in 1975 by the public law 92-142 (U.S. Department of Education 2010), in Italy in 1992 by the law 104 (Legge 5 febbraio 1992, n. 194) and in Finland in 1998 by the Basic Education Act 628/1998. An individualized education plan emphasizes a student's unique needs, while its preparation also provides a collaborative platform for the school personnel.

An evaluation of the effects of co-teaching, peer-assisted strategies and differentiation in the service of inclusive education is not easy, because none of them is a single strategy, but each comprises a variety of approaches and models. However, each of these methods has achieved empirical support from research. Co-teaching is reported to be helpful in providing peer support for teachers (Scruggs, Mastropieri, and McDuffie 2007) and to be especially beneficial for students with disabilities (Murawski and Swanson 2001). Peer-assisted learning strategies, such as cooperative learning, have been shown to create a strong intervention in promoting social inclusion and acceptance of students with disabilities, while they also have

shown their efficacy as teaching methods (Hattie 2009; Johnson and Johnson 2000). Research has also validated a number of practices associated with differentiation (Huebner 2010).

In addition to co-teaching, cooperative learning and differentiation, multiple other strategies have been recommended for inclusive classrooms beginning from the nineties. They have included the creation of a supportive learning community with an inclusive culture (Hoskins 1995), school-wide planning and collaborative teaming (Fox and Williams 1991; Giangreco 1996; Rainforth, York and MacDonald 1992), cooperation with families (Buswell and Schaffner 1990), community involvement (Fox and Williams 1991), partnership with paraprofessionals, (Causton-Theoharis 2009; Doyle 2002), developing peer support and friendships (Gartner and Lispky 1990, Stainback and Stainback 1990), positive behavioral support (Ayres and Hedeen 1997; Koegel, Koegel and Dunlap 1996), developing communication systems (Duncan and Prelock 1998) and other assistive technologies (Dutton and Dutton 1990; Gartner and Lipsky 2002), developing a universal design for learning (Thousand, Villa and Nevin 2007), and adapting general educator ownership for educating students with disabilities (Giangreco 1997).

Currently, a multitude of accommodations exist that have been developed to support schools with their inclusive orientation. However, a gap is widening between the ever increasing knowledge concerning the requisites of inclusion and the actual practice in schools, where significant systems-level change towards inclusive education is still largely missing (Armstrong, Armstrong and Spandagou 2010, 29). While inclusive education has been adopted as a key educational strategy by many important international organizations such as the United Nations, UNESCO, the World Bank (2016) and the Council of the European Union (2010), and it has achieved the status of international law (United Nations 2006), it has

met considerable resistance at the level of school organizations unwilling to change in the direction proposed (EADSNE 2012).

The Reception of the Idea of Inclusion

The concept of inclusive education actually lost much of its original meaning soon after it was launched as an official policy of UNESCO in 1994. This development is typical of political language, where the ambiguity of key terms is often a greater virtue than their accuracy. Ambiguity helps to build support for a particular policy by uniting people who in reality may have diverse opinions on the issue itself. After 1994, for instance, the Organization for Economic Cooperation and Development (OECD) simply changed its terminology from integration to 'inclusive education' without making any distinction between these words (OECD 1999). Also, even if the principle of inclusion was included in the Convention on the rights of people with disabilities (United Nations 2006), it was not among those concepts which were separately defined.

In Great Britain, the terminology of the Salamanca Statement was, in 1997, adapted by the New Labour government for its educational policy (Armstrong 2006). However, inclusion was defined as a 'process' rather than an outcome. In the new policy, the idea of inclusion was constructed within the traditional framework of special education, which meant that it lost its focus on environmental change (Armstrong 2006, 134). The definition of inclusion as a process rather than an outcome was echoed in the Index of Inclusion (Booth and Ainscow 2000), a publication that was supported by the state department for education (Vaughan 2002). The change from an outcome to a process deprived the concept its original ground-breaking emphasis, and opened it to cryptic interpretations. This was probably one reason for the disappointment later expressed regarding the achievements of New Labour's

educational policy in Great Britain (Hodkinson 2012; Roulstone and Prideaux 2008). The process interpretation was also adopted by UNESCO itself in its later documents (UNESCO 2008; 2009) leading to a further watering down of the idea. The interpretation was taken to its limits in Greece, where special education classes were renamed by law 2817/2000 as 'inclusive classes' (Armstrong, Armstrong and Spandagou 2010, 6). Thus, the pressure for change was sometimes met by a symbolic transformation.

Another development leading to a watering down of the concept was a change in its focus away from disabilities and towards 'education for all'. While a widening of the target group for inclusion was not a problem in itself, it actually allowed the original target group to be forgotten from some subsequent UNESCO programs (Kiuppis 2014). A similar development has been reported in relation to the concept of supported employment, which, while initially born in the context of severe disabilities, soon began to lose this group as its focus, at least in Europe (Saloviita 2000).

Inclusive Education in Finland

The educational system of Finland includes one of the largest sectors of segregated special education in the world (EADSNE 2012; National Center for Education Statistics 2016). The Salamanca Statement did not at first awaken any attention in Finland. It took about six years before the National Board of Education (NBE) began to use the term 'inclusion' (Laukkanen and Kyrö 2000). The definition given to it was very broad, embodying a general concept of a good education. With this enlarged definition, the concept was not specifically associated with special education or disabilities, as confirmed by the representatives of the NBE: 'We see special needs education as an important, but not dominant, part of the nation's policies for inclusion' (Halinen and Järvinen 2008). Even after

the NBE began to use the term, the atmosphere in Finnish universities remained unreceptive to it (Puro, Sume and Vehkakoski 2011). Only slowly, more than 10 years after Salamanca, did the word 'inclusion' start to appear in the language of teacher educators, as can be seen from the yearly abstracts from the Annual Conference of the Finnish Educational Research Association (FERA 2016). Even today, the Salamanca Statement has not yet found acceptance at a political level, and any referral to the primacy of mainstream placement is missing from school legislation (Basic Education Act 1998). In 2016, Finland ratified the Convention on the Rights of People with Disabilities (United Nations 2006), which includes the principle of inclusive education, but this event was not understood to demand structural changes in education. Symbolic transformation, as discussed above, also manifests in overstatements concerning the number of included students, to the extent that educational placement is rated as 'full inclusion', when only the occasional participation of a student in a mainstream environment has been documented (EADSNE 2012; Halinen and Järvinen 2008; Saloviita and Schaffus 2016). The changes in the basic education act in 2010 or the new curriculum 2014 did not bring any new tools to combat segregating practices. This can be seen from the statistics on the development of special class placements (Statistics Finland 2017).

The number of students transferred to segregated special education increased in Finland until the year 2010, when a change in state funding, motivated by financial reasons, halted this growth (Saloviita and Schaffus 2016; Statistics Finland 2017). Since then, at least 4% of students in comprehensive schools have been served in self-contained special education classrooms for most of the time (Statistics Finland 2017). However, there is a trend away from school environments that are heavily segregated (Statistics Finland 2017).

Aim of the Study

Among the prerequisites of inclusive education, the greatest focus has been concentrated on the measurement of teacher attitudes, while less research has been conducted into the effectiveness of the various inclusive teaching strategies (Kraayenoord 2007). There is also a lack of studies investigating the prevalence of inclusive teaching strategies in schools. One such study was performed in Finland and showed that co-teaching was used by 40% of teachers on a weekly basis (Saloviita and Takala 2010). No such studies on the prevalence of group work are available. Some sources have credited high amount of student group work to Finnish schools (Darling-Hammond, 2009).

The aim of the present study was to survey the prevalence of inclusive teaching strategies among Finnish comprehensive school teachers. In the present study, inclusion was defined in the original spirit of the Salamanca Statement (UNESCO 1994) with an emphasis on outcomes rather than process, and with a focus on all students, including those with disabilities. Based on this delineation, the strategies selected for study were co-teaching, group work and differentiation, all of which have been recommended for use in classrooms where the challenge is to include one or more students with disabilities, but which are considered equally beneficial for all students. Besides a focus on data concerning these strategies, attention is also given to several background variables that could explain the frequency of their use. These variables include both teacher related variables, such as demographic data, and environmental variables, such as classroom characteristics or the size of the municipality.

Methods

Participants

The participants (N = 2,136) in this study were teachers from Finnish comprehensive schools. The sample consisted of classroom teachers (n = 1,018) working in grade levels 1–6, subject teachers (n = 718) working mainly in grades 7–9, and special education teachers (n = 400) working in grades 1–9. The age of their students varied between 7–16 years. Of the participants, 19.5% were men and 80.5% women. Their mean age was 47 years, and they had 18 years of teaching experience on average. Compared with the teacher statistics from the year 2013 collected by the National Board of Education (Kumpulainen 2014), the number of women in the sample (80.5%) was higher than in this data source (73.6%), indicating that female teachers answered more frequently. The mean class size of the classroom teachers was 19.6, while the national mean for grades 1–6 was 20.7 (Ministry of Education and Culture 2013). Among subject teachers, the mean class size was 18.2, while the national mean for grades 7–9 was 16.5 (Ministry of Education and Culture 2013). Thus, in the sample, the class sizes were not far from the national means.

Setting

The Finnish comprehensive school contains grades 1–9, the first six grades being instructed by classroom teachers and the last three grades by subject teachers. The large special education sector contains two types of special education, the first based on separate classrooms led by a special education teacher, and including about 4.5% of all students, and the second, based on a resource room approach, where about 23% of students visit the special education teacher, usually for short periods of time and without any formal nomination (Statistics Finland 2017). If preferred so, these teachers also provided an excellent resource for co-teaching. All comprehensive school teachers have a master's level academic education with the exception of special education teachers with some disability groups. Those students

who are identified as having learning difficulties are usually initially transferred to a formal status where they have 'intensified support', and after this, if so decided, to a second formal status as a student with 'special support' (National Board of Education 2011). These categories are intended to help schools to allocate extra resources for the instruction of students thus labelled. However, there are no strict rules to be followed.

Data Collection

The data were collected in 2016 by 52 volunteering university students who were participating in a course on quantitative methodology during their second year of teacher training. The participating students formed 29 groups of between one and three students. Each group was given a sample of Finnish municipalities for data collection. The students participated in the data collection on a voluntary basis and used their own data for personal study purposes.

A total of 223 municipalities were selected, in alphabetical order, from the list of 317 Finnish municipalities, excluding the Swedish-speaking communities. The students collected the teachers' e-mail addresses from the schools' websites. In most cases they were easily available. It was explained in the cover letter that the survey was voluntary and anonymous. Most groups sent one reminder to the recipients. Approximately 12 245 e-mails containing a hyperlink to the survey were sent out, and 2416 replies (19.7%) were returned. A total of 134 cases were excluded because they were not teachers. Additionally, 146 cases did not answer to questions on teaching methods which reduced the final sample to 2136 cases.

Measures

The survey form contained questions on different issues, some of which will be reported separately. Only those variables used for the present study are described here. First,

they contained some background questions on demographic variables and environmental features. For the purposes of analysis, the participants' age was converted into four age decades: 39 or less, 40–49, 50–59, and 60 or more. The size of the municipality was coded into four groups: less than 10,000, between 10,000 and 50,000, between 50,000 and 100,000 and larger than 100,000. Other variables are described in the results section.

Three Inclusive Teaching Strategies

The use of co-teaching, group work and differentiated education was asked about using the following single items with response alternatives of 'yes' or 'no': '*I teach every week at least one hour together with another teacher', 'I use group work on a weekly basis in my classroom',* and *'I differentiate the instruction on a regular basis'.*

Opinions of Teachers towards Inclusive Schooling

Teachers' attitudes towards inclusive education were measured using a 5-point Likert-scale for the items on a 7-item scale named 'Opinions of Teachers towards Inclusive Schooling' (OTIS). For its construction, three items were selected that loaded highest in the principal component analysis of the Teacher Attitudes towards Inclusive Education Scale (TAIS) (Saloviita 2015; Saloviita and Tolvanen 2016a). These three items explained 86% of the variance of the whole one-dimensional 10-item TAIS scale. Four new items were then added to form a seven-item scale (Saloviita and Tolvanen 2016b). Before calculating the total score, the scoring was reversed in four items. The reliability of the final scale was $\alpha = .90$, indicating an excellent level. Principal component analysis performed for this scale confirmed its one-dimensionality with a strong first component explaining 63.2% of the total variance.

Teachers' Sense of Efficacy

Teachers' self-efficacy has been understood as the confidence that teachers have about their capability to influence student learning (Klassen, Tze, Betts and Gordon 2011). The sense of teacher efficacy was measured with one item, '*I can teach different types of students including students with special educational needs'.* The scoring was done by using a 5-point Likert scale ranging from 'strongly disagree' to 'strongly agree' with a neutral mid-point.

Analysis

The results were analysed using the SPSS version 22. Statistical analyses using cross-tabulation, statistical tests, trend analysis, and Cohen's *d* were performed.

[Tables 1 and 2 near here]

Results

The prevalence of the three teaching methods across teacher categories is given in Table 1. Table 3 summarizes the associations between their use with some of the background variables studied.

Table 2 presents the total number of methods used against teacher category. The difference in the means was statistically significant, $F(2,2133) = 189.24$, $p < .000$, with subject teachers differing from the two other categories with lower use of the methods. Among them, only 4.5% reported using all three teaching methods frequently, while 24–27% of special education and classroom teachers used all three.

Among classroom teachers, the overall use of these methods was associated with a more positive attitude towards inclusive education, $F(3,992) = 4.400$, $p = .004$, and a higher sense of efficacy, $F(3,983) = 12.076$, $p < .000$. The same was true of subject teachers with regards to a sense of efficacy $F(3,685) = 12.950$, $p < .000$, but not with regards to attitude towards inclusion. Among the special education teachers, no such associations with these two

variables were observed.

The gender of the teacher was associated with the use of the three methods, with female teachers having a higher mean than male teachers, $t(2134) = 4.193$, $p<.000$, $d = .23$. The ages of the teachers were compared by using age decades. A statistically significant difference between the four age groups was observed, with the younger generations using these methods more frequently than the older generations, $F(3,2132) = 4.473$, $p =.004$. The existence of a linear trend across age groups was confirmed by a polynomial contrast via a one-way ANOVA (contrast estimate = .-.159, standard error = .051, $p =.002$).

The size of the municipality was associated with the total use of these methods, $F(3,2163) = 7.561$, $p =.000$. Post hoc tests (Bonferroni) indicated than cities bigger than 100,000 inhabitants differed from municipalities with less than 50,000 inhabitants by using the inclusion methods more frequently. The existence of a linear trend across the size of municipality was confirmed by a polynomial contrast via one-way ANOVA (contrast estimate = .224, standard error = .042, $p <.000$).

Use of Co-teaching. There were no gender differences in the use of co-teaching in any of the three teacher categories. The age of the teacher was associated with the use of co-teaching only among subject teachers among whom teachers under 40 used co-teaching more frequently (26%) than teachers in their forties, fifties or sixties (15 to 18%), $\chi^2(3) = 7.87$, $p = .049$. The university from which the teachers had graduated had no association with their use of co-teaching.

Among the subject teachers, the use of co-teaching was most frequent among teachers of mathematics or science (26.5%), and language teachers (19.8%), while teachers of music, art, sport or handicrafts used it less (12.7%) and teachers of history, religion, philosophy or

psychology the least frequently (10.1%), $\chi^2(4) = 14.67$, $p = .005$.

The size of the municipality of the school was associated with the use of co-teaching among classroom teachers $\chi^2(3) = 16.56$, $p < .001$, so that its frequency was 43.6% in municipalities below 10,000 inhabitants but rising with an increase in population so that it was 63.1% in cities larger than 100,000 inhabitants. The same phenomenon was observed in the category of special education teachers, $\chi^2(3) = 8.26$, $p < .041$, among whom this percentage rose similarly, from 60.8% to 70.4%. No statistically significant change was observed among subject teachers. Class size was associated with the use of co-teaching in that classroom teachers using it had, on average, one student more in their classrooms than other classroom teachers, $t(1016) = -3.58$, $p<.000$, $d = -.22$.

The presence of a student with intensified support needs (ISN) or special educational needs (SEN) in the classroom had some association with the use of co-teaching. Classroom teachers who had at least one student with ISN in their class used co-teaching more frequently (52%) than other classroom teachers (40%), $\chi^2(1) = 7.32$, $p = .007$. The same was true among subject teachers (20.9% against 9.2%), $\chi^2(1) = 8.17$, $p = .004$. However, the presence of a student with SEN had no statistically significant effect on the frequency of co-teaching in either group.

The use of weekly group work assignments was associated with more frequent co-teaching (56.2% vs. 43.2%) among classroom teachers, $\chi^2(1) = 17.13$, $p < .000$, but not among subject teachers (18.9% vs. 19.1%). The use of differentiated instruction had no effect on the prevalence of co-teaching in either teacher group.

There were some associations between teacher attitudes and the use of co-teaching. Attitudes towards inclusive education were more positive among those classroom teachers

who used weekly co-teaching than among other classroom teachers, $t(994) = -2.53$, $p = .011$, $d = -.16$. The sense of teacher efficacy was somewhat higher among classroom teachers who used weekly co-teaching, $t(978{,}646) = -3.65$, $p < .000$, $d = -.24$. The same was true of subject teachers, $t(198{,}315) = -2.39$, $p = .018$, $d = -.23$. This association was reversed among special class teachers. In this group, teachers who used co-teaching frequently reported lower levels of efficacy than others, $t(305{,}5) = -2.20$, $p = .029$, $d = .24$.

Use of Group Work. There were no gender differences in the use of group work in any of the three teacher categories. The age of the teacher was associated with the use of group work only among classroom teachers. It was most frequent in the age group under 40 (61.6%), and least common in the age group of 50-59 years (45.6%), $\chi^2(3) = 17.21$, $p = .001$. The university from which the teachers had graduated had no association with their use of group work.

Among the subject teachers, the use of group assignments was most frequent among language teachers (39.3%), then among teachers of music, art, sport or handicrafts (37.3%), followed by the humanities (31.9%), while it was least frequent among the teachers of mathematics and science (17.6%), $\chi^2(4) = 27.21$, $p < .000$.

The size of the municipality was not associated with the use of group work separately in any teacher category, but in total there was an association, $\chi^2(3) = 12.39$, $p = .006$, indicating that group assignments were most frequent in big cities of over 100,000 people (51.2%), while in others the frequency varied between 40% and 42%. Class size had no association with the use of group work.

The presence of a student with ISN or SEN in the classroom had no association with the use of group work. The use of differentiated instruction was associated with the use of

group work among classroom teachers $\chi^2(1) = 10.32$, $p = .001$ but not among subject teachers.

There were some associations between teacher attitudes and the use of group work. Attitudes towards inclusive education were more positive among those classroom teachers who used weekly group work than among other classroom teachers, $t(994) = -3.00$, $p = .003$, $d = -.20$. The sense of teacher efficacy was somewhat higher among classroom teachers who frequently used group work, $t(930{,}118) = -3.15$, $p = .002$, $d = -.24$. The same was true of subject teachers, $t(687) = -2.68$, $p = .008$, $d = -.23$.

Use of Differentiation. Gender was associated with the use of differentiation among classroom teachers, with female teachers using it more frequently (88%) than male teachers (79%), $\chi^2(1) = 10.62$, $p = .001$. There was no gender difference among subject teachers. The age of the teacher was not associated with the use of differentiation in any teacher category. The university from which the teachers had graduated had no association with their use of differentiation. Among subject teachers, there were no differences across subjects regarding the use of differentiation. The size of the municipality was not associated with the use of differentiation, although there was a slight tendency for it to be used more frequently in bigger municipalities. Class size had no association with the use of differentiation.

The presence of a student with ISN or SEN in the classroom had some association with the use of differentiation. Among classroom teachers, the use of differentiation rose from 79% to 88% when there was a student with ISN in the classroom, $\chi^2(1) = 8.80$, $p = .003$. In the case of a student with SEN, this number rose from 82% to 90%, $\chi^2(1) = 13.91$, $p <= .000$. Among subject teachers, the use of differentiation was not affected by the presence of students with ISN or SEN.

There were some associations between teacher attitudes and the use of differentiation. No associations were found with attitudes towards inclusive education, but classroom teachers who regularly used differentiation had a greater sense of teacher efficacy than others, $t(165{,}556) = -4.08$, $p < .000$, $d = -.40$. The same was true with subject teachers, $t(687) = -5.78$, $p < .000$, $d = -.46$.

[Table 3 near here]

Discussion

The survey into the use of three basic inclusive strategies among Finnish comprehensive school teachers indicated that the large majority of teachers regularly use differentiation in their classrooms, but that weekly use of co-teaching and group work was less frequent, being practiced by less than half the teachers. The variable most clearly related to the use of these strategies was teacher category. Classroom teachers used all these methods more frequently than subject teachers. Special education teachers were frequent users of differentiation and co-teaching, but did not use group work very often. This may show their greater interest in individual-based instruction. Subject teachers differed from other teachers in their low level use of all these approaches. About a fifth of all subject teachers did not use any of them, and less than 5% used them all.

The overall results for the frequency of co-teaching were close to those obtained in a previous study on teachers in the capital city of Finland (Saloviita and Takala 2010). However, the reported rate of weekly co-teaching among classroom teachers in big cities was now two times higher (63%) than in this very recent earlier study (34%). This may reflect the increasing popularity of co-teaching among classroom teachers since the year 2010. In the interim, co-teaching has been powerfully advocated by the National Board of Education

(2014), especially when there is a student with ISN in the classroom. The rate of co-teaching was 30% higher among classroom teachers and 127% higher among subject teachers if there was a student with ISN in their classroom. With a student with SEN, this percentage was only 8% higher among classroom teachers and actually lower among subject teachers. It would seem that when a student is transferred to intensified support, co-teaching is used, especially in grade levels 7–9. However, when the student is transferred to special support, co-teaching may be replaced by a partial removal of the student to a special education classroom.

The presence of students with ISN was also associated with a higher frequency of differentiation among classroom teachers. However, the presence of students with ISN or SEN had no association with the use of group work, which it would appear is not considered a strategy for meeting student diversity as the other two methods are.

The observed differences between classroom teachers and subject teachers in the use of the three inclusive teaching strategies may affect their relative success in teaching all children in their classrooms. Classroom teachers have succeeded better than subject teachers in having smaller expulsion rates (4%) of their students to special education classrooms as compared to subject teachers (5–6%) (National Board of Education 2016).

When the combined use of the three methods was assessed, it was found that they were most popular among female and younger teachers. Among classroom teachers, their use was also associated with a more positive attitude towards inclusive education. Their use was also associated with a higher sense of teacher efficacy both among the classroom and subject teachers.

A noteworthy finding was the association between certain methods and the teaching subject. Co-teaching was most preferred among mathematics and science teachers, and group

work among language teachers and arts and crafts teachers. It was also found that the educational program from which the teachers had graduated had no association with any of the variables studied. The use of co-teaching was found to be more prevalent in bigger municipalities than in smaller. The reason for this remains open.

Limitations of this study include the low return rate, which is typical for electronic surveys. The use of teaching methods was inquired by the use of only one item, while a more comprehensive investigation would warrant the use of multiple questions. The large number of participants in this study may have had the effect that very small differences can attain statistical significance. Therefore, the effect sizes were reported wherever possible. Even if statistical significances at the level of 5% were reported here, they should be taken with a grain of salt also because the total number of tests was pretty large. Some interesting background variables were also missing from the study. These included closer description of the locations of the schools, size of the schools, arrangements of special education and experience of teachers surveyed.

Were the reported prevalence percentages too small while taking into account the importance of these three strategies in inclusive education? It was found that subject teachers used them notably less often than classroom or special education teachers. Their use of a less versatile collection of teaching strategies may be one reason why subject teachers fail more often than classroom teachers in educating all their students, as manifested in their greater rate of special classroom consignments. It can be concluded that subject teachers, in particular, seem to need more flexible instructional strategies if they are to succeed as teachers in heterogeneous classrooms.

References

Armstrong, A.C., D. Armstrong and I. Spandagou. 2010. *Inclusive education: International policy and practice.* London: Sage.

Armstrong, D. 2006. "Reinventing "Inclusion": New Labour and the cultural politics of special education." In *Education and the Labour Government. An evaluation of two terms,* edited by G. Walford, 133–150. Abingdon: Taylor and Francis.

Ayres, B.J. and D.K. Hedeen. 1997. "Creating positive behavioral supports." In *Quick-guides to inclusion. Ideas for educating students with disabilities,* edited by M.F. Giangreco, 113–139. Baltimore: Brookes.

Basic Education Act (BEA). 1998. Perusopetuslaki. Finlex 628/1998. Http://Www.Finlex.Fi/Fi/Laki/Ajantasa/1998/19980628?Search%5Btype%5D=Pika&Search%5Bpika%5D=Perusopetuslaki

Biklen, D. 1992. *Schooling without labels: Parents, educators and inclusive education.* Philadelphia: Temple University Press.

Booth, T. and M. Ainscow. 2000. *Index for inclusion: Developing learning and participation in schools.* Bristol: CSIE. Http://Www.Eenet.Org.Uk/Resources/Docs/Index%20English.Pdf

Buswell, B.E. and C.B. Schaffner. 1990. "Families Supporting Inclusive Schooling." In *Support networks for inclusive schooling: Interdependent integrated education,* edited by W. Stainback and S. Stainback, 51–63. Baltimore: Brookes.

Carter E.W., J.M.Asmus and C.K.Moss. 2014 "Peer support interventions to support inclusive schools." In *Handbook of effective inclusive school,* edited by J.Mcleskey, N.L. Waldron, F. Spooner and B. Algozzine, 292–305. New York, NY: Routledge.

Causton-Theoharis, J. 2009. *The paraprofessional"s handbook for effective support in inclusive classrooms.* Baltimore: Brookes.

Cohen, E.G. 1994. *Designing group work: Strategies for the heterogeneous classroom*. 2nd Ed. New York, NY: Teachers College.

Conderman, G., V. Bresnahan, and T. Pedersen. 2009. *Purposeful co-teaching. Real cases and effective strategies.* Thousand Oaks: Corwin Press.

Council of the European Union. 2010. *Council conclusions on the social dimension of education and training.* 3013th Education, Youth and Culture Council Meeting.

Brussels, 11 May 2010. http://Www.Consilium.Europa.Eu/Uedocs/Cms_Data/Docs/Pressdata/En/Educ/114374.Pdf c

Darling-Hammond, L. (2009). Steady work: How Finland is building a strong teaching and learning system. Annenberg Institute for School Reform, *V.U.E.* Summer, 15-25.

Devecchi, C., F. Dettori, M. Doveston, P. Sedgwick and J. Jament. 2012. "Inclusive classrooms in Italy and England: The role of support teachers and teaching assistants." *European Journal of Special Needs Education, 27*(2): 171–184. doi: 10.1080/08856257.2011.645587

Doyle, M.B. 2002. *The paraprofessional"s guide to the inclusive classroom*. Baltimore: Brookes.

Duncan, J. M. and P.A. Prelock. 1998. "Communication Systems in the Classroom." In *Quick-guides to inclusion 2: Ideas for educating students with disabilities,* ed. M.F. Giangreco, 57–84. Baltimore: Brookes.

Dutton, D.H. and D.L. Dutton. 1990. "Technology to support diverse needs in regular classes." In *Support networks for inclusive schooling: Interdependent integrated education.* Ed. W. Stainback and S. Stainback, 51–63. Baltimore: Brookes.

European Agency for Development in Special Needs Education (EADSNE). 2003. *Key principles for promoting quality in inclusive education: Recommendations for policy makers.* Odense: Author.

European Agency for Development in Special Needs Education (EADSNE). 2012. *Special needs education country data.* https://Www.European-Agency.Org/Publications/Ereports/Sne-Country-Data-2012/Sne-Country-Data-2012

Fattig, M.L. and M. Tromey Tailor. 2009. *Co-teaching in the differentiated classroom: Successful collaboration, lesson design, and classroom management.* San Francisco: Wiley and Sons.

Finnish Educational Research Association. 2016. *Archives of the Annual Conference of the Finnish Educational Research Association.* http://www.kasvatus.net/fera/tekstisivu.tmpl?navi_id=259

Fox, T.J. and W. Williams. 1991. *"Implementing best practices for all students in their local school: Inclusion of all students through family and community involvement, collaboration, and the use of school planning teams and individual student planning teams."* Burlington: Vermont Statewide Systems Support Project, University Of

Vermont.

Gartner, A. and D.K. Lispky. 1990. "Students as instructional agents." In *Support networks for inclusive schooling: Interdependent integrated education*. Ed. W. Stainback and S. Stainback, 81–93. Baltimore: Brookes.

Gartner, A. and D. Kerzner Lipsky. 2002. *Inclusion: A service, not a place*. Port Chester, NY: Dude Publishing.

Giangreco, M.F. 1996. *VISTA. Vermont Interdependent Services Team Approach*. Baltimore: Brookes.

Giangreco, M.F. 1997. "Key lessons learned about inclusive education: Summary of the 1996 Schonell Memorial Lecture." *International Journal of Disability, Development and Education, 44* (3): 193–206.

Gibb, K., D. Tunbridge, A. Chua, and N. Frederickson. 2007. "Pathways to inclusion: Moving from special school to mainstream." *Educational Psychology in Practice, 23* (2):109-127. doi:10.1080/02667360701320770

Halinen, I. and R. Järvinen. 2008. "Towards inclusive education: The case of Finland." *Prospects, 38* (1): 77–97. doi: 10.1007/s11125-008-9061-2

Hattie, J. 2009. *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.

Hodkinson, A. 2012. "Illusionary inclusion: What went wrong with New Labour's landmark educational policy?" *British Journal of Special Education, 39* (1): 4–11. doi: 10.1111/j.1467-8578.2012.00532.x

Hoskins, B. 1995. *Developing inclusive schools: A guide*. Bloomington, Indiana: Case Research Committee.

Huebner, T.A. 2010. "Differentiated Instruction." *Educational Leadership, 67*(5): 79–81.

Johnson, D.W. and R.T. Johnson. 1999. *Learning together and alone: Cooperative, competitive, and individualistic learning.* 5th Ed. Boston: Allyn and Bacon.

Johnson, D.W. and R.T. Johnson. 2000. "Cooperative learning methods: A meta-analysis." https://Www.Researchgate.Net/Publication/220040324_Cooperative_Learning_Methods_A_Meta-Analysis

Kagan, S. 1992. *Cooperative learning.* San Clemente: Resources for Teachers.

Kirk, S.A. and G.O. Johnson. 1951. *Educating the retarded child.* Cambridge, Massachusetts: Houghton Mifflin Company.

Kiuppis, F. 2014. "Why (not) associate the principle of inclusion with disability? Tracing connections from the start of the "Salamanca Process"." *International Journal of Inclusive Education 18* (7): 746–761. doi: 10.1080/13603116.2013.826289

Klassen, R.M., V.M.C. Tze, S.M. Betts, and K.A. Gordon. 2011. "Teacher efficacy research 1998-2009: Signs of progress or unfulfilled promise?" *Educational Psychology Review, 23* (1): 21–43. doi:10.1007/s10648-010-9141-8

Koegel L.K., R.L. Koegel and G. Dunlap. 1996. *Positive behavioral support. Including people with difficult behavior in the community*. Baltimore, MD: Paul. H. Brookes.

Koster, M., S.J. Pijl, H. Nakken, and E. Van Houten. 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. doi: 10.1080/10349120903537905

Kraayenoord Van, C. 2007. "Revisiting the key lessons learned from inclusive education: Continuing the research agenda." *International Journal of Disability, Development and Education, 54* (2): 145–149. doi: 10.1080/10349120701330321

Kumpulainen, T. (Ed.) (2014). *Opettajat Suomessa 2013* [Teachers in Finland 2013]. Koulutuksen seurantaraportit 2014:8. Helsinki: National Board of Education.

Laukkanen, R. and M. Kyrö. 2000. Eds. *Oppia OECD: n analyyseista.* [Learning from the analyses of OECD]. Helsinki: Opetushallitus.

Legge 5 febbraio 1992, n. 194. 1992. http://hubmiur.pubblica.istruzione.it/alfresco/d/d/workspace/SpacesStore/b9b27816-47b5-4031-9f4b-f0a8d1a8f364/prot104_92.pdf

McLeskey, J,, N.L. Waldron, F. Spooner and B. Algozzine.2014. eds. *Handbook of effective inclusive school*. New York, NY: Routledge.

Ministry of Education and Culture. 2013. Perusopetuksen Opetusryhmäkoko 2013 [Size of the Teaching Groups in Basic Education 2013] http://www.minedu.fi/export/sites/default/OPM/Koulutus/koulutuspolitiikka/Hankkeet/pop/liitteet/Opetusryhmakoot2013.pdf

Murawski, W.W., and V.A. Goodwin. 2014. Effective inclusive schools and the co-teaching conundrum. In *Handbook of effective inclusive school,* ed. J.Mcleskey, N.L. Waldron, F. Spooner and B. Algozzine, 292–305. New York, NY: Routledge.

Murawski, W.W. and H.L. Swanson, 2001. "A meta-analysis of co-teaching research: Where are the data?" *Remedial and Special Education, 22*(5): 258–267.

National Board of Education 2011. *Amendments and additions to the national core curriculum for basic education*. Http://Www.Oph.Fi/Download/132551_Amendments_And_Additions_To_National_Core_Curriculum_Basic_Education.Pdf

National Board of Education 2014. *Perusopetuksen opetussuunnitelman perusteet.* [*National core curriculum for basic education 2014*]. Määräykset ja ohjeet 2014:96. Helsinki: Opetushallitus Http://Www.Oph.Fi/Download/163777_Perusopetuksen_Opetussuunnitelman_Perusteet_2014.Pdf

National Board of Education 2016. *Vipunen. Education statistics Finland.* Https://Vipunen.Fi/Fi-Fi/Perus/Sivut/Erityinen-Ja-Tehostettu-Tuki.Aspx

National Center for Education Statistics. 2016. *Digest of education statistics.* Https://Nces.Ed.Gov/Programs/Digest/D13/Tables/Dt13_204.60.Asp

Organisation for Economic Cooperation and Development (OECD). 1999. *Inclusive education at work: Students with disabilities in mainstream schools*. Paris: Author.

Puro, E., H. Sume and T. Vehkakoski. 2011. "Erityispedagogiikan tieteenalaidentiteetin rakentuminen professoreiden puheessa." [The construction of the identity of special education as discipline in the professors' speech]. *Kasvatus, 42* (3): 243–255.

Rainforth, B., J. York and C. Macdonald. 1992. *Collaborative teams for students with severe disabilities: Integrating therapy and educational services.* Baltimore: Brookes.

Roulstone, A. and S. Prideaux. 2008. "More policies, greater inclusion? Exploring the contradictions of New Labour inclusive education policy." *International Studies on Sociology of Education, 18* (1): 15–29. doi: 10.1080/09620210802195939

Saloviita, T. 2000. "Supported employment as a paradigm shift and a cause of legitimation crisis." *Disability and Society, 15* (1): 87–98.

Saloviita, T. 2015. "Measuring pre-service teachers' attitudes towards inclusive education: Psychometric properties of the TAIS scale." *Teaching and Teacher Education*, *52*, 66–72. doi:10.1016/j.tate.2015.09.003

Saloviita, T. and T. Schaffus. 2016. "Teacher attitudes towards inclusive education in Finland and Brandenburg, Germany, and the issue of extra work". *European Journal of Special Education.* Advance online publication. doi:10.1080/08856257.2016.1194569

Saloviita, T. and M. Takala (2010). *"*Frequency of co-teaching in different teacher categories." *European Journal of Special Needs Education, 25*(4)*: 389–396.*

doi:10.1080/08856257.2010.513546

Saloviita, T. and A. Tolvanen. 2016a. "Attitudes of teachers towards inclusive education: Teacher-related factors." Submitted for publication.

Saloviita, T. and A. Tolvanen. 2016b. "Teacher attitudes towards inclusive education in Finland." Submitted for publication.

Scruggs, T.E., M.A. Mastropieri and K.A. Mcduffie. 2007. "Co-teaching in inclusive classrooms: A metasynthesis of qualitative research." *Exceptional Children*, 73 (4): 392–416.

Stainback, W. and S. Stainback. 1990. "Facilitating peer supports and friendships." In *Support networks for inclusive schooling: Interdependent integrated education.* Ed. W. Stainback and S. Stainback, 51–63. Baltimore: Brookes

Statistics Finland. 2017. *Erityisopetus 2016* [Special Education 2015]. http://www.stat.fi/til/erop/2016/erop_2016_2017-06-13_tie_001_fi.html

Taylor, S.J. 1988. "Caught in the continuum: A critical analysis of the principle of the least restrictive environment." *The Journal of the Association for Persons with Severe Handicaps,* 13 (1): 41–53.

Thousand, J.S., R.A. Villa and A.I. Nevin. 2007. *Differentiating instruction: Collaborative planning and teaching for universally designed learning*. Thousand Oaks, California: Corwin Press.

Tomlinson, C.A. 2005. *How to differentiate instruction in mixed-ability classrooms.* Upper Saddle River, NJ: Pearson.

United Nations. 2006. *Convention on the rights of people with disabilities.* Http://Www.Un.Org/Disabilities/Convention/Conventionfull.Shtml

United Nations Educational, Scientific, and Cultural Organization (UNESCO). 1994. *The Salamanca Statement and framework for action on special needs education.* World conference on special needs education: Access and quality. Salamanca, Spain 7–10. June 1994. Http://Www.Unesco.Org/Education/Pdf/SALAMA_E.PDF

United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2004. *Changing teaching practices: Using curriculum differentiation to respond to students' diversity*. Paris: Author. Http://Unesdoc.Unesco.Org/Images/0013/001365/136583e.Pdf

United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2008. Conclusions and recommendations of the 48th session of the International Conference

on Education (ED/BIE/CONFINTED 48/5). Geneva: UNESCO IBE. http://www.ibe.unesco.org/fileadmin/user_upload/Policy_Dialogue/48th_ICE/ICE_FINAL_REPORT_eng.pdf

United Nations Educational, Scientific, and Cultural Organization (UNESCO). 2009. *Policy guidelines on inclusion in education.* Paris: Author. Http://Unesdoc.UNESCO.Org/Images/0017/001778/177849e.Pdf -

U.S. Department of Education. 2010. *Thirty-five years of progress in educating children with disabilities through IDEA.* Http://Www2.Ed.Gov/About/Offices/List/Osers/Idea35/History/Index_Pg10.Html

Vaughan, M. 2002. "An index of inclusion." *European Journal of Special Needs Education, 17* (2): 197–201.

World Bank. 2016. Inclusive education for disabled children. Http://Www.Worldbank.Org/Projects/P126025/Inclusive-Education-Disabled-Children?Lang=En

Table 1

The prevalence of some inclusive educational approaches among teachers

Teacher category	N	No %	Yes %	Total %	χ^2	*df*	*p*
Co-teaching (weekly)							
Classroom teacher	1018	49.8	50.2	100			
Subject teacher	718	80.9	19.1	100			
Special ed. teacher	400	37.8	62.3	100			
Total	2136	58.0	42.0	100	250.25	2	.000***
Group work (weekly)							
Classroom teacher	1018	46.4	53.6	100			
Subject teacher	718	68.4	31.6	100			
Special ed. teacher	400	65.3	34.8	100			
Total	2136	57.3	42.7	100	96.14	2	.000***
Differentiation (regular)							
Classroom teacher	1018	13.7	86.3	100			
Subject teacher	718	31.2	68.8	100			
Special ed. teacher	400	1.8	98.3	100			
Total	2136	17.3	82.7	100	173.82	2	.000***

Table 2

The prevalence of three inclusive educational strategies among teachers

		Number of strategies used %						
Teacher category	N	0	1	2	3	Total %	M	SD
Classroom teacher	1018	4.9	27.2	40.7	27.2	100	1.90	.86
Subject teacher	718	18.4	48.2	29.0	4.5	100	1.19	.79
Special ed. teacher	400	0.8	27.3	48.0	24.0	100	1.95	.75
Total	2136	8.8	34.3	38.1	19.0	100	1.67	.88

Table 3

Variables significantly associated with the use of three inclusive approaches (p values)

Variables	Teacher category		
	Class	Subject	Special
	N=1018	N=718	N=400
Teacher's use of weekly co-teaching			
Age	-	.049	-
Gender	-	-	-
School subject		.005	
Class size	.000	-	
Size of the municipality	.001	-	.041
Presence of a student with intensified support needs (ISN)	.007	.004	
Presence of a student with special education needs (SEN)	-	-	
Use of group work	.000	-	-
Use of differentiation	-	-	
Attitudes towards inclusion (OTIS)	.011	-	-
Teacher's sense of efficacy	.000	.018	.029
Teacher's use of weekly group work			
Age	.001	-	-
Gender	-	-	-
School subject		.000	
Size of the municipality	-	-	-
Presence of a student with intensified support needs (ISN)	-	-	
Presence of a student with special education needs (SEN)	-	-	
Use of co-teaching	.000	-	-
Use of differentiation	.001	-	
Attitudes towards inclusion (OTIS)	.003	-	-
Teacher's sense of efficacy	.002	.008	-
Teacher's use of regular differentiation			
Age	-	-	
Gender	.001	-	
School subject		-	
Size of the municipality	-	-	
Presence of a student with intensified support needs (ISN)	.003	-	
Presence of a student with special education needs (SEN)	.000	-	
Use of group work	.001	-	
Use of co-teaching	-	-	
Attitudes towards inclusion	-	-	
Teacher's sense of efficacy	.000	.000	

Note. Sign '–' means that no statistically significant association was found