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# Teachers' Changing Attitudes and Preferences around Inclusive Education

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## ABSTRACT

Inclusive education as an alternative to traditional separate special education has gained recognition since the approval of the Salamanca Statement in 1994. The success of inclusion is considered to be highly dependent on the teachers' positions on inclusion. In this study Finnish comprehensive school teachers' opinions were investigated in order to evaluate the prospects of inclusion in Finland, and also to study the variables associated with these attitudes. A total of 2,276 teachers and principals participated in the email survey. The final sample contained 1,041 classroom teachers, 755 subject teachers and 445 special education teachers. The results confirmed the existence of a large variety in attitudes both in the whole sample as well as between the teacher categories. Except for special education teachers, the participants reported changing their position more often towards negative than positive direction. The availability of material resources such as smaller class size, had no association with teachers' attitudes. Instead, the immaterial resources such as help from other teachers had a positive association with more positive attitudes. Even if the teachers' opinions were more critical than in many other countries, the survey also indicated the existence of the potential for positive development towards more inclusive education.

## Keywords

Finland; inclusive education; special education; survey; teacher attitudes

## Introduction

The concept of inclusive education was initially launched in the Salamanca Statement (United Nations Educational, Scientific and Cultural Organisation (UNESCO), 1994). In this document, inclusion referred to the education of all students with disabilities together with their peers without disabilities. Even if the principle was adopted in the Convention on the Rights of People with Disabilities (United Nations, 2006), its practical implementation in schools has met difficulties. In almost all countries, students with disabilities and other special educational needs (SEN) are still extensively instructed in self-contained classrooms (European Agency for Development in Special Needs Education (EADSNE), 2012). One reason for inclusion's slow development may have been the teachers' worries and reservations regarding it.

Teacher attitudes towards inclusive education have been extensively studied for decades (Avramidis & Norwich, 2002; Chazan, 1994; de Boer, Pijl, & Minnaert, 2011;

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Scruggs & Mastropieri, 1996). These studies indicate that attitudes show great variation, even if the majority of teachers typically have a positive view of inclusion. Another finding notes that teachers from Western countries have been more positive towards inclusion than their colleagues from developing or Asian countries (Engelbrecht, Savolainen, Nel, & Malinen, 2013; Helldin et al., 2011; Leyser, Kapperman, & Keller, 1994; Loreman, Forlin, & Sharma, 2007; Moberg, 2003; Savolainen, Engelbrecht, Nel, & Malinen, 2012; Sharma, Ee, & Desai, 2003; Sharma, Forlin, & Loreman, 2008; Sharma, Forlin, Loreman, & Earle, 2006). Large differences also exist between Western countries (Author removed, 2016, 2019b; Leyser et al., 1994; Moberg, Zumberg, & Reinmaa, 1997; Sharma, Aiello, Pace, Round, & Subban, 2018).

A consistent finding has been that teacher attitudes differ across teacher categories. Special education teachers have constantly been the most positive group (Engelbrecht et al., 2013; Forlin, Douglas, & Hattie, 1996; Hernandez, Hueck, & Charley, 2016; Moberg, 2003; Pearson, Lo, Chui, & Wong, 2003), while secondary education or subject teachers have scored lower than elementary school teachers (Alvarez McHatton & McCray, 2007; Author removed, 2018; Chiner & Cardona, 2013; Larrivee & Cook, 1979; Savage & Wienke, 1989). Previous studies have equally confirmed that school principals have been more positive towards inclusive education than teachers (Author removed, 2018; Boyle, Topping, & Jindal-Snape, 2013; Center & Ward, 1987; Houck & Rogers, 1994).

Regarding gender differences, an almost equal number of studies have reported either female superiority in positive attitudes (e.g. Avramidis, Bayliss, & Burden, 2000a; Bowman, 1986; Boyle et al., 2013) or no gender differences at all (e.g. Avramidis, Bayliss, & Burden, 2000b; Chiner & Cardona, 2013; Forlin, Loreman, Sharma, & Earle, 2009). Males were found superior in only two studies, the first performed in the United States (Ernst & Rogers, 2009) and the second in India (Bhatnagar & Das, 2014). However, only the Indian study found the difference to be statistically significant at the level of  $p < 0.01$ . When teachers' age has been studied, younger teachers have been found to be more positive than the older in a majority of cases (Ahmed, Sharma, & Deppeler, 2014; Bhatnagar & Das, 2014; Bornman & Donohue, 2013; Cornoldi, Terreni, Scruggs, & Mastropieri, 1998; Leyser et al., 1994). A few studies have not found any age effect (e.g. Avramidis et al., 2000a; Gyimah, Sugden, & Pearson, 2009).

One attitudinal dimension frequently studied in association with attitudes towards inclusion has been the teacher's self-efficacy. Self-efficacy in education has usually been understood as teachers' confidence in their individual and collective ability to influence students' learning (Klassen, Tze, Betts, & Gordon, 2011). The clearest associations between self-efficacy and attitudes towards inclusion have been found when the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma, Loreman, & Forlin, 2012) has been used (Savolainen et al., 2012). Teachers' attitudes towards inclusion may also be related to their work preferences, for example, whether they are willing to cooperate closely with other staff members in the school (Minke, Bear, Deemer, & Griffin, 1996).

Another issue possibly having an effect on teachers' attitudes is the adequacy of resources. The lack of adequate resources has been frequently mentioned as one reason for teachers' negative attitude towards inclusion (Avramidis et al., 2000b; Center & Ward, 1987; Coutsocostas & Alborz, 2010; Horne & Timmons, 2009; Scruggs & Mastropieri, 1996; Stoiber, Gettinger, & Goetz, 1998; Subban & Sharma, 2006). However, studies on this topic have remained inconclusive because the direction of causality has not been reliably

established. Some examples of the resources that teachers possibly need and mentioned in the studies referred include smaller class sizes, a smaller number of students with SEN, help from teaching assistants or special education teachers and knowledge that help is available if needed.

An interesting issue is the future development of teacher attitudes concerning the acceptability of inclusion. The vast increase in research on inclusion and the real information overload in manuals and guidebooks for teachers could suggest that teachers' attitudes are also becoming more positive. It also could be speculated that economic growth at some point must reach a level at which schools will have adequate resources. However, this point of saturation does not seem to have occurred yet, and the complaints regarding a lack of resources have continued (Chiner & Cardona, 2013; Goodman & Burton, 2010). Actually, a stability of teacher attitudes towards inclusion has been observed in the past. Scruggs and Mastropieri (1996) noted that at least during the 37 study years 1958–1995, no positive changes occurred in teacher attitudes towards inclusion.

## Finland

Previous studies on Finnish comprehensive school teachers' attitudes towards inclusion have shown that overall scores have settled just below (Author removed, 2018, 2016; Moberg, 2003; Moberg et al., 1997) or near the midpoint of the scales used (Engelbrecht et al., 2013). The results indicate a somewhat lower acceptance of inclusive education than usual in Western countries (Scruggs & Mastropieri, 1996). In a recent large survey, it was observed that only 20% of the Finnish classroom teachers agreed that children with special educational needs should be educated in mainstream classrooms as much as possible (Author removed, 2019a). This lower level of acceptance sounds logical because the level of school segregation in Finland is higher compared with other European countries (EADSNE, 2012). However, a comparison with Brandenburg, Germany, showed that comprehensive school teachers in Finland were more positive than German teachers (Author removed, 2016). It was proposed that the difference is explained by the better support systems for inclusion that are available for Finnish teachers.

The Finnish comprehensive school has a large special education sector (Statistics Finland, 2018). In 2011 (Act on Basic Education, 1998/2010), a three-tier model of supports was introduced, replacing the existing model which divided students into two classes: mainstream students and students with special educational needs. The first tier, general support, entails standard mainstream education with possible temporary supports. On the second tier, a student identified as having learning difficulties is categorised as a student with *intensified support needs* (ISN). Official pedagogical documentation is needed to move the student to this second tier. It allows the teacher to access extra support for the student, such as a special education teacher or psychologist. If the student does not show adequate progress, the third tier is used to categorise the student as having *a need for special support*. This new label essentially corresponds with the old label of special educational needs (SEN). The student is then usually transferred to a special education classroom.

The three-tier system of general, intensified and special support was created as a response to the ever-increasing transfers of students to self-contained classrooms. The

idea of the three-tier model follows the principles of the American Response to Intervention (RTI) model (Finnish National Agency for Education, 2014). In it, students who have learning difficulties are provided with interventions at increasing levels of intensity. Decisions about the intensity of supports are based on individual student responses to instruction (Berkeley, Bender, Peaster, & Saunders, 2009).

The introduction of the three-tier model in Finland stopped the percentage increase of student transfers from mainstream classrooms in special education classrooms, but only for a couple of years. Most recent data indicate that the growth of special education has continued. The number of special classroom placements is now about 5.4% of all comprehensive school students (Statistics Finland, 2018). This number is among the largest in Europe, and possibly in the world (EADSNE, 2012).

The present study aimed to survey Finnish comprehensive school teachers' attitudes towards inclusive education and replicate some parts of a previous study made one year earlier (Author removed, 2018) in order to study the repeatability or consistency of the survey results. It also aimed to survey how teachers evaluate their experiences with inclusion and how they have seen their attitudes develop.

The aim was also to review the association of attitudes towards inclusion with selected background variables, which included several teacher-related variables, such as age and gender. A second group of variables comprised the teachers' approaches, preferences and strategies in the classroom, including some instructional strategies, reliance on self and the assurance of getting help if it is needed. For the analysis, these variables were grouped on the basis of factor analysis to achieve a more concise comparison. Finally, some organisational variables were studied, such as class size and number of SEN students in the classroom. In particular, four teacher categories were compared with one another: classroom teachers, subject teachers, special education teachers and principals. Most of the principals were also teachers.

Partly for the sake of brevity, an item-by-item analysis of the responses to the scale measuring attitudes is presented for only the first three teacher categories (Table 1). A comparison of some items measuring the opinions on the teaching environment is made only between classroom and subject teachers (Table 2). A statistical comparison between the sum scores of the attitude scale is made only among the first three teacher categories in order to demonstrate their mutual differences (Table 3). All four categories are used to review the relative amount of supporters and opponents of inclusion (Table 4) and correlations between some variables (Table 5).

## Methods

### Participants

The participants of this study were comprehensive school teachers (N = 2,241) and principals (N = 217), of whom all but 35 also worked as teachers, totalling 2,276 participants. The majority of school principals (60%) were classroom teachers. Teachers were from grade levels 1–9 in the Finnish comprehensive school, where the students' age varied between 7–16 years. Of the participants, 1,041 were classroom teachers, who instructed grades 1 to 6, 755 were subject teachers, instructing mainly grades 7–9, and

**Table 1.** Percentages of teachers who agreed or strongly agreed on the items of OTIS.

Item	Teacher category					
	N	class	subject	special	Total	
		1,041	755	445	2,276	%
		%	%	%	%	%
<b>ITEMS FROM THE TAIS SCALE</b>						
1. The best result is achieved if each child with SEN is placed in a special education classroom that best suits him/her <i>(Reversed in the sum total)</i>		47	54	30	46	
2. Children with SEN learn best in their own special education classes where they have specially trained teachers <i>(Reversed in the sum total)</i>		48	56	28	47	
3. Students with SEN should be educated in mainstream classrooms as much as possible		39	30	60	40	
<b>EXPERIENCES ON INCLUSION</b>						
4. My experiences on the education of students with SEN in the mainstream classroom are predominantly positive		47	37	73	49	
5. My experiences on the education of students with SEN in the mainstream classroom are predominantly negative <i>(Reversed in the sum total)</i>		18	25	6	18	
<b>DIRECTION OF ATTITUDE CHANGE</b>						
6. I am more positive than before on the idea of placing students with SEN in mainstream classes		27	21	59	31	
7. I am more negative than before on the idea of placing students with SEN in mainstream classes <i>(Reversed in the sum total)</i>		36	41	14	34	

**Table 2.** Classroom (N = 1,041) and subject teachers' (N = 755) opinions on some issues (means, standard deviations, t-tests and correlations with the OTIS scale).

Item	Teacher	M	SD	t	p	d	r
1. I trust that I get additional help if a student with SEN is placed in my class	class subject	2.56	1.23	.468	.640	-	.344
	subject	2.53	1.18				
2. The principal sufficiently supports teachers who have a student with SEN	class subject	2.88	1.04	3.04	.002	.15	.258
	subject	2.72	1.02				
3. In my classroom, supports are sufficient	class subject	3.02	1.19	3.01	.003	.15	.243
	subject	2.85	1.07				
4. If I had a student with SEN in my classroom, I would manage if I had a teaching assistant	class subject	3.21	.96.93	-.760	.447	-	.291
	subject	3.24					
5. A student with SEN does not cause much extra work if a teacher gets help from a special education teacher	class subject	2.28	1.04	-5.71	>.000	-.29	-.143
	subject	2.59	1.10				
6. A student with SEN causes additional work even if the teacher gets additional help	class subject	4.55	.68.65	2.38	.018	.12	-.250
	subject	4.47					
7. I plan the teaching of my students with SEN with special education teachers	class subject	3.42	1.11	5.55	>.000	.27	.092
	subject	3.11	1.20				
8. If I had a student with SEN, I would prefer to get help from a teaching assistant rather than a special education teacher	class subject	2.33	.92.90	.826	.409	-	.020
	subject	2.30					
9. If had a student with SEN in my class, I would manage if I got help from a special education teacher	class subject	3.71	.92.85	-1.94	.052	-	.138
	subject	3.80					
10. Teaching assistants should be primarily responsible for the teaching of a student with SEN	class subject	1.74	.81.95	-5.47	>.000	-.27	-.195
	subject	1.98					
11. I can teach various students, including students with SEN	class subject	3.69	.84.90	3.84	>.000	.20	.311
	subject	3.52					
12. I have experience in teaching students with SEN	class subject	4.45	.95.81	.08	.934	-	.116
	subject	4.45					



**Table 3.** Attitudes of teachers towards inclusive education as measured by OTIS.

Teacher category	n	Mean	SD	df	F	p
Sum total	2,057	21.16	5.62	2, 2054	127.5	.000
Classroom teacher	996	20.84	5.48			
Subject teacher	698	19.51	5.68			
Special education teacher	363	25.21	5.92			

**Table 4.** Opponents (scoring lower than 15) and supporters (scoring higher than 27) of inclusion as classified from OTIS sum score.

Participant category	N	Opponents	Neutral	Supporters	Total %
Classroom teacher	1,041	14.8	74.0	11.2	100
Subject teacher	755	18.6	76.8	5.6	101
Special education teacher	445	5.0	55.6	39.4	100
School principal	204	11.3	70.6	18.1	100
Sum total	2,276	14.2	71.1	14.7	100

**Table 5.** Pearson correlations between some variables (N = 2087–2131). All correlations are statistically significant,  $p < .000$ .

Item	1.	2.	3.	4.	5.
1. Inclusion scale (three items from TAIS)	-	.550	-.559	.601	-.602
2. My experiences of inclusion are mainly positive		-	-.610	.613	-.581
3. My experiences of inclusion are mainly negative			-	-.582	.615
4. I am more positive than before towards inclusion				-	-.820
5. I am more negative than before towards inclusion					-

445 were special education teachers. In Finland, 'subject teachers' are those teachers who provide instruction only in specified subjects.

The final number of participants answering the individual questions varied by item. Of all participants, 19.5% (N = 444) were male and 80.5% (N = 1832) were female. Their mean age was 47 years, and they averaged 18 years of teaching experience. The respondents covered 6% of all comprehensive school teachers in Finland. The share of female participants was 81%, which was higher than the relative portion of female teachers in Finnish comprehensive school teachers in total (74%) (Kumpulainen, 2014).

### Data Collection

The data were collected in 2016 by 52 students who participated in a university course on statistical methods during their second year of teacher training. Each student or student group was given a sample of Finnish municipalities. For this purpose, a total of 223 municipalities were chosen in alphabetical order from the list of all 317 Finnish municipalities. Each student collected the teachers' email addresses from the primary schools' websites and sent emails until a determined amount of replies was attained. Usually, the teachers' addresses were freely available on the school web sites; if not, the school was excluded from the study. The cover letter confirmed that the study was anonymous and voluntary, and no participant could be identified. The students volunteered for the data collection and used the data they collected for their personal accomplishment.

Approximately 12,245 emails containing the link to the survey were sent, resulting in 2,416 replies (19.7%). A total of 99 replies were excluded because they represented neither teachers nor school principals. The study followed the ethical standards of the National Advisory Board on Research Ethics in Finland (2009).

## Variables

The questionnaire contained background questions about the teacher, the school and the teaching. For further analysis, the subject teachers were divided into four groups based on their major subject. The groups were languages ( $N = 236$ ), science and mathematics ( $N = 198$ ), arts, crafts and physical education ( $N = 136$ ) and humanities ( $N = 67$ ).

*OTIS Scale.* A seven-item scale, Opinions of Teachers towards Inclusive Schooling (OTIS), was constructed to measure teachers' attitudes towards inclusive education (Table 1). A five-point Likert scale, ranging from 'strongly disagree' to 'strongly agree' with a neutral midpoint was used as the response format for each item. The first three items for this scale were taken from the Teacher Attitudes towards Inclusive Education Scale (TAIS) (Author removed, 2015) on the basis of their highest item and total correlations with the full scale. The items selected for this TAIS Short Form scale explained 86% of the variance of the original TAIS scale (Author removed, 2017). These three items probed inclusion as a value (one item) and measured the outcomes of inclusion (two items with slightly different wording). Four additional items, written for this study, were added to the scale. Two of these items asked the teacher's personal experiences on inclusive education with a similar wording but reversing 'positive' to 'negative' in the subsequent item (items 4 and 5). The inter-correlation of these items was  $r = -0.81$ . The last two items (items 6 and 7) asked the direction of teachers' possible attitude changes towards inclusion, the first asking the change in a positive direction and the second in a negative direction. The inter-correlation of these items was  $r = -0.82$ . The scoring was reversed in four items, as indicated in Table 1, before the sum score for OTIS was calculated.

*Supporters and opponents.* Two subgroups were formed to designate definite supporters and opponents of inclusion. Teachers who scored 28 or higher on the OTIS scale were categorised as 'supporters'. This total required that the average of the responses in seven items of OTIS be at least four. The score was achieved if the participant agreed on each of the seven items in favour of inclusion. Teachers who scored 14 or lower on the OTIS scale were categorised as 'opponents'. This score similarly required that the teacher, in principle, disagreed on every item.

*Approaches, preferences and sentiments.* Twelve statements on teachers' approaches and sentiments around the education of students with SEN were developed (Table 2). These statements measured the teachers' preferences regarding the outside help (help from principals, special education teachers, or teaching assistants), their reliance on their own abilities, and their reliance on getting outside help. The statements were answered using a five-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'.

## Data Analysis

Data were analysed with the IBM SPSS Statistics program (Version 24). The results are presented mainly in percentages. Some statistical tests and effect size calculations were also made. The OTIS scale was studied with principal component analysis. The twelve statements were studied with principal-axis factor analysis.

## Results

### Attitudes Towards Inclusion

The principal component analysis performed for the OTIS scale confirmed its one-dimensionality with a strong first component explaining 63.2% of the total variance. The distribution of values departed from a full symmetry in the direction of more negative values with skewness =  $-0.143$  and kurtosis  $-0.427$ . The internal consistence of the scale was  $\alpha = 0.90$ .

The mean of the whole sample total score of OTIS ( $M = 21.22$ , standard deviation (SD) =  $5.94$ ) did not statistically differ from the neutral midpoint of the scale,  $t(2086) = 1.69$ ,  $p = 0.092$ . However, one-sample t-tests showed that the classroom teachers' mean value was at the midpoint, with subject teachers' value below and special education teachers' value above. The differences between teacher categories varied from small to large (Table 3). Post hoc tests (Bonferroni) confirmed that all were statistically significant at the level of  $p < 0.000$ . The difference between special education teachers and subject teachers calculated by Cohen's  $d$  was  $d = 1.02$ , indicating a strong effect. The difference between special education teachers and classroom teachers was moderate ( $d = 0.77$ ), while the difference between classroom teachers and subject teachers remained small ( $d = 0.24$ ).

The school principals ( $N = 204$ ) were more positive towards inclusion ( $M = 22.70$ ,  $SD = 5.6$ ) than teachers in general ( $M = 21.06$ ,  $SD = 6.0$ ), with  $t(2085) = 3.752$ ,  $p < 0.000$ . The effect size indicated a small difference of  $d = 0.28$ . No differences in attitudes towards inclusion were found among subject teachers across their major subject,  $F(3, 633) = 2.06$ ,  $p = 0.105$ .

A large minority of special education teachers, and to a lesser extent, school principals were classified as supporters of inclusion so that the percentage of supporters was larger than the percentage of opponents (Table 4). In contrast, the percentage of supporters was smaller than the percentage of opponents among classroom teachers, and especially among subject teachers.

Response distributions in individual items of the OTIS scale tangibly demonstrated the teachers' opinions on inclusion. In Table 1, the participants' responses were classified as agreements if the response was either 'agree' or 'strongly agree'. About half of the classroom and subject teachers believed that students with SEN learn best in special education classrooms (items 1 and 2). This belief was not equally common among special education teachers. The classroom and subject teachers' experiences about inclusion were twice as often positive as negative. Among special education teachers, the respondents were as much as twelve times more positive than negative. Positive experiences correlated with a positive attitude change and negative experiences with negative attitude change (Table 5).

Even if the teachers' experiences were more often positive than negative, the classroom and subject teachers' change in attitudes was usually in the negative direction. Special education teachers differed again from others. They reported having changed their opinion four times more often towards the positive than the negative direction.

The school principals' ( $N = 206$ ) attitude change, not reported in Table 1, occurred more often in a positive (34%) than a negative (24%) direction. The principals had, for the most part, positive experiences from inclusion (56%), while only 10% reported predominantly negative experiences.

The results of this study were compared with a similar previous study in Finland. The three items of the TAIS Short Form in this study were also used in a survey performed one year earlier with 1,766 Finnish teachers, using a similar sampling method (Author removed, 2018). The comparison indicated that the total and subgroup sample means of the TAIS Short Form were almost identical in both studies as confirmed by Cohen's  $d$ , which remained within the limits of 0.00–0.07. However, the percentage distributions of the individual TAIS items showed greater variation. The total percentage of agreements (see Table 1) for the first item in the present study was 46% in contrast to 43% in the previous study; for the second, 47% in contrast to 55%; and for the third, 40% in contrast to 52%. The differences in the three teacher categories varied between 1–14% with a mean of 8%.

## Explaining the Attitudes

### Teacher-related Variables

**Gender and Age.** Female teachers ( $N = 1,675$ ) were more positive towards inclusion than male teachers ( $N = 412$ ),  $t(2085) = 4.96$ ,  $p < 0.000$  with a small effect size of  $d = 0.27$ . When analysed separately in teacher categories, the difference survived only among subject teachers,  $t(248,028) = 3.209$ ,  $p = 0.002$ ,  $d = 0.30$ . The correlation between the age and the attitudes towards inclusion was  $r = -0.048$ , with  $p = 0.030$  remaining close to zero in all teacher categories. However, the comparison of teachers under the age of 30 ( $N = 80$ ) and those over the age of 59 ( $N = 178$ ) produced a difference that was statistically significant, with  $t(187,121) = 2.15$  and  $p = 0.032$ . Young teachers were slightly more positive than older ( $d = 0.30$ ).

**University Campus.** Almost all classroom teachers had graduated from ten main university campuses with teacher education programs. Subject teachers came mainly from six campuses and special education teachers from five campuses. No statistically significant differences were observed between the campuses in the OTIS sum score in the analysis of variance. However, when the highest ranking and lowest ranking programmes were compared, modest effect sizes between  $d = .30 - .44$  emerged in the mean scores. The highest-ranking campus was always the University of Helsinki, while the lowest ranking varied from Rauma (for classroom teachers) to Oulu (for subject teachers) to Turku (for special education teachers).

### Resources and Attitudes

**Students with SEN or ISN.** If the classroom teacher had a student with SEN in her classroom (as was the case in 55% of the teachers), her attitude towards inclusion was

slightly more positive than that of her colleagues without a student with SEN:  $t(994) = -2.64, p = 0.008, d = 0.17$ . If the subject teacher had a student with SEN in some of their groups (as was the case in 71% of the teachers) no difference in attitudes was observed. Most classroom teachers (85%) and subject teachers (85%) had a student with ISN in the class, but the presence of students with ISN had no association with their attitudes towards inclusion.

**Classroom Assistant.** Classroom teachers having a student with SEN were studied by comparing those teachers with a classroom assistant ( $N = 241$ ) to those without an assistant ( $N = 308$ ). There was no difference in attitudes towards inclusion between these groups:  $t(547) = -1.71, p = 0.089$ . The same was true for subject teachers, of whom 26% also had a classroom assistant if they had a student with SEN:  $t(488) = -0.388, p = 0.698$ .

**Class Size.** Classroom teachers had 5–41 students in their classroom with an average of 19.6 and SD of 4.6. When asked about the maximum class size appropriate for them, the classroom teachers' average value was 20.3 students. A teacher's actual class size had no association with her attitudes towards inclusion ( $r = -0.07$ ). The same was true for subject teachers ( $r = -0.09$ ) who had an average class size of 18.2 (SD = 3.6), varying between 2 and 28. The subject teachers considered the appropriate class size to be no more than 18.6 students. Special education teachers evaluated that 18.8 would be the appropriate maximum size. For school principals, the average for the appropriate class size was 20.0. When asked about the maximum acceptable number of students with SEN in a mainstream classroom, all teacher categories and school principals most commonly (45–48%) mentioned two students, while the majority set the limit on one to two students (62–77% according to teacher category). About 10% of the classroom teachers and 14% of the subject teachers were not willing to accept any student at all with SEN in their classroom.

### **Approaches, Preferences and Sentiments**

The replies of 1041 classroom teachers and 755 subject teachers on 12 statements on strategies and opinions around education were submitted to principal-axis factoring. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.667, indicating a mediocre level of acceptability for factor analysis (Dziuban & Shirkey, 1974). The statistical significance of Bartlett's test of sphericity was  $p < 0.000$ , confirming that the correlation matrix was an identity matrix. The best solution to principal-axis factoring of the twelve statements was considered to have three factors. They accounted for 28.2% of the variance of the original scores. Oblique rotation, using the Oblimin criterion, showed that correlations between factors were small. The analysis was therefore continued with the Varimax rotation. The first factor was called 'trust on support', which loaded higher than 0.580 in items 1, 2 and 3 (see Table 2 for item phrasing). The second factor was named 'transfer of responsibility'. Its highest loading (0.912) was on item 8. The third factor was named 'self-efficacy', and loaded higher than 0.460 on items 11 and 12.

Standardised regression scores of the three factors were used for further analysis. The correlation of OTIS scale with factor 1 (trust on support) was  $r = 0.413, p < 0.000$ ; with factor 2 (transfer of responsibility),  $r = -0.022, p = \text{N.S.}$ ; and with factor 3 (self-efficacy),

$r = 0.283, p < 0.000$ . In the comparison between classroom teachers and subject teachers across the factors, a statistically significant difference was found only in the self-efficacy factor:  $t(1674) = 5.07, p < 0.000$ . In this comparison, the classroom teachers scored higher than subject teachers.

Classroom teachers and subject teachers' mean scores deviated in several of the twelve items used in the factor analysis, even if the differences remained small regarding effect size (see [Table 2](#)).

## Discussion

The present study surveyed Finnish comprehensive school teachers' (grade levels 1–9) attitudes towards inclusive education. The association of these attitudes were also studied with several background variables including teacher-related and organisational variables.

Finnish comprehensive school teachers' attitudes towards inclusion were somewhat more negative than those usually found among teachers in English speaking countries (Scruggs & Mastropieri, 1996). The wide dispersion of teacher opinions must be taken into account when discussing the possibilities of inclusion in the Finnish schools. The majority of teachers in all categories positioned themselves in a neutral mid-ground. The definite opponents of inclusion exceed the supporters in the actual battlefield of inclusion – the mainstream classrooms – as is evident from the opinions of classroom and subject teachers. The relative amount of supporters exceeds opponents among special education teachers and principals. The initiatives for more inclusion in the schools probably can be expected to emerge from these groups. Based on the example of Italy, a solution leading to more inclusion could be the introduction of special education teachers into the mainstream classrooms (Cornoldi, Terreni, Scruggs, & Mastropieri, 1999). It may be that special education teachers, despite their overall positive attitude, are not yet ready for this step, which could clearly be a threat to their professional autonomy.

All three teacher categories reported more positive than negative experiences from inclusion. Positive experiences were especially prominent among special education teachers. A majority of them also reported to have changed more positive towards inclusion than before. This change could have been real as special education teachers now scored higher on the inclusion scale than in an earlier study (Moberg, 2003). Contrary to this, the classroom and subject teachers reported to have changed more negative than positive. [Table 5](#) shows that teachers' positive or negative experiences from inclusion were strongly correlated with their reported positive or negative attitude change.

The reason for the classroom and subject teachers' self-reported increase in their negative stance towards inclusion remains a mystery on the basis of the present study. However, an important development was associated with it, namely the recent changes in school legislation. In Finland, the principle of inclusion was not incorporated in the school legislation. However, state officials have been worried about the ever-rising numbers of special-class transfers (Ministry of Education, 2007). Probably because of the rising costs caused by special education changes were made in school legislation, which have made special-class transfers more difficult for teachers. The 2010 Amendments to the Act on Basic Education (1998/2010) signified that teachers had to complete more paperwork before a student could be moved from a mainstream classroom to a special education classroom. This change awakened dissatisfaction and protests among teachers, as

manifested in the statement of the classroom teachers' professional association (Luokanopettajaliitto, 2009). Also, the state subsidy legislation was changed so that extra costs for special-class placements were mainly shifted to local municipalities (Act on the Funding of Education and Culture, 2009). This change in state subsidy legislation made the special-class transfers less attractive to local municipalities.

The association of attitudes towards inclusion with some background variables, such as gender, age or teacher category, were similar to the previous findings reviewed in the introduction (e.g. Bhatnagar & Das, 2014; Boyle et al., 2013; Chiner & Cardona, 2013; Moberg, 2003). Female teachers were found to be more positive than male teachers, younger teachers slightly more positive than older, special education teachers more positive than other teachers, classroom teachers more positive than subject teachers and school principals more positive than classroom or subject teachers.

### *The Role of Resources*

The resource variables studied provided some surprising results. Usual findings from teacher surveys have been that teachers regard the lack of resources as a barrier to inclusion (Avramidis et al., 2000b; Center & Ward, 1987; Coutsocostas & Alborz, 2010; Horne & Timmons, 2009; Scruggs & Mastropieri, 1996; Stoiber et al., 1998; Subban & Sharma, 2006). These findings might give rise to the idea that teachers could become more positive regarding inclusion if they only had more training, more classroom assistants and smaller class sizes, giving them more time for individual students. However, the present study found no positive association between certain types of resources and teachers' attitudes. Teachers who had smaller classes or classroom assistants were no more positive than those without them.

Maybe it is too mechanistic to think that teachers' attitudes spring directly from the number of material resources. This view does not observe that attitudes, in turn, may affect the way how the adequacy of resources is seen. Teachers are also capable of creating new resources when they begin to work towards inclusion. Starting to implement inclusive education begins to develop teachers' skills needed in this work such as cooperation with other teachers (Janney, Snell, Beers, & Raynes, 1995). By starting the work teachers also have a possibility to form a realistic view of the disposal of outside supports (Author removed, 2019a). The availability of resources may therefore dramatically change when teachers start the inclusion process.

In previous studies teachers' more positive views towards inclusion have neither been found to be associated with material resources such as time, smaller class size or help from the teaching assistants. Instead, teachers' attitude change has been observed to correlate with the existence of immaterial resources, such as cooperation and help from the administration (Ahmed et al., 2014; Larrivee & Cook, 1979), from special education teachers (Chiner & Cardona, 2013) and other teachers (Minke et al., 1996). In the present study, the result was similar to these overall findings; the availability of support from principals and reliance on one's own skills was associated with more positive attitudes towards inclusion.

Teachers' opinions regarding the maximum acceptable number of students with SEN revealed that about half of the teachers were ready to accept two students, and some teachers accepted even more students with SEN. The size of the teacher groups accepting



no students with SEN were near the relative size of the definite opponents of inclusion in each teacher category. Results concerning the acceptable number of students with SEN are not found in previous studies.

### **Teachers' Orientations to Inclusion**

Factor analysis using twelve statements on teachers' *approaches, preferences and sentiments* in education was not unproblematic, because the percentage of total variance explained by the factors remained low. Despite this, the result possessed some construct validity, which became evident in further analysis. The factor solution provided a division between three main orientations. The first was the teacher's reliance on getting outside support if needed, the second was the teacher's reliance on her or his skills, and the third was a strategy of transferring teaching responsibility to the paraprofessional staff in the classroom.

Positive attitudes towards inclusion were differently associated with these three strategies. Most strongly, these attitudes were related to the trust of achieving outside support ( $r^2 = 0.17$ ). This variable was not found in previous studies. They were also weakly associated with a sense of self-efficacy ( $r^2 = 0.08$ ), a finding which was confirmed in several prior studies (Savolainen et al., 2012; Soodak, Podell, & Lehman, 1998). Finally, attitudes were not at all related to a strategy to shift teaching responsibility to paraprofessional staff ( $r^2 = 0.000$ ). This dimension neither has been previously studied.

Classroom teachers scored higher than subject teachers in the factor of self-efficacy. This comparison has been lacking from the previous studies Zee & Koomen, 2016). As documented in Table 2, the subject teachers were also somewhat more inclined than classroom teachers to shift the teaching responsibility of the students with SEN to teaching assistants. The readiness to shift the teaching responsibility may also be the reason why subject teachers stated more often that inclusion does not cause extra work for them. Classroom teachers, instead, relied more often on their own skills and their cooperation with special education teachers than subject teachers.

### **Limitations of the Study**

The present survey had a low return rate, as is usual with email surveys. The low response rate should not be a problem for overall results, as previous observations have confirmed that return rates do not produce differences in the sum total scores on inclusion (Scruggs & Mastropieri, 1996). The large sample collected in this study, using unbiased sampling, speaks for the generalisability of the findings (Gall, Gall, & Borg, 2003). This conclusion was supported by the stability of the arithmetic means of the three items used in two similar studies in subsequent years. When the results were presented as percentage distributions of single items, the results differed more between the studies. These alterations were mainly in the same direction and did not affect the order of the subgroups studied. Reasons for this instability may lie in the sensitivity of survey results to even small changes in the questionnaire (Pew Research Center, 2020). This finding also provides a cautionary example of the dangers which hide in the use of distributions from single items.



## Summary and Conclusions

In sum, the results show that teachers' attitudes towards inclusion were strongly related with their work position while the teacher-related variables of age, gender, self-efficacy and the university campus at which the teacher had studied had only minimal associations with attitudes towards inclusion. Interestingly, the available resources, as measured by class size, presence of teaching assistants and number of students with educational challenges in the classroom, had minimal or no association with the teachers' attitudes towards inclusion. The only exception among the resource variables was the teacher's confidence in getting outside help if necessary. These findings contrast with the frequent and common claims that more resources provide a solution to enhance the progress of inclusive education.

The results illustrate the current status of teacher attitudes towards inclusion in the Finnish comprehensive schools. The distribution of opinions highlights the strengths and weaknesses of the current situation and gives perspectives for possible future attempts to advance the policy of inclusive education in Finland. Classroom and subject teachers' growing negativity towards inclusive education is a warning sign for those who would like to see basic education become more responsive to student diversity. While the reasons for this change remain obscure it perhaps can be associated with the 2010 school reform, which introduced the new state subsidy legislation and the three-tier model in special education. At least this reform was strongly opposed by teachers (Luokanopettajaliitto, 2009). It may be that teachers felt that their professional autonomy was being endangered, because the legislation contained new obligations, which made the relocation of students from mainstream classrooms to special education classrooms more difficult for teachers (Act on Basic Education, 1998/2010). For special education teachers, in contrast, the effects of the new legislation remained more neutral in terms of their work conditions. Future attempts to reduce the level of student transfers should therefore build more on the agency and participation of teachers themselves (Myles & Simpson, 1989). Good models for this kind of activity are accumulating (European Agency for Special Needs and Inclusive Education [EASNIE], 2014; Giangreco, 1997; Janney et al., 1995; McLeskey, Waldron, & Redd, 2014).

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## References

- Act on Basic Education (1998/2010). Perusopetuslaki. Amendment June 24, 2010/642. Finlex 628/1998.
- Act on the Funding of Education and Culture. (2009). Finlex 29. 12.2009/1705 [in Finnish]. Retrieved from: <http://www.finlex.fi/fi/laki/ajantasa/2009/20091705>
- Ahmed, M., Sharma, U., & Deppeler, J. (2014). Variables affecting teachers' intentions to include students with disabilities in regular primary schools in Bangladesh. *Disability & Society*, 29(2), 317–331.
- Alvarez McHatton, A., & McCray, E. D. (2007). Inclination toward inclusion: Perceptions of elementary and secondary education teacher candidates. *Action in Teacher Education*, 29(3), 25–32.

- Author removed. (2015). Measuring pre-service teachers' attitudes towards inclusive education: Psychometric properties of the TAIS scale. *Teaching and Teacher Education*, 52, 66–72.
- Author removed. (2016). Teacher attitudes towards inclusive education in Finland and Brandenburg, Germany, and the issue of extra work. *European Journal of Special Education*, 31(4), 458–471.
- Author removed. (2017). Confirmatory factor analysis of the scale measuring teacher attitudes towards inclusive education (TAIS). *European Journal of Special Education Research*, 2(6), 196–203.
- Author removed. (2018). Attitudes of teachers towards inclusive education in Finland. *Scandinavian Journal of Educational Research*. doi:10.1080/00313831.2018.1541819.
- Author removed. (2019a). Teacher attitudes towards the inclusion of students with support needs. *Journal of Research in Special Educational Needs*, 20(1), 64–73.
- Author removed. (2019b). Teacher attitudes in Italy after forty years of inclusion. *British Journal of Special Education*, 46(4), 465–479.
- Avramidis, E., Bayliss, P., & Burden, R. (2000a). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16, 277–293.
- Avramidis, E., Bayliss, P., & Burden, R. (2000b). A survey into mainstream teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology*, 20(2), 191–211.
- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, 17(2), 129–147.
- Berkeley, S., Bender, W. N., Peaster, L. G., & Saunders, L. (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities*, 42(1), 85–95.
- Bhatnagar, N., & Das, A. (2014). Attitudes of secondary school teachers towards inclusive education in New Delhi, India. *Journal of Research in Special Educational Needs*, 14(4), 255–263.
- Bornman, J., & Donohue, D. K. (2013). South African teachers' attitudes toward learners with barriers to learning: Attention-deficit and hyperactivity disorder and little or no functional speech. *International Journal of Disability, Development and Education*, 60(2), 5–104.
- Bowman, I. (1986). Teacher training and the integration of handicapped pupils: Some findings from a fourteen nation UNESCO Study. *European Journal of Special Needs Education*, 1(1), 29–38.
- Boyle, C., Topping, K., & Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools. *Teachers and Teaching: Theory and Practice*, 19(5), 527–542.
- Center, Y., & Ward, J. (1987). Teachers' attitudes towards the integration of disabled children into regular schools. *The Exceptional Child*, 34(1), 41–56.
- Chazan, M. (1994). The attitudes of mainstream teachers towards pupils with emotional and behavioural difficulties. *European Journal of Special Needs Education*, 9(5), 261–274.
- Chiner, E., & Cardona, M. C. (2013). Inclusive education in Spain: How do skills, resources, and supports affect regular education teachers' perceptions of inclusion? *International Journal of Inclusive Education*, 17(5), 526–541.
- Cornoldi, C., Terreni, A., Scruggs, T. E., & Mastropieri, M. A. (1998). Teacher attitudes in Italy after twenty years of inclusion. *Remedial and Special Education*, 19(6), 350–356.
- Cornoldi, C., Terreni, A., Scruggs, T. E., & Mastropieri, M. A. (1999). Teacher attitudes in Italy after twenty years of inclusion. *Remedial and Special Education*, 19(6), 350–356.
- Coutsocostas, -G.-G., & Alborz, A. (2010). Greek mainstream secondary school teachers' perceptions of inclusive education and of having pupils with complex learning disabilities in the classroom/school. *European Journal of Special Education*, 25(2), 149–164.
- de Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular classroom schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, 15(3), 331–353.
- Dziuban, D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin*, 81(6), 358–361.
- Engelbrecht, P., Savolainen, H., Nel, M., & Malinen, O.-P. (2013). How cultural histories shape South African and Finnish teachers' attitudes towards inclusive education: A comparative analysis. *European Journal of Special Needs Education*, 28(3), 305–318.

- Ernst, C., & Rogers, M. R. (2009). Development of the inclusion attitude scale for high school teachers. *Journal of Applied School Psychology, 25*(3), 305–322.
- European Agency for Development in Special Needs Education (EADSNE). (2012). *Special-needs education country data*. Odense, Denmark: Author.
- European Agency for Special Needs and Inclusive Education (EASNIE). (2014). *Five Key Messages for Inclusive Education*. Odense, Denmark: Author.
- Finnish National Agency for Education. (2014). *Perusopetuksen opetussuunnitelman perusteet*. [National Core Curriculum for Basic Education 2014]. Määräykset ja ohjeet 2014: 96. Helsinki: Opetushallitus.
- Finnish National Board on Research Integrity. (2009). *The ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review*. Helsinki: Author.
- Forlin, C., Douglas, G., & Hattie, J. (1996). Inclusive practices: How accepting are teachers? *International Journal of Disability, Development and Education, 43*(2), 19–33.
- Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education, 13*(2), 195–209.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston: Allyn and Bacon.
- 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.
- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers' experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties, 15*(3), 223–237.
- Gyimah, E. K., Sugden, D., & Pearson, S. (2009). Inclusion of children with special educational needs in mainstream schools in Ghana: Influence of teachers' and children's characteristics. *International Journal of Inclusive Education, 13*(8), 787–804.
- Helldin, R., Bäckman, Ö., Dwyer, H., Skarlind, A., Hugo, A. J., Nel, N., & Müller, H. (2011). Opportunities for a democratic pedagogy: A comparative study of South African and Swedish teachers' attitudes to inclusive education. *Journal of Research in Special Educational Needs, 11*(2), 107–119.
- Hernandez, D. A., Hueck, S., & Charley, C. (2016). General education and special education teachers' attitudes towards inclusion. *Journal of the American Academy of Special Education Professionals, 79*–93.
- Horne, P. E., & Timmons, V. (2009). Making it work: Teachers' perspectives on inclusion. *International Journal of Inclusive Education, 13*(3), 273–286.
- Houck, C. K., & Rogers, C. J. (1994). The special/general education integration initiative for students with specific learning disabilities: A "snapshot" of programme change. *Journal of Learning Disabilities, 27*(7), 435–453.
- Janney, R. E., Snell, M. E., Beers, M. K., & Raynes, M. (1995). Integrating students with moderate and severe disabilities into general education classes. *Exceptional Children, 61*(5), 425–439.
- Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998–2009: Signs of progress or unfulfilled promise? *Educational Psychology Review, 23*, 21–43.
- Kumpulainen, T. (2014). *Opettajat Suomessa 2013* [Teachers in Finland 2013]. Koulutuksen seurantaraportit 2014: 8. Helsinki: National Board of Education.
- Larrivee, B., & Cook, L. (1979). Mainstreaming: A study of the variables affecting teacher attitude. *The Journal of Special Education, 13*(3), 315–324.
- Leyser, Y., Kapperman, G., & Keller, R. (1994). Teacher attitudes toward mainstreaming: A cross-cultural study in six nations. *European Journal of Special Needs Education, 9*(1), 1–15.
- Loreman, T., Forlin, C., & Sharma, U. (2007). An international comparison of pre-service teacher attitudes towards inclusive education. *Disability Studies Quarterly, 27*(4), 1–13.
- Luokanopettajaliitto. (2009). In *Erytisopetusuudistus uhkaa romuttaa Suomen koululaitoksen* [Special education reform threatens to scrap the Finnish basic school]. Helsinki: Author.

- McLeskey, J., Waldron, N. L., & Redd, L. (2014). A case study of a highly effective, inclusive elementary school. *The Journal of Special Education, 48*(1), 59–70.
- Ministry of Education. (2007). *Erytyisopetuksen strategia*. [Strategy of special education]. Opetusministeriön työryhmämuistioita ja selvityksiä 2007: 47. Helsinki: Opetusministeriö.
- Minke, K. M., Bear, G., Deemer, S. A., & Griffin, S. M. (1996). Teachers' experiences with inclusive classrooms: Implications for special education reform. *Journal of Special Education, 30*(2), 152–186.
- Moberg, S. (2003). Education for all in the North and the South: Teachers' attitudes towards inclusive education in Finland and Zambia. *Education and Training in Developmental Disabilities, 38*(4), 417–428.
- Moberg, S., Zumberg, M., & Reinmaa, A. (1997). Inclusive education as perceived by prospective special education teachers in Estonia, Finland, and the United States. *The Journal of the Association for Persons with Severe Handicaps, 22*(1), 49–55.
- Myles, B. S., & Simpson, R. L. (1989). Regular educators' modification preferences for mainstreaming mildly handicapped children. *Journal of Special Education, 22*(4), 479–491.
- Pearson, V., Lo, E., Chui, E., & Wong, D. (2003). A heart to learn and care? Teachers' responses toward special needs children in mainstream schools in Hong Kong. *Disability & Society, 18*(4), 489–508.
- Pew Research Center. (2020). *Pew research center methods.questionnaire design*. Retrieved from: <https://www.pewresearch.org/methods/u-s-survey-research/questionnaire-design/>
- Savage, L. B., & Wienke, W. D. (1989). Attitudes of secondary teachers toward mainstreaming. *High School Journal, 73*(1), 70–73.
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implications for pre-service and in-service teacher education. *European Journal of Special Needs Education, 27*(1), 51–68.
- Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*(1), 59–74.
- Sharma, U., Aiello, P., Pace, E. M., Round, P., & Subban, P. (2018). In-service teachers' attitudes, concerns, efficacy and intentions to teach in inclusive classrooms: An international comparison of Australian and Italian teachers. *European Journal of Special Needs Education, 33*(3), 437–446.
- Sharma, U., Ee, J., & Desai, I. (2003). A comparison of Australian and Singaporean pre-service teachers' attitudes and concerns about inclusive education. *Teaching and Learning, 24*(2), 207–217.
- Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities. *Disability & Society, 23*(7), 333–377.
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international comparison of the novice pre-service teachers. *International Journal of Special Education, 21*, 80–93.
- Sharma, U., Loreman, T., & Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational Needs, 12*(1), 12–21.
- Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers' responses to inclusion. *Journal of Special Education, 31*(1), 480–497.
- Statistics Finland. (2018). *Erytyisopetus 2017* [Special Education 2017]. Retrieved from: [http://www.stat.fi/til/erop/2017/erop\\_2017\\_2018-06-11\\_fi.pdf](http://www.stat.fi/til/erop/2017/erop_2017_2018-06-11_fi.pdf)
- Stoiber, K. C., Gettinger, M., & Goetz, D. (1998). Exploring factors influencing parents' and early childhood practitioners' beliefs about inclusion. *Early Childhood Research Quarterly, 13*(1), 107–124.
- Subban, P., & Sharma, U. (2006). Primary school teachers' perceptions of inclusive education in Victoria, Australia. *International Journal of Special Education, 21*(1), 42–52.
- United Nations. (2006). *Convention on the rights of people with disabilities*. New York: Author.
- United Nations Educational, Scientific and Cultural Organisation (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.
- Zee, M., & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom process, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research, 86*(4), 981–1015.