Akie Yada

Different Processes Towards Inclusion

A Cross-Cultural Investigation of Teachers' Self-Efficacy in Japan and Finland

UNIVERSITY OF JYVÄSKYLÄ

FACULTY OF EDUCATION AND
PSYCHOLOGY

Akie Yada

Different Processes Towards Inclusion

A Cross-Cultural Investigation of Teachers' Self-Efficacy in Japan and Finland

JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

Cover illustration: Tsukasa Yada

ABSTRACT

This dissertation aims to examine inclusive education from teachers' points of view in Japan and Finland. Specifically, it has three aims: a) to examine how teachers' self-efficacy for inclusive practices relates to teachers' attitudes towards inclusive education; b) to assess how teachers' demographic variables influence their self-efficacy and attitudes; and c) to identify sources of teachers' self-efficacy that might affect their efficacy beliefs in implementing inclusive education. Data were obtained from a total of 620 Japanese and 1995 Finnish teachers through a survey questionnaire and analysed using statistical methods. The analyses revealed that teachers' self-efficacy for inclusive practices affected their attitudes positively in both Japan and Finland. In addition, teachers' experience in teaching students with disabilities had a positive effect on their self-efficacy and attitudes in both countries. However, there were some differences between Japan and Finland. First, teachers' teaching careers predicted their self-efficacy only in Japan; elder teachers were more confident in Japan, but there was no difference between novice and experienced teachers in Finland. Second, the teachers' teaching careers had a negative effect on their attitudes only in Finland; elder Finnish teachers held more negative attitudes towards inclusive education. Finally, the amount of inclusive education training affected teachers' self-efficacy and attitudes positively only in Finland. In regard to the four sources of self-efficacy proposed by Bandura (1997), mastery experience had the strongest independent positive effect on self-efficacy in the two countries. Verbal persuasion made a small but significant contribution to self-efficacy in both countries; however, the effect was positive in Finland but negative in Japan. Further, the four sources of self-efficacy explained 54% of variance in teachers' self-efficacy in the Finnish sample but 15% in the Japanese sample, indicating there may be other sources that influence self-efficacy in Japan. Overall, the findings of this thesis confirm that teachers' self-efficacy for inclusive practices was positively associated with their attitudes. Moreover, how teachers' demographic variables and their sources of self-efficacy predicted their efficacy beliefs differ by country, which emphasises the importance of studying inclusive education within cross-cultural frameworks, taking in to account cultural, historical, political and societal contexts.

Keywords: inclusive education, teacher, self-efficacy, attitudes, Japan, Finland

TIIVISTELMÄ

Väitöstutkimuksessa tarkastellaan inklusiivista koulutusta opettajan näkökulmasta Japanissa ja Suomessa. Tutkimustavoitteita on kolme: a) selvittää opettajien inklusiivisen minäpystyvyyden yhteys heidän inklusiivista opetusta koskeviin asenteisiinsa; b) arvioida, kuinka opettajien demografiset muuttujat vaikuttavat heidän minäpystyvyyteensä ja asenteisiinsa sekä c) tunnistaa sellaisia minäpystyvyyden lähteitä, jotka voivat vaikuttaa opettajien pystyvyysuskoon inkluusiota toteutettaessa. Aineisto kerättiin kyselylomakkeella 620 japanilaiselta ja 1995 suomalaiselta opettajalta ja analysoitiin tilastollisin menetelmin. Tulosten perusteella opettajien inklusiivinen minäpystyvyys muokkasi heidän asenteitaan myönteiseen suuntaan sekä Japanissa että Suomessa. Lisäksi kokemus vammaisten opiskelijoiden opettamisesta vaikutti myönteisesti heidän minäpystyvyyteensä ja asenteisiinsa molemmissa maissa. Japanin ja Suomen välillä oli kuitenkin myös eroja. Ensinnäkin opettajan pitkä ura ennusti minäpystyvyyttä vain Japanissa, eli siellä vanhemmat opettajat olivat nuoria itsevarmempia. Suomessa vastaavaa eroa ei havaittu. Opettajan ura taas vaikutti negatiivisesti hänen asenteisiinsa ainoastaan Suomessa: vanhemmat suomalaiset opettajat asennoituivat inkluusioon nuoria kielteisemmin. Kolmas ero oli, että inkluusioon liittyvän opettajankoulutuksen määrä vaikutti positiivisesti opettajien minäpystyvyyteen ja asenteisiin vain Suomessa. Banduran (1997) neljästä minäpystyvyyden lähteestä 'onnistumiskokemukset' olivat eniten pystyvyyden tunnetta kohottanut yksittäinen tekijä molemmissa maissa. 'Verbaalisella vakuuttamisella' eli palautteella oli pieni mutta merkitsevä rooli molemmissa maissa; Suomessa sen vaikutus oli kuitenkin positiivinen ja Japanissa negatiivinen. Lisäksi kyseiset neljä minäpystyvyyden lähdettä selittivät 54 % suomalaisten opettajien minäpystyvyyden vaihtelusta mutta vain 15 % japanilaisen otoksen vaihtelusta, joten Japanissa asiaan vaikuttanevat muutkin tekijät. Kaiken kaikkiaan väitöstutkimuksen tulokset vahvistavat opettajien inklusiivisen minäpystyvyyden positiivisen yhteyden heidän asenteisiinsa. Maiden välisiä eroja oli edelleen siinä, kuinka opettajien demografiset muuttujat ja minäpystyvyyden lähteet ennustivat heidän pystyvyysuskoaan. Siksi on korostetun tärkeää tutkia inkluusiota kulttuurienvälisissä viitekehyksissä ja huomioida kulttuuriset, historialliset, poliittiset ja sosiaaliset kontekstit.

Avainsanat: inklusiivinen koulutus, inkluusio, opettaja, minäpystyvyys, asenteet, Japani, Suomi

Author's address   Akie Yada
Department of Education
University of Jyväskylä, Finland
P.O. Box 35
40014 University of Jyväskylä, Finland
ado.eika@gmail.com

Supervisors   Professor Hannu Savolainen
Department of Education
University of Jyväskylä

Dr. Olli-Pekka Malinen
EduCluster Finland Ltd
University of Jyväskylä Group

ACKNOWLEDGEMENTS

When I was a student, I hated studying and spent much more time hanging out with friends and doing club activities. My parents gave up telling me "you have to study"; rather they just let me do whatever I want. Who in my family could have imagined that I would get a Ph.D? Thanks to invaluable assistance from many people, I was able to complete my Ph.D study.

First of all, I would like to express my sincere gratitude to my supervisor Prof. Hannu Savolainen for the continuous support of my Ph.D study and related research, for his patience, motivation, and immense knowledge. As a researcher and practitioner of positive behaviour support, he always gave me positive and constructive feedback. His guidance helped me in all the time of research and writing of this dissertation. In addition, I always surprised his insatiable motivation to learn new things. He is my role model and my goal as a researcher. I could not have imagined having a better supervisor for my Ph.D study.

Besides my main supervisor, I would like to thank the rest of my thesis committee: Dr. Olli-Pekka Malinen and Dr. Matti Kuorelahti, for their insightful comments and encouragement, which enabled me to widen my research from various perspectives.

My sincere thanks also go to Prof. Asko Tolvanen who provided me an excellent guidance to conduct statistical analysis. Without his precious support it would not be possible to accomplish this research.

I would also like to acknowledge the pre-examiners of my dissertation – Prof. Markku Jahnukainen of University of Helsinki, Finland and Prof. Markus Gebhardt of TU Dortmund University, Germany – for their time and effort to give me constructive comments in spite of their busy schedule. I once again thank Prof. Markku Jahnukainen for accepting to be an opponent in my public examination of the dissertation.

A special gratitude goes out to Dr. Satu Perälä-Littunen and also Dr. Leena Halttunen for helping and providing the useful advices during my Ph.D study.

I am also grateful to Prof. Aini-Kristiina Jäppinen, who provided me an opportunity to join her research seminar group. I also appreciate members of her research seminar group providing me valuable comments.

Finally, I must express my very profound gratitude to my parents, to my siblings, to my friends, to our little daughter Kaoru and to my husband Takumi for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this dissertation. I once again thank Takumi for giving me not only daily support as my husband but also useful comments as a researcher. This accomplishment would not have been possible without him. Thank you.

Jyväskylä 24.1.2020
Akie Yada

LIST OF PUBLICATIONS

Article 1   Yada, A., & Savolainen, H. (2017). Japanese in-service teachers' attitudes toward inclusive education and self-efficacy for inclusive practices. *Teaching and Teacher Education*, *64*, 222-229.

Article 2   Yada, A., Tolvanen, A., & Savolainen, H. (2018). Teachers' attitudes and self-efficacy on implementing inclusive education in Japan and Finland: A comparative study using multi-group structural equation modelling. *Teaching and Teacher education*, *75*, 343-355.

Article 3   Yada, A., Tolvanen, A., Malinen, O. P., Imai-Matsumura, K., Shimada, H., Koike, R., & Savolainen, H. (2019). Teachers' self-efficacy and the sources of efficacy: A cross-cultural investigation in Japan and Finland. *Teaching and Teacher Education*, *81*, 13-24.

The author of this thesis is the first author of all the three research articles. She conducted the literature review, collected data from Japan, carried out all the statistical analyses, and reported the results for all the individual articles. The co-writers collected data from Finland in sub-studies II and III. Moreover, in all sub-studies, the co-writers had advisory roles in commenting on all the three manuscripts.

FIGURES

TABLES

CONTENTS

ABSTRACT
TIIVISTELMÄ
ACKNOWLEDGEMENTS
LIST OF PUBLICATIONS
FIGURES AND TABLES
CONTENTS

1   INTRODUCTION

In this era of diversity, inclusive education has become a central issue for educational policies and systems around the world, especially since the *Salamanca Statement and Framework for Action on Special Needs Education* was published (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994). This grobal shift towards inclusion is further reinforced by the *Convention on the Rights of Persons with Disabilities* (CRPD, United Nations, 2006) and the 2030 Agenda for Sustainable Development (United Nations General Assembly, 2015). Inclusive education is defined as 'a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education' (UNESCO, 2005, p.13). It is worth noting that inclusive education is not about the issue of placement, in which all students with disabilities and/or Special Educational Needs (SEN) are sent to regular schools; rather, it includes improvement of contexts, attitudes, policies, curricula, and pedagogies towards inclusion of these students (Slee, 2011).

Although including all students in mainstream classrooms is the ultimate goal worldwide, the meaning of inclusive education and how it is actually implemented in policies and practices vary by country, based on each country's cultural, historical, political and societal backgrounds (Savolainen, Engelbrecht, Nel, & Malinen, 2012). To offer a few examples, the term inclusive education is internationally understood as including all children of any gender, from ethnic and linguistic minorities, and with disabilities and learning difficulties (UNESCO, 2009). However, the Japanese government frequently discusses only the inclusion of students with disabilities (Forlin, Kawai, & Higuchi, 2015). In the same vein, in Finland, inclusive education is not seen as an ideological but pragmatic question, which refers mainly to including students with SEN in mainstream classrooms (Malinen, Väisänen, & Savolainen, 2012). Therefore, previous research has emphasised studying inclusive education within cultural-historical frameworks as extremely relevant (e.g., Artiles & Dyson, 2005; Savolainen et al., 2012). Artiles and Dyson (2005) interpreted three dimensions of comparative education perspective, which were introduced by Arnove (1999). The first dimension is scientific, in which researchers understand generalisable propositions

about educational systems and how they interact with surrounding factors, such as politics, histories, and cultures, through comparative analysis to develop theories. The second dimension is pragmatic, which focuses on searching for new ideas that we can use to improve our own country's policy and practices. The last dimension of comparative education is global, which aims to understand educational process internationally and, in turn, contributes to awareness of how globalisation influences local educational contexts. Based on these three dimensions, comparative analysis provides not only researchers but also policy makers with beneficial insights for developing inclusive education (Artiles & Dyson, 2005).

Clearly, teachers are key players in implementing inclusive education. An objective of this dissertation is to compare Japanese and Finnish teachers' perspectives on inclusive education. In particular, this study focuses on teachers' senses of self-efficacy and how this relates to their attitudes towards inclusive education. Further, it investigates what background characteristics of teachers affect their self-efficacy and attitudes towards inclusive education. The current dissertation is conducted as a part of an international research project called 'Comparative Analysis of Teachers' Roles in Inclusive Education', which aims to advance knowledge on the development of inclusive education through comparing teachers' points of view between several countries (Engelbrecht & Savolainen, 2018).

2 THEORETICAL BACKGROUND

This chapter reviews the main theoretical concepts of this dissertation: self-efficacy and attitudes. It also presents a brief description of the historical development of inclusive education, educational systems, and teacher education systems, as well as cultural differences and similarities between Japan and Finland.

2.1 Self-efficacy

2.1.1 Definition of self-efficacy

The concept of 'self-efficacy' was first introduced by Bandura (1977), who saw it as 'expectations of personal mastery' and suggested that it influences the initiation and continuation of coping behaviour (Bandura, 1977, p.193). More recently, Bandura (1997) defined self-efficacy, or perceived self-efficacy as it is often used in his works, as one's belief in one's capabilities to perform successfully under specific circumstances. He demonstrated that the efficacy belief is related to controlling exercise over action, as well as to regulating one's thought processes, motivation, and affective and phycological states.

Almost 50 years ago, Bandura (1969) formulated his social cognitive theory, centred around human agency and its operation within an interdependent causal structure (Bandura, 1997, 2012). The structure involves triadic reciprocal causation between three determinants: a) personal determinants, including the interpersonal influences of cognitive, affective, and biological states; b) behavioural determinants, such as one's responses in given situations; and c) environmental determinants, which include various imposed, selected, and constructed environments (see Figure 1) (Bandura, 1997, 1999, 2012). These determinants influence one another, and the strength of influence varies depending on different activities and circumstances (Bandura, 1997). In this causal structure, self-efficacy forms personal determinates, playing a pivotal role because it influences adaptation and change in the structure through its impact on other determinants

(Bandura, 1997, 2001). For instance, self-efficacy affects ways of thinking (e.g., pessimistically or optimistically) and self-regulation of motivation, which, in turn, influences one's choice to undertake challenges, the amount of effort asserted, and the durance of patience in facing difficulties (Bandura, 2001).
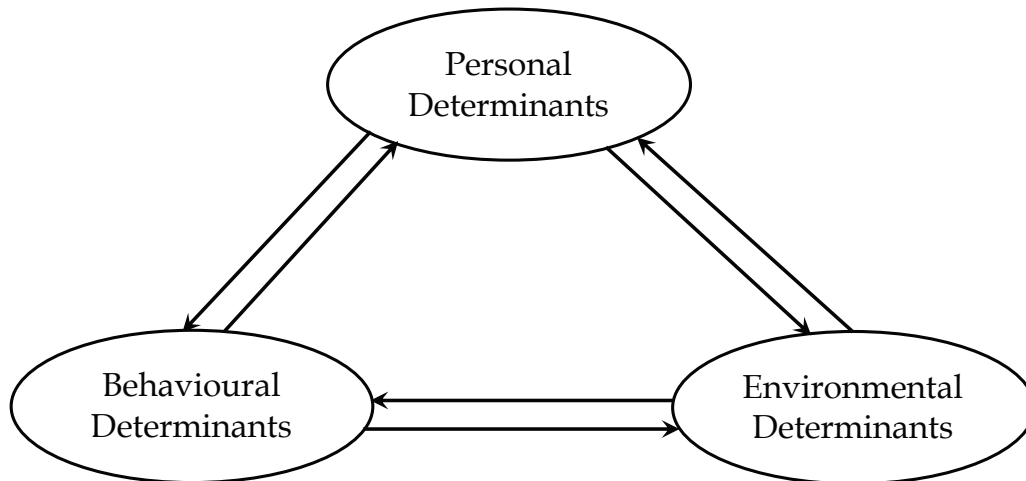
FIGURE 1.   Triadic reciprocal causal structure in the social cognitive theory (Adapted from Bandura, 2012)

2.1.2   Sources of self-efficacy

Bandura (1977, 1997) identified four principal sources that might be increase or decrease self-efficacy: a) mastery experience; b) vicarious experience; c) verbal persuasion; and d) psychological and affective states. It has been pointed out that these four sources do not influence efficacy beliefs independently but in combination (Bruce & Ross, 2008).

Mastery experience refers to one's experience of accomplishment or failure in a certain situation; successes increase efficacy beliefs, making them more robust, while failures undermine one's self-efficacy (Bandura, 1997). Experience of easy success has a small effect on self-efficacy, which is easily discouraged by failures, and experience of overcoming difficulties with perseverance is required for a stable sense of efficacy (Bandura, 1997). Bandura (1997) asserted that mastery experience is the strongest source of self-efficacy, a view supported by other researchers (e.g., Tschannen-Moran & Woolfolk Hoy, 2007; Usher & Pajares, 2008).

Vicarious experience, which involves observing others' performances in a demanding situation, is the second source of self-efficacy, though it has less effect on self-efficacy than mastery experience (Bandura, 1977). It has been suggested that vicarious experience's influence on self-efficacy relies on group norms and one's relationships with the person serving as the observed model (Bandura, 1997). For instance, if a person perceives that the model has similar personal attributes (e.g., age, gender and ethnicity) and/or a similar ability on the task, vicarious experience may exert a stronger influence on his or her efficacy belief

(Bandura, 1997; Usher & Pajares, 2008). Vicarious experience also includes symbolic modelling offered through television or other media and self-modelling through a variety of aids, such as videotape recording (Bandura, 1997).

The third source, verbal persuasion, can be defined as evaluative feedback and appraisal from others (Bandura, 1997). Bandura (1997) indicates that verbal persuasion itself may not have much power to increase self-efficacy; however, positive appraisal combined with actual performance can boost efficacy belief. However, negative feedback or appraisal can undermine self-efficacy (Hattie & Timperley, 2007).

The fourth source is psychological and affective states, which is understood to mean emotional arousal drawn by a stressful and taxing situation (Bandura, 1977). Emotional reactions to stress, such as anxiety and vulnerability, may affect one's judgement of one's capability (Bandura, 1997). Although the negative side of psychological and affective states is most often discussed in the literature (Morris, Usher, & Chen, 2017), there can be positive effects of the affective state; for example, a feeling of excitement may strengthen efficacy belief (Mills, 2011).

2.1.3 Teachers' self-efficacy

Previous studies have principally defined teachers' self-efficacy as their beliefs in their capabilities to conduct professional tasks that may influence student learning (Klassen, Tze, Betts, & Gordon, 2011; Morris et al., 2017; Ross & Bruce, 2007). It has been observed that teachers' efficacy beliefs have context-specific characteristics and are related to instructional capabilities and tasks (Tschannen-Moran & Woolfolk Hoy, 2007). Thus, much of the literature has investigated teachers' self-efficacy in teaching specific academic domains, such as science, math, reading, and teaching with technology (Klassen et al., 2011). However, specificity has received considerable critical attention among researchers because if the specificity of measures increases, the research may lose its generalisability to other situations and practical usefulness (Klassen et al., 2011; Pajares, 1996). Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) have pointed out that few teachers' self-efficacy measures satisfy both the appropriate level of specificity and generalisability; therefore, the authors developed a new scale of assessing teacher self-efficacy in three dimensions (i.e., efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement), which covers the activities that are common in most teaching contexts (Tschannen-Moran & Woolfolk Hoy, 2001).

Although a considerable amount of literature has been published on teacher self-efficacy in specific subject domains and on general teachers' self-efficacy, there used to be no specialised measure for examining teachers' beliefs in their capability to implement inclusive education (Sharma, Loreman, & Forlin, 2012). Thus, Sharma et al. (2012) designed a new instrument called the Teacher Efficacy for Inclusive Practices (TEIP) scale. The scale consists of three sub-scales: efficacy to use inclusive instructions, efficacy in managing behaviour, and efficacy in collaboration (Sharma et al., 2012). This scale might be considered domain specific in terms of inclusive education; however, inclusive practises can be applied to all kinds of school activities no matter which subjects are taught. In

that sense, the scale can be seen as a measure for teachers' self-efficacy, which may balance specificity and generalisability appropriately. For example, the TEIP scale measures two similar constructs to the teachers' sense of efficacy scale developed by Tschannen-Moran and Woolfolk Hoy (2001); that is, the TEIP's constructs of efficacy to use inclusive instructions and efficacy in managing behaviour are similar to Tschannen-Moran and Woolfolk Hoy's efficacy for instructional strategies and efficacy for classroom management.

Throughout this thesis, the term 'teachers' self-efficacy for inclusive practices' refers to the definition suggested by Malinen (2013), who saw it as teachers' beliefs in their capabilities to give proper assessment and instruction based on students' individual needs, to prevent and control student behaviour that disrupts the classroom, and to collaborate with parents and other professionals within and outside the school to support students' learning. To date, several studies have investigated teachers' self-efficacy for inclusive practices. For instance, one study by Gibson and Dembo (1984) compared teacher groups with high-efficacy and low-efficacy and found that teachers with high-efficacy were more persistent in addressing students' incorrect answer and never gave feedback in the form of criticising student failure. Further, Soodak and Podell (1993) analysed data from 192 teachers from the United States, concluding that teachers with higher self-efficacy were more inclined to choose a regular class placement as appropriate for students with learning and/or behavioural problems than teachers with low efficacy.

Yet research suggests that teachers' self-efficacy for inclusive practices differs by country, which may be related to the different cultural, historical, and political backgrounds of each country's educational system. A cross-cultural study by Savolainen et al. (2012) reported that Finnish teachers had the highest self-efficacy in terms of offering inclusive instruction but the lowest self-efficacy in managing students' problematic behaviour. On the other hand, teachers from South Africa showed the highest efficacy belief in managing students' behaviour and the lowest in collaboration with parents and other staff (Savolainen et al., 2012). Moreover, a study of Australian and Italian teachers' self-efficacy for inclusive practices suggested that Australian teachers possessed significantly higher self-efficacy than their Italian counterparts (Sharma, Aiello, Pace, Round, & Subban, 2018). Another study examined the relationship between teachers' self-efficacy for inclusive practices and their demographic variables in China, Finland, and South Africa, finding that the background variables that influenced teachers' self-efficacy differed by country (Malinen, Savolainen, Engelbrecht, et al., 2013). For instance, experience in teaching students with disabilities, teaching experience, and teacher type had a statistically significant association with teachers' self-efficacy in China; on the other hand, experience in teaching students with disabilities, amount of training related to inclusive education, and gender had positive correlation with teachers' self-efficacy in Finland (Malinen, Savolainen, Engelbrecht, et al., 2013).

2.2 Attitudes

2.2.1 Definition of attitudes

Research into attitudes has a long history, and several definitions of attitudes have been proposed. As early as 1935, Allport found sixteen different definitions of attitudes and added seventeenth: 'a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related' (Allport, 1935, p. 810). For Bohner and Dickel (2011), attitude means one's evaluation of an attitude objects, which can be things, people, groups, and ideas.

One of the most significant discussions in attitudes is whether attitudes are trait-like dispositions, which are stable and stored in memory, or temporal evaluations, which are constructed on the spot (Bohner & Dickel, 2011; Gawronski, 2007). These discussions are also connected to context-sensitivity (i.e., constructed in the situation) and cross-situational stability (i.e., stable in different situations) (Bohner & Dickel, 2011). Since this dissertation does not aim to identify a definitive definition of attitudes, it adopted the overarching definition presented by Eagly and Chaiken (1993) , who wrote: 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour' (p. 1).

2.2.2 Attitudes as predictor of behaviour

In 1980, Ajzen and Fishbein published a seminal article in which they described the understanding of individual's attitudes and behaviour in the framework of the theory of reasoned action. Later on, this theory developed into the theory of planned behaviour (TPB) (Ajzen & Madden, 1986). The TPB (see Figure 2) highlights three factors associated with one's behavioural intention that later predict one's behaviour (Ajzen, 2012). The first factor is attitude towards the behaviour, which refers to one's evaluation of the behaviour as favourable or unfavourable. The second factor is subjective norm, which is a perceived social pressure from important other(s). The last factor is perceived behavioural control, which signifies one's belief in one's capability to perform an expected behaviour. Ajzen (2012) indicated that the concept of perceived behavioural control is deeply indebted to Bandura's (1997) self-efficacy theory. As a general principal, if a person has a more favourable attitude and subjective norm and perceives greater behavioural control, his/her intention to perform a certain behaviour is stronger (Ajzen & Cote, 2008). In addition, the pass from behavioural intention to behaviour is influenced by actual behavioural control, which is defined as one's subjective probability of whether facilitating or inhibiting factors (e.g., required skill and knowledge, time availability, support from others, and other resources) will exist (Ajzen, 2019; Ajzen & Cote, 2008).
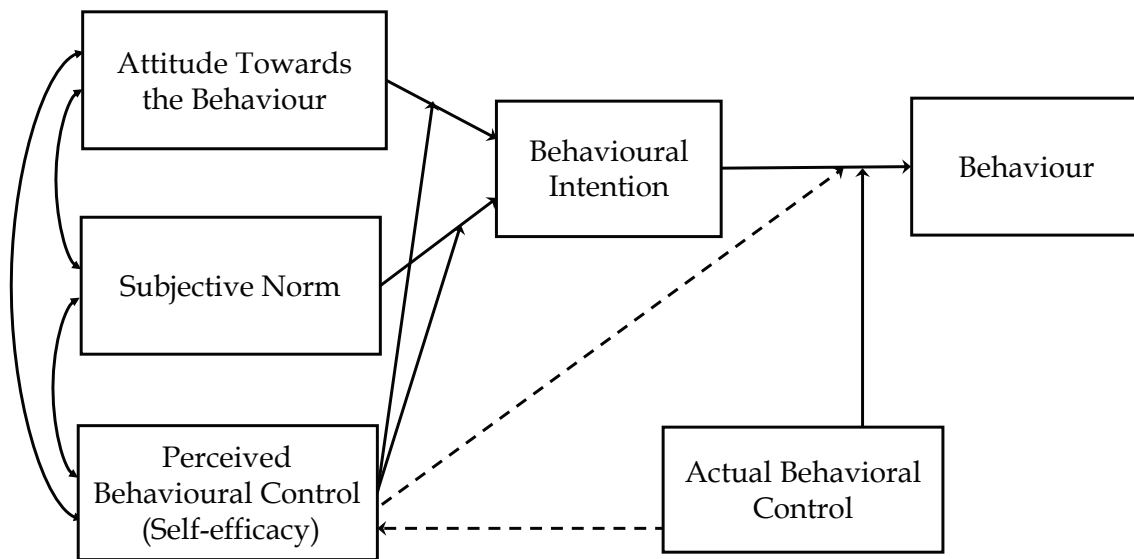
FIGURE 2.   Theory of planned behaviour (Adapted from Ajzen, 2019)

2.2.3   Teachers' attitudes towards inclusive education

Teachers' attitudes towards inclusive education (teachers' favourable or unfavourable evaluation of inclusive education) have been studied by many researchers, reflecting the international trend towards inclusion (e.g., Avramidis & Norwich, 2002; de Boer, Jan Pijl, & Minnaert, 2011; Forlin, Cedillo, Romero-Contreras, Fletcher, & Hernández, 2010; Leyser, Kapperman, & Keller, 1994). In their review article about teachers' attitudes towards integration/inclusion, Avramidis and Norwich (2002) concluded that teachers do not fully agree on a total inclusion. They further identified three factors that may influence teachers' attitudes: a) child-related variables, including the type and severity of the child's disability; b) teacher-related variables, such as gender, teaching career in years, experience of contact with people with disabilities, inclusive education training, and other personality characteristics; and c) environment-related variables, such as the availability of human and physical support. Similarly, a review of 26 studies conducted by de Boer et al. (2011) found that most teachers have neutral or negative attitudes towards including students with SEN in regular classes and indicated some variables related to teachers' attitudes, such as training, experiences of teaching students in inclusive settings, and students' types of disability.

Like teachers' self-efficacy for inclusive practices, previous studies have found that teachers' attitudes towards inclusive education differ across countries, which might be related to their political, cultural, and historical backgrounds (e.g., Leyser et al., 1994; Moberg & Savolainen, 2003; Savolainen et al., 2012; Sharma et al., 2018). For example, a cross-cultural study observed that teachers from the United States and Germany showed more positive attitudes towards inclusive education than teachers from Taiwan, Ghana, and Israel (Leyser et al., 1994). Likewise, some evidence indicates that teachers from non-Western

countries hold relatively negative or undecided attitudes towards the inclusion of students with special needs (Alghazo & Gaad, 2004; Malinen, Savolainen, & Xu, 2012). Further, various studies have assessed the relationships between teachers' attitudes towards inclusive education and their demographic factors (Forlin, Keen, & Barrett, 2008; Malinen, Savolainen, et al., 2012; Savolainen et al., 2012). A previous study investigated Beijing in-service teachers' attitudes towards inclusive education, concluding that experience in teaching students with disabilities had a positive relationship with attitudes, though the effect was relatively small (Malinen, Savolainen, et al., 2012). In contrast, a comparative study of teachers' attitudes towards inclusive education between Japan and Finland indicated that the quantity of experience in inclusive education did not have a significant influence on teachers' attitudes in both countries; however, in both Japan and Finland, the quality of experience mattered where successful experience was related to attitudes (Moberg, Muta, Korenaga, Kuorelahti, & Savolainen, 2019). Another study that explored the relationship between Australian teachers' concerns regarding inclusive education and demographic variables suggested that teachers' levels of concern differed by their age, the year level they teach, teaching experience, qualification, and previous experience in inclusive education (Forlin et al., 2008). A significant finding of that study was that younger teachers showed a lower level of concern than older teachers, perhaps because younger teachers had received the latest training regarding inclusive education and, thus, expressed fewer concerns.

2.2.4 Relationship between teachers' self-efficacy and attitudes

Thus far, a number of studies have revealed a positive relationship between teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education (e.g., Malinen, Savolainen, et al., 2012; Meijer & Foster, 1988; Savolainen et al., 2012; Weisel & Dror, 2006). For instance, Weisel and Dror (2006) reported that Israeli teachers' sense of efficacy was the only important factor that affected their attitudes towards the inclusion of students with special needs. Similarly, data from Finland and South Africa suggest that teachers' self-efficacy in collaboration remained the strongest predictor of their attitudes towards inclusive education among the three facets of efficacy and some background factors in both countries (Savolainen et al., 2012).

A significant association between attitudes and perceived behaviour control (mostly equal to self-efficacy) is also proposed by the TPB (Ajzen & Madden, 1986). Even though the TPB has been adopted widely in other fields, such as health science, studies using the theory in inclusive education have increased only recently. MacFarlane and Woolfson (2013) applied the TPB to their study and found a significant correlation between teachers' attitudes and their perceived behavioural control over including children with social, emotional, and behavioural difficulties. Moreover, they examined which factor predicts teachers' behavioural intention to inclusion, finding that teachers' cognitive sub-scale of attitudes and their perceived behavioural control were the only predictors (MacFarlane & Woolfson, 2013). This view is supported by Sharma et al. (2018)

who demonstrated that teachers' attitudes and self-efficacy significantly predicted their intention to include students with disabilities in mainstream classes.

2.3   Inclusive education in Japan and Finland

The research reviewed above suggests that teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education may be influenced by their national historical and socio-cultural contexts. Therefore, it is important to understand the process and way of implementation of inclusive education in each country. This chapter gives a brief overview of the history and recent situation of inclusive education in Japan and Finland.

2.3.1   History of education for students with SEN in Japan

In Japan, the first special school for children with visual and hearing disabilities, called '*Kyoto Moain*', was established in 1878, and later, in 1890s, the first educational service for children with intellectual disabilities was started (see Table 1) (Sakurai, 2019; Yawata, 2006). These schools were run by private institutions, and education for children with visual and hearing disabilities became compulsory in 1948 after the Basic Education Law was established (Sakurai, 2019). However, discriminatory attitudes against people with disabilities existed before and after World War II, which can be seen in the enforcement of the Eugenic Protection Law in 1948, which was continued until 1996 (Yawata, 2006). While eugenics was also a global trend associated with the concept of Darwinian evolution, this was the first time in the world that the law legitimised abortion for economic reasons, by which the government intended to decrease the population (Takeda, 2005).

Only in 1979 were all municipalities required to establish schools for all children, even with severe disabilities (Muta, 2002; Yawata, 2006). Although education for all children became obligatory, special support was offered only in special schools and special classes, and children with mild disabilities studying in regular classes did not receive any support until the resource room system was established in 1993 (Muta, 2002; Nagano & Weinberg, 2012).

Major reform towards inclusive education occurred in 2007, when the government replaced the traditional special education model (*Tokusyukyoiku*) with the new idea of special needs education (*Tokubetsushienkyoiku*) (Miyoshi, 2009; Shoji, 2015). In this new system, it became officially possible for children to receive special needs support in any kind of school, including in regular classes (Shoji, 2015). In the report by the Committee of Elementary and Lower Secondary Education in the Central Council for Education (2012), it is mentioned that 'reasonable accommodation' for children with disabilities is required in municipalities and local schools, a direct reference to the CRPD article 24. Further, in 2013, the Enforcement Ordinance of the School Education Law was revised, and the decision system of educational placement for children with disabilities was changed to indicate that alternative placement choices should be guaranteed

based on children's and guardians' opinions (Ministry of Education, Culture, Sports, Science and Technology [MEXT], 2013).

TABLE 1.   The history of education for students with SEN in Japan

Year	Educational events	Legal events
1878	*Kyoto Moain* for children with visual and hearing disabilities was established in Kyoto	
1890s	*Takinogawa Gakuen* for children with intellectual disabilities was established in Tokyo	
1947		Basic Education Law
		School Education Law
1948	Education for children with visual and hearing disabilities became compulsory at primary level (lower secondary: 1954)	Eugenic Protection Law (later revised as the Maternal Body Protection Law in 1996)
1970		Basic Act for Countermeasures Concerning Mentally and Physically Handicapped Persons
1979	Education for all, including children with severe disabilities, became compulsory	
1993	Resource room system was established	Basic Act for Persons with Disabilities
2006		A partial amendment to the Enforcement Ordinance for the School Education Law
2007	Initiation of *Tokubetsushienkyouiku* (special needs education) system	
2013	Educational placement decision system for students with disabilities was revised	A partial amendment to the Enforcement Ordinance of the School Education Law
		Act for Eliminating Discrimination against Persons with Disabilities
2014		Ratified United Nations CRPD

Note. Source: Muta (2002); Sakurai (2019); Yawata (2006)

2.3.2   Current situation and barriers to inclusive education in Japan

Though the Japanese government has promoted inclusive education, it does not intend to deconstruct the traditional special education system; rather it maintains special schools as one option for responding to the diverse educational needs of children (Committee of Elementary and Lower Secondary Education in the

Central Council for Education, 2012). In addition, the government expects special schools to serve as resource centres for local schools that provide not only education for children but also consultation and training for teachers and guardians (Committee of Elementary and Lower Secondary Education in the Central Council for Education, 2012), as mentioned in the UNESCO guideline for inclusion (2017). Many other countries also followed this strategy. It appears that the number of special schools and students who enrol in them is still increasing gradually in Japan (see Figure 3) (MEXT, 2017b). Previous research argues that the growing number of students in segregated education is a retrograde step towards inclusive education (Institute for Global Education and Culture, 2007; Miyoshi, 2009).
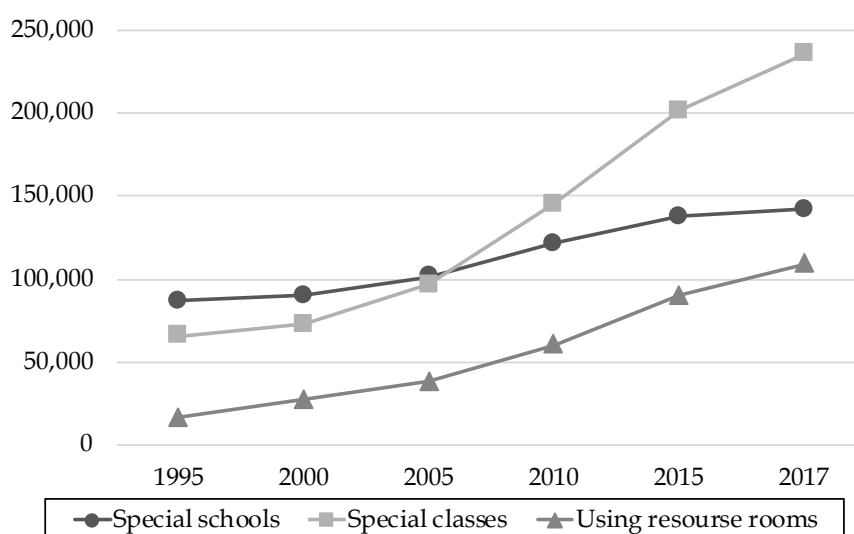
FIGURE 3. Numbers of students in special needs education service (MEXT, 2017b)

Note. This graph reports the number of students in primary and lower secondary schools, except for the number of students in special schools, including students from preschools to upper secondary schools.

The decision-making process for transferring students to special needs education may also be problematic. Japanese special needs education has been and is still based on a medical model of disability (Kimura, 2006). On the one hand, it gives us a medical understanding of children who were previously seen as 'difficult children' (Kimura, 2006). On the other hand, operating special needs education based on a medical deficit model has increased the number of children who are 'labelled' as disabled, which maintains and enforces the distinction between children with and without disabilities (Miyoshi, 2009). Moreover, in this service model, statements by professionals outside the school, such as doctors or psychologists, are required when children need special educational support (MEXT, 2010), which includes a relatively bureaucratic process and is, thus, time consuming. Although early intervention is seen as crucial for students with SEN, prompt support cannot be expected in Japan.

One of the challenges of inclusive education in Japan is the limited support for students with SEN in regular classes. It has been indicated that approximately 6.3-6.5% of students in regular schools have some kind of developmental disability, such as a learning disability, an attention-deficit hyperactivity disorder (AD/HD), or a high-functioning autism (Committee of Elementary and Lower Secondary Education in the Central Council for Education, 2012; MEXT, 2012). However, 93.3% of those students do not receive support from resource rooms (MEXT, 2012). Usually, there are no special education teachers in regular schools in Japan (except in special classes), and the whole responsibility of educating students with SEN in regular classes is left to classroom teachers. Therefore, not only students with SEN but also classroom teachers face difficulties, and teachers themselves seek support (Hamatani, 2012). Similarly, even though the idea of providing 'reasonable accommodation' is required from municipalities, there are no legal regulations that define what this means in concrete terms for children with disabilities. Thus, the ways of implementing reasonable accommodation differ across municipalities and even by schools (Watanabe, 2012).

It has been suggested that teachers need to work collaboratively with other school staff, professionals outside the school, and students' parents to implement inclusive education effectively (Groom & Rose, 2005; Savolainen et al., 2012). Although Japanese teachers' working time (56 hours for lower secondary and 54.4 hours for primary level per week) was the longest among the Organisation for Economic Co-operation and Development (OECD) countries, they spent less time collaborating with guardians and more time on clerical work and extracurricular activities than the OECD average (National Institute for Educational Policy Research, 2019). In addition, several studies have demonstrated that there is a limit to what classroom teachers can do alone; it is, therefore, necessary to develop a support system for teachers where they can receive daily consultation and supervision regarding students with SEN (Beppu, 2013; Fujita & Nishimura, 2012; Ogiso & Tsuzuki, 2016).

Moreover, a critical obstacle for inclusive education is the limited expertise of Japanese teachers to implement inclusive education because of inadequate teacher training. The term 'inclusive education' is a relatively new concept in Japan, and, only recently, in 2017, it became mandatory for student-teachers to take a one credit course concerning the 'understanding of infants and students who need special support' to obtain a teacher certificate in teacher training programmes (MEXT, 2017a). Before that, though there were conventional stipulations to teach topics related to inclusive education in basic educational theory courses, the amount, content, and quality varied by university at their discretion (Katoh, 2016). Much of the literature emphasises that, as a result, Japanese teachers feel increasing anxiety about their role in implementing inclusive education (Forlin et al., 2015; Fujii, 2014; Ueno & Nakamura, 2011). Furthermore, in-service teacher training is systematically organised by municipalities, of which some include inclusive education content. However, most of the time, the training is conducted by lecture-style presentation, which teachers often argue is neither attractive nor practical (Sakakibara, Yamamoto, & Kobayashi, 2005).

Finally, Japanese teachers' self-efficacy and attitudes in implementing inclusive education can be seen as a barrier, even though there are few studies

on this topic in Japan. For instance, Yoshitoshi (2014) analysed survey data from 59 high-school teachers in Japan and found that the level of teachers' self-efficacy for inclusive practises is relatively low compared to other countries. Similarly, Song (2016) reported that Japanese teachers' self-efficacy was significantly lower than that of Korean teachers. In regard to teachers' attitudes towards inclusive education, a previous study suggested the scores of Japanese teachers' attitudes were slightly below the scale's midpoint, indicating that Japanese teachers held slightly negative attitudes towards inclusive education (Muta, Ando, Korenaga, Tsukimori, & Kinoshita, 2016). Furthermore, one comparative study between Japan and Finland indicated that Japanese teachers were more concerned about the negative labelling of students with disabilities in inclusive settings and the appropriateness for students without SEN than Finnish teachers (Moberg et al., 2019).

2.3.3   Education for students with SEN in Finland

In Finland, the first services for students with SEN were started in the late nineteenth century for children with visible disabilities, such as deafness, blindness, and physical disability (see Table 2) (Halinen & Järvinen, 2008). Education was not compulsory in Finland until 1921, which was relatively late compared to other European countries (Halinen & Järvinen, 2008; Kivinen & Kivirauma, 1989). After the enforcement of the Compulsory School Attendance Act in 1921, all municipalities with more than 10,000 inhabitants were required to arrange education for children with intellectual disability (Kivinen & Kivirauma, 1989).

A drastic change for the Finnish education system occurred in 1968 when the Comprehensive School Act was enacted and the old parallel school system was combined into a nine-year comprehensive school system (Halinen & Järvinen, 2008; Kivirauma & Ruoho, 2007; Savolainen, 2009). Accordingly, in 1970s, part-time special education was introduced to deal with pedagogical problems due to the heterogeneity of students (Kivirauma & Ruoho, 2007). This new type of special education service can be offered by a special needs education teacher immediately when any difficulties in children are identified at school, without any diagnosis (Savolainen, 2009). However, traditional special education still existed where children with SEN were educated separately in special classes or schools (Halinen & Järvinen, 2008). In addition, children with severe disabilities were not included in compulsory basic education until 1983, when the Basic Education Act stated that no child should be exempt from compulsory education (Halinen & Järvinen, 2008). The process of integrating children with disabilities into basic education took place gradually over a period of ten years until children with the most severe intellectual disabilities moved into the educational system in 1997 (Graham & Jahnukainen, 2011).

Another significant reform was undertaken during the late 1990s, following the renewal of Basic Education Act in 1998 (Graham & Jahnukainen, 2011). The new regulation emphasised the support of all learners in basic education, even those with the most severe developmental impairments (Halinen & Järvinen, 2008). For that purpose, a new kind of Individual Educational Plan (IEP), which

enabled students to receive necessary support in a full-time regular classroom, was introduced (Graham & Jahnukainen, 2011).

TABLE 2.   The history of education for students with SEN in Finland

Year	Educational vents	Legal events
1846	The first school for the deaf was established in Porvoo	
1860s	The first school for the blind was established	
1890s	The first school for the physically disabled was established	
1901	The first school for the educationally subnormal (mental disabilities) was established	
1921		Compulsory School Attendance Act (except pupils with severe disabilities)
1939	The first classes for the socially maladjusted pupils with behaviour disorders were established	
1968	Initiation of the nine-year comprehensive school system and part-time special education	Comprehensive School Act
1983		Basic Education Act
1997	Children with the most severe disabilities have access to the nine-year basic education	
1998	IEP was introduced	Act and Decree on Basic Education were renewed
2010		Act for Amendment of Basic Education Act
2011	Initiation of the three tiers of support	
2016		Ratified United Nations CRPD

Note. Source: Graham & Jahnukainen (2011); Halinen & Järvinen (2008); Kivinen & Kivirauma (1989); Savolainen (2009)

In 2011, a new multilevel support system was launched, preceded by legal documents, such as the strategy of special education (the first of its kind in Finland) (Ministry of Education and Culture, 2007), amendments to the Act of Basic Education (Parliament of Finland, 2010), and related new guidelines in the national curriculum framework (Finnish National Board of Education [FNBE], 2010). The new model consists of three tiers of support (see Figure 4): a) general or universal support that aims to provide good education for all students, including

differentiation of teaching, part-time special education, remedial teaching, and guidance; b) intensified support, in which a pedagogical plan for the continuous support is made; and c) special support, which involves a pedagogical review by a multi-professional school team and an individual support plan (Björn, Aro, Koponen, Fuchs, & Fuchs, 2016; FNBE, 2016). The idea of general support is to form a strong background for the prevention of problems; intensified support can be provided immediately when pedagogical challenges are found, and an administrative decision is required only at the beginning of the special support (Björn et al., 2016).

SPECIAL SUPPORT
Provision of special-needs education
→ Extensive assessment
& individual plan

INTENSIFIED SUPPORT
Including part-time special education,
individual guidance and cooperation between
home and school
→ Pedagogical assessment & learning plan

GENERAL SUPPORT
Including remedial teaching, part-time special education and guidance
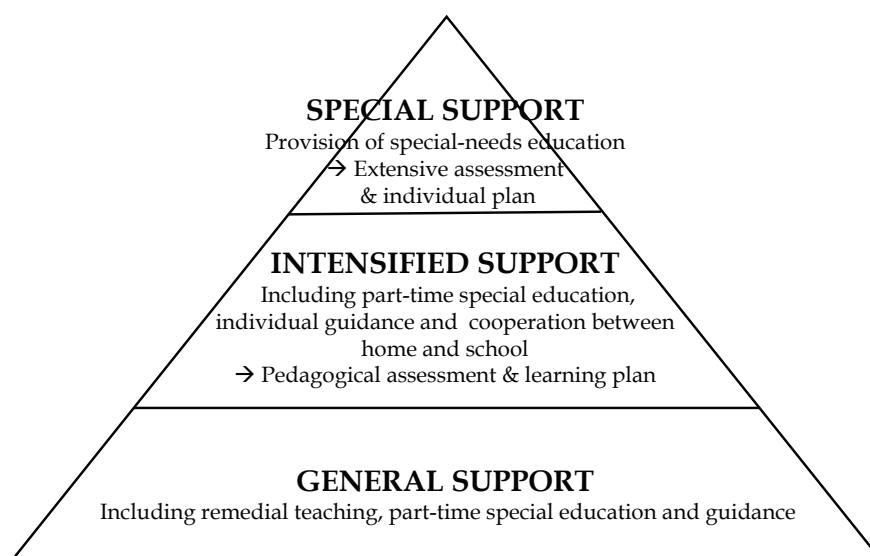
FIGURE 4.   Three tier support model in Finland (based on FNBE, 2016)

2.3.4   Current situation and barriers to inclusive education in Finland

According to the Official Statistics of Finland (2018), 18.8% of all students in comprehensive school system received intensified or special support in autumn 2018 (intensified support: 10.6%; special support: 8.1%). Among those students who received special support, 35.5% spent all their time in segregated settings, such as special school or special class; in other words, 64.5% were somehow included in mainstream classrooms, and 21.3% of those students were fully educated in regular classes (see Figure 5) (Official Statistics of Finland, 2018). In terms of part-time special education, 22% of all students in comprehensive schools were provided service in autumn 2017 (Official Statistics of Finland, 2018), which indicates that part-time special education was probably provided at all levels of support. The situation might be unique in Finland compared to other countries, such as the United States where special needs education teachers are mainly involved only in the special support level, though a similar three tier support model has been adopted (Björn et al., 2016; Jahnukainen & Itkonen, 2016).
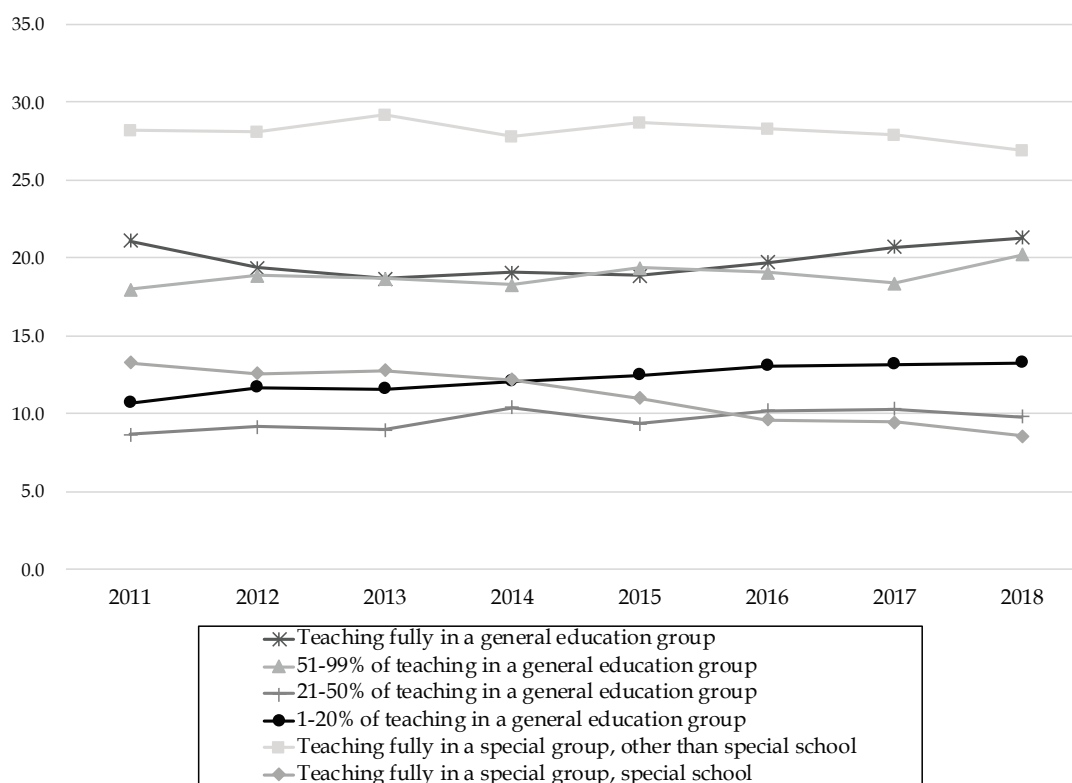
FIGURE 5. Students receiving special support by place of provision of teaching (%)
(Official Statistics of Finland, 2018)

The Finnish government aims to ensure equal educational opportunities to all learners, and 'early intervention and support' is one strategy for achieving this aim (Halinen & Järvinen, 2008; Takala & Hausstätter, 2012). Up to now, it seems that the Finnish education system has been successful in offering prompt and flexible support to every student by means of part-time special education and multi-level support; however, some challenges remain. First, even though the law and national core curriculum intend to promote inclusive education, how to organise inclusive educational settings and networks is left to each municipality (Pesonen et al., 2015). Thus, the level of inclusiveness and content of inclusive education differ among municipalities, in accordance with the strong tradition of municipal autonomy to organise education services, though funding comes largely from government subsidies (Halinen and Järvinen, 2008).

Second, while the share of students receiving all their education in special schools has fallen annually in Finland, segregated education still exists, and students who need special support are often placed in special classes or special schools even though special support can also be offered in mainstream class-rooms (Jahnukainen, 2011; Jahnukainen & Itkonen, 2016). Moreover, there is re-newed pressure to maintain special classes as displayed in public media (Trade Union of Education in Finland [TUEF], 2009). It is often suggested that students with behavioural problems should not be included in mainstream classes (TUEF, 2009). In addition, a recent study described how the 'segregated path' may

continue into one's post-compulsory education stages and affect one's whole life. (Hakala, Björnsdóttir, Lappalainen, Jóhannesson, & Teittinen, 2018).

Third, with the growing rate of children with SEN in regular classes, the teachers' workload is also increasing. Finland's national public broadcasting company Yle (2018) reported that increasing amounts of students with SEN in mainstream classes is making teachers' jobs more complicated and stressful and that the teachers' union (OAJ) was concerned about the well-being of teachers. Therefore, it is essential to increase support for teachers; one way to do so would be to develop collaborative networks between teachers and other school staff (Engelbrecht, Savolainen, Nel, Koskela, & Okkolin, 2017; Naukkarinen, 2010; Savolainen et al., 2012; Yle, 2018).

Fourth, one of the greatest challenges for Finland, as well as for other countries, is improving teachers' expertise in responding to students' diverse educational needs (Halinen & Järvinen, 2008; OECD, 2011). As mentioned above, teachers' expertise and confidence in working collaboratively are important elements to implementing inclusive education. However, in Finnish universities, different types of teacher, such as classroom teachers, special education teachers, and subject teachers, are trained in separate teacher education programmes with few common courses (Malinen, Väisänen, et al., 2012). This discrete model of teacher education is not likely to improve student-teachers' ability for collaboration (Malinen, Väisänen, et al., 2012). It is important to prepare future teachers who can participate in the development of the school community and collaborate with the community members (Naukkarinen, 2010).

Lastly, several studies have discussed teachers' self-efficacy and attitudes towards inclusive education in Finland as potential barriers to implementing inclusive education (Malinen, Savolainen, Engelbrecht, et al., 2013; Moberg & Savolainen, 2003; Saloviita & Schaffus, 2016; Savolainen et al., 2012). A comparative study in Finland and South Africa indicated that Finnish teachers' self-efficacy for managing students' problematic behaviour was the lowest among the three sub-domains of efficacy and illustrated that Finnish teachers, in most cases, face difficulties in working with students with challenging behaviour (Savolainen et al., 2012). In terms of teachers' attitudes towards inclusive education, Finnish teachers' attitudes were found to be more positive than other countries (Saloviita & Schaffus, 2016; Savolainen et al., 2012), though they maintained a more critical view on including students with disabilities in their own classes (Savolainen et al., 2012). Conversely, Moberg et al. (2019) reported that Finnish teachers' attitudes were slightly more negative than those of their Japanese peers and that they were more concerned about their efficacy of teaching when including students with emotional and behaviour difficulties or intellectual disabilities.

2.4   Validity of cross-cultural research

The two countries presented in this dissertation differ not only in education systems but also in socio-cultural contexts. These differences can influence inclusive education and also provide grounds for explaining the outcomes of this study.

The current chapter is concerned with cultural differences and similarities in Japan and Finland and the methodology of testing cross-cultural validity in this research.

2.4.1 Cultural differences and similarities between Japan and Finland

The definition of 'self' is a fundamental element in psychological research, which is related to both self-efficacy and attitudes. Previous studies have explored how an individualist or collectivist culture affects definitions of 'self' (Klassen, 2004; Markus & Kitayama, 1991). Markus and Kitayama (1991) have illustrated two different views of self: a) an independent view in individualist cultures, which is exemplified in American and many European cultures; and b) an interdependent view in collectivist cultures, which is exemplified in Japanese and many other Asian cultures (see Figure 6). In their explanation, the independent view sees self as an entity that consists of dispositional attributes and as detached from others. On the other hand, in the interdependent view, self is interdependent with contexts around, in which 'self-in-relation-to-other' is emphasised (Markus & Kitayama, 1991, p. 225). Although this illustration of self by Markus and Kitayama provides useful insight, cultural differences cannot be explained only in a dichotomy of individualism and collectivism. Rather cultural differences involve a spectrum including both components, and how much they influence one's understanding of self is highly dependent on each specific country and even each context.

A. Independent view of self   B. Interdependent view of self
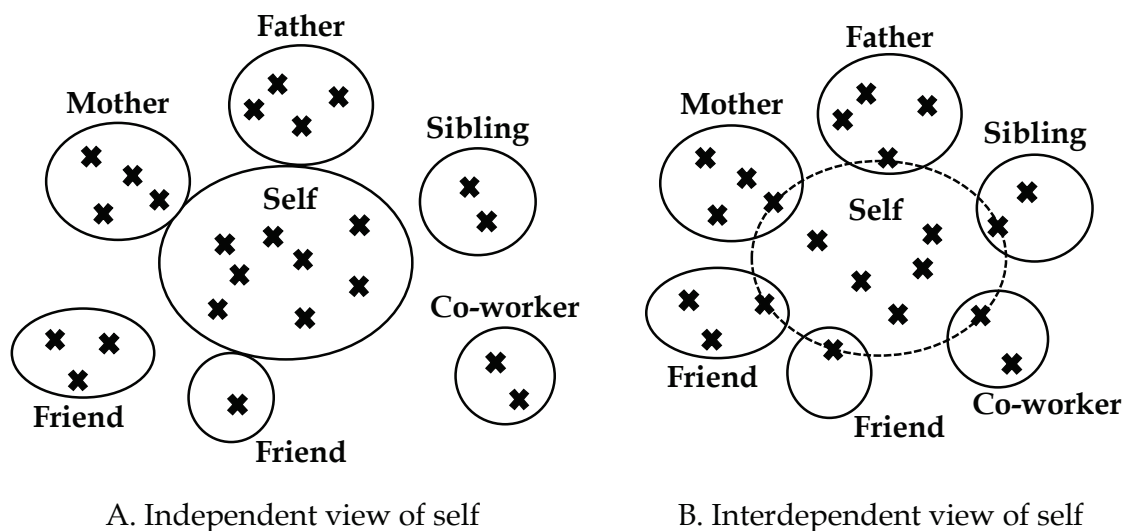
FIGURE 6.   Conceptualisation of self (adopted from Markus and Kitayama, 1991)

Another perspective on cultural differences, which may be related to an understanding of self, was presented by Triandis (2001). He demonstrated the idea of horizontal and vertical cultures, in which the former focuses on equality and the latter emphasises hierarchy. With combination of individualism/collectivism,

Triandis (2001) generated four dimensions: horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism. Finland and other Nordic countries can be characterised as horizontal individualism, which reflects equality between all people and the uniqueness of each person (Triandis, 2001). Vertical individualism is exemplified in the United States, where being distinct from and the best among others is emphasised (Triandis, 2001). Horizontal collectivism emphasises merging oneself as a member of an in-group, but one's status in the group does not have any implication (Triandis, 2001). Japan can be included in the vertical collectivism category, in which group superiority as well as in-group authority are viewed as important (Spielberger, 2004; Triandis, 2001).

It is evident that the two countries in this dissertation, Japan and Finland, are different in cultural perspective; however, there are also some similarities. Generally speaking, people say Japanese and Finns are similar in disposition, which is described as silent, shy, and calm. Petkova (2015) examined the communication style in Japan and Finland and indicated that in both countries, quietude and silence are viewed as positive characteristics. Further, both Japanese and Finns pay careful attention to non-verbal signs, and listening to others is prioritised (Petkova, 2015). For instance, Japanese people often use anticipatory communication, in which the person guesses and tries to accommodate other people's wishes based on empathy and non-verbal signs without asking directly what others want (Lebra, 1976). Moreover, both countries emphasise the virtue of modesty, and, thus, both Japanese and Finns tend to underestimate themselves (Nishimura, Nevgi, & Tella, 2008).

All in all, as noted by Petkova (2015), cultural models and dichotomies (e.g., collectivism/individualism) can be useful general guidelines for understanding the concept of self in different countries. However, they do not fully explain all the cultural aspects, making it important to understand and discuss specific contexts.

2.4.2   Testing measurement invariance

Although comparative analysis among different countries enables researchers to identify useful insights, such research design is challenging in several ways. For instance, the two countries in the current study use completely different languages; therefore, there are possibilities that the translated version of the questionnaire does not capture whole meaning of the original version, even if the same questionnaire is used. Similarly, the educational concepts (e.g., 'inclusive education', 'disability', and 'self-efficacy') might have different meanings or understandings in different countries (Mitchell, 2005). Take the term 'disability' as an example; the Japanese word '*shogai*' can be used for moderate to severe disabilities, but the Finnish word '*vammaisuus*' connotes quite clearly and mainly severe disabilities. Moreover, the above-mentioned cultural differences, such as collectivism/individualism, can affect participants' response style, such as by displaying modesty bias.

Testing measurement invariance is one way to investigate whether the same conceptual constructs are measured in independent samples (Chen, Sousa, & West, 2005). Measurement invariance testing is necessary when a comparative

study is conducted, particularly in the group mean (Milfont & Fischer, 2010). There are several steps to testing measurement invariance depending on the purpose of the study, and Steenkamp and Baumgartner (1998) present a step-by-step flowchart of the procedure. The first step is testing configural invariance, where the same latent variables are identified in the different groups (Chen et al., 2005). In this stage, the factor loadings can be varied across the groups, but the same item must be correlated with the same latent factors between the groups (Chen et al., 2005). When configural invariance is achieved, the second step is testing metric invariance. Metric invariance refers to the factor loadings of the items on underlying latent variables that are equal between the groups (Chen et al., 2005). The third stage is testing scalar invariance, in which the factor loadings and intercepts of the items are set to equal; the achievement of this step is required if the study aims to compare the latent means of different groups (Chen et al., 2005). However, it has been argued that even if full scalar invariance is not achieved, if two items, including a marker item, have equal factor loadings and intercepts (creating partial scalar invariance), the comparison of the factor means between the different groups would be meaningful (Steenkamp & Baumgartner, 1998). The procedure can be continued to test factor covariance invariance, factor variance invariance, and error variance invariance, which were not tested in the present dissertation. In the recent literature, the relative importance of testing measurement invariance has been debated by many researchers (Eid, Langeheine, & Diener, 2003; Milfont & Fischer, 2010; Scherer, Jansen, Nilsen, Areepattamannil, & Marsh, 2016). However, few studies have investigated cross-cultural measurement invariance in terms of teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education.

2.5 Research aims

The central objective of this doctoral dissertation is to investigate inclusive education from teachers' points of view in the contexts of Japan and Finland. Specifically, the research focuses on teachers' sense of self-efficacy for inclusive practices. The detailed aims in light of the original articles are illustrated below and in Figure 7.

The first purpose of this investigation is to explore teachers' self-efficacy in relation to inclusive education. In addition, this research examines how teachers' self-efficacy for inclusive practices relates to their attitudes towards inclusive education. Not only the factor structure of self-efficacy and attitudes but also the relationships between them were assessed (sub-studies I and II).

The second aim is to determine how teachers' demographic variables affect their self-efficacy and attitudes in inclusive education (sub-studies I and II). The examined variables are gender, teaching career in years, experience in teaching students with disabilities, experience in interactions with persons with disabilities, and the amount of inclusive education training. These variables were selected according to previous systematic narrative reviews of attitudes towards inclusive education (Avramidis & Norwich, 2002; de Boer et al., 2011).

Finally, the current dissertation aims to identify sources of teachers' self-efficacy that might affect their self-efficacy for inclusive practices. The four sources proposed by Bandura (1997) are measured using a newly developed scale. The association between each source and self-efficacy is illustrated (sub-study III).

Throughout all three objectives, Japanese and Finnish teachers' perspectives related to inclusive education are compared. Similarities and differences in light of teachers' self-efficacy, attitudes, and sources of self-efficacy, as well as their relationships, are illustrated based on each country's cultural and historical background (sub-studies I-III). Moreover, the relationships between teachers' demographic variables, self-efficacy, and attitudes are also determined to understand the cultural differences in teachers' perspectives on inclusive education (sub-studies I and II).
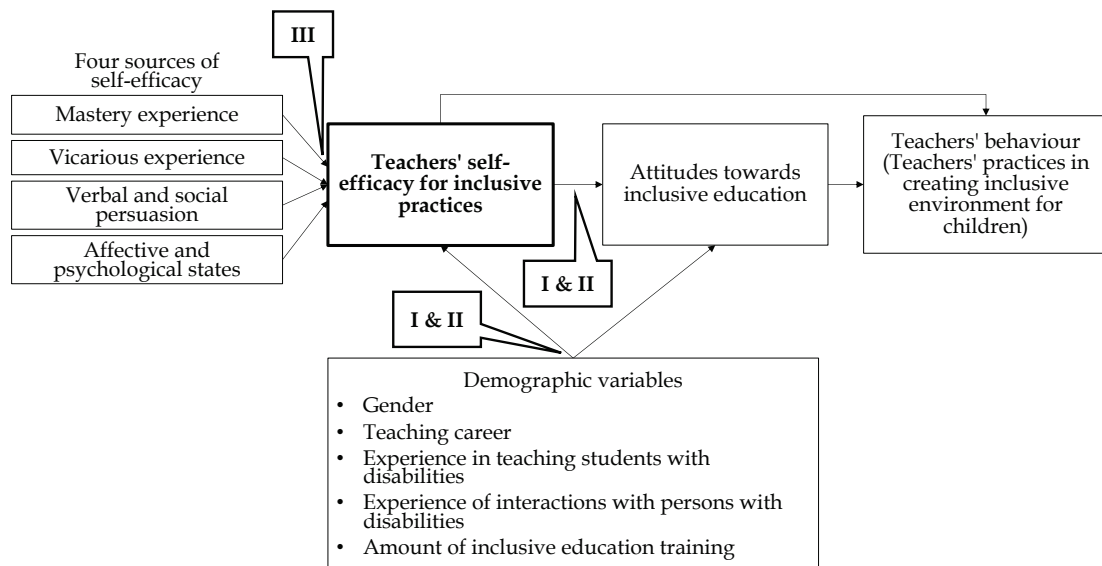
FIGURE 7. Main aims of the dissertation. The number (I-III) refers to the original articles

3 METHOD

3.1 Participants and procedure

Studies I-III were conducted as a part of the *Comparative Analysis of Teachers' Roles in Inclusive Education* project (Engelbrecht & Savolainen, 2018), which aims to compare teachers' perspectives on the development of inclusive education in different countries, including Finland, South Africa, Slovenia, Lithuania, China, England, and Japan. The project has produced useful insights about how teachers perceive their role in regard to inclusive education, which contribute to, for example, the development of pre- and in-service teacher training programmes.

3.1.1 Sub-study I

The cross-sectional data were gathered from Japanese teachers in 2014. Teachers were recruited from primary and secondary schools in the eastern and western parts of Japan using convenience sampling. A paper version of the questionnaire was distributed to 738 potential participants with a return envelope. A total of 359 participants (53.5% female, 43.7% male; M_{age} = 42.41, SD = 11.82) completed the questionnaire, creating a response rate of 48.6%. Of the 359 participants, 189 (52.6%) were working in primary school (grades 1 to 6), 77 (21.4%) in lower secondary school (grades 7 to 9), 55 (15.3%) in upper secondary school (grades 10 to 12), 1 (0.3%) in a combined primary and lower secondary school (grades 1 to 9), and 8 (2.2%) in combined lower and upper secondary schools (grades 7 to 12).

3.1.2 Sub-study II

A cross-cultural sample of in-service teachers from Japan and Finland was used in sub-study II. The Japanese participants were the same as in sub-study I. The Finnish sample of 872 teachers (73.9% female, 20.4% male; M_{age} = 44.46, SD = 9.07) was obtained from six small to middle size municipalities in the eastern Finland region and from one large municipality in the south-west region in 2010. Either

a paper or electronic version of the questionnaire was used for the Finnish sample. Although the exact return rate was not available, it can be assumed that the estimation rate was around 60%. In the Finnish data, 469 (53.8%) participants worked in primary school (grades 1 to 6), 203 (23.3%) in lower secondary school (grades 7 to 9), and 177 (20.3%) in comprehensive school (grades 1 to 9).

3.1.3   Sub-study III

In sub-study III, the data consisted of 261 Japanese (60.5% female, 39.1% male; M_{age} = 39.82, SD = 11.49) and 1123 Finnish teachers (65.9% female, 23.1% male; M_{age} = 45.19, SD = 9.43). The Japanese sample was extracted from schools located in western-Japan in 2017. A paper format of the questionnaire was distributed to participants through the school principals, and the researcher visited the schools to collect the questionnaires when notified of their completion. The obtained response rate was 80.6%. Of the Japanese participants, 150 (57.5%) taught in primary school (grades 1 to 6) and 111 (42.5%) in lower secondary school (grades 7 to 9).

The Finnish data collection was carried out in 2013-2014 as a part of a *Pro-Koulu* project, a national research project aiming to examine the effects of positive behaviour supports on schools. An internet survey strategy was adopted for the Finnish data collection. The Finnish sample consists of 730 (65.0%) participants teaching in primary school (grades 1 to 6) or comprehensive school (grades 1 to 9) and 393 (35.5%) in lower secondary school (grades 7 to 9).

3.2   Measures

The questionnaires used in the all the sub-studies included a cover letter explaining the purpose of the study, the participants' right to withdraw at any time, and the confidentiality of the data. In addition, teachers' demographic information, such as their gender and age, were asked in the questionnaire. The psychological scales to measure teachers' self-efficacy, attitudes, and sources of self-efficacy are explained in the following chapters and tables (Tables 3 and 4). The detailed processes for translating the questionnaire are described in the original articles.

3.2.1   Teacher Efficacy for Inclusive Practices (TEIP) scale

To measure teachers' self-efficacy to implement inclusive education, the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012) was used in all three sub-studies. The scale contains 18 items with six response anchors, ranging from 'strongly disagree' to 'strongly agree', except in the Finnish sample of sub-study III, in which participants answered to a 9-point Likert scale. The instrument can be divided into three sub-scales: 'efficacy to use inclusive instructions'; 'efficacy in collaboration'; and 'efficacy in managing behaviour' (Sharma et al., 2012). The reliability, calculated using Cronbach's alpha, was .93 for the Japanese sample and .88 for the Finnish sample.

3.2.2 Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale

The next scale used in this dissertation is the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale (Forlin, Earle, Loreman, & Sharma, 2011), which was developed to assess teachers' general to specific attitudes towards inclusive education. The instrument was used in sub-studies I and II. Teachers' attitudes towards inclusive education were originally measured with 15 items; however, 13 items were adopted in the current research because two items were shown fit insufficiently with the model (Savolainen et al., 2012). Participants responded on a 4-point Likert scale where 1 = 'strongly disagree' and 4 = 'strongly agree'. The scale consists of three sub-scales, namely 'sentiments', 'attitudes' and 'concerns' (Forlin et al., 2011). An acceptable reliability was found in Japan and Finland (Cronbach's alpha was .75 and .74, respectively). Table 3 presents the structure and example items of the SACIE-R and TEIP scales.

3.2.3 Sources of Teacher Self-Efficacy (STSE) scale

The third quantitative scale used only in the sub-study III was the Sources of Teacher Self-Efficacy (STSE) scale, which was developed for the aforementioned *ProKoulu* project (Malinen, 2014). The scale was designed to measure how the four sources of self-efficacy (mastery experience, vicarious experience, verbal persuasion, and affective state) affected participants' belief of their capability in the four different teaching domains (instruction, behaviour management, collaboration, and student engagement) with 16 items. A Likert type scale with nine possible responses that varied from 1 = 'not at all' to 9 = 'very much' was used. Table 4 presents the structure and item descriptions of the STSE scale.

TABLE 3.   Description of the TEIP and SACIE-R scales

Scales	Sub-scales (corresponding to factor names)	Item examples
TEIP	Efficacy to use inclusive instructions	- I can accurately gauge student comprehension of what I have taught. - I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated.
	Efficacy in collaboration	- I can assist families in helping their children do well in school. - I can collaborate with other professionals (e.g. school nurse or school counsellor) in designing educational plans for students with disabilities.
	Efficacy in managing behaviour	- I am able to calm a student who is disruptive or noisy. - I can control disruptive behaviour in the classroom.
SACIE-R	Sentiments	- I tend to make contacts with people with disabilities brief and I finish them as quickly as possible. - I find it difficult to overcome my initial shock when meeting people with severe physical disabilities.
	Attitudes	- Students who are inattentive should be in regular classes. - Students who need an individualised academic programme should be in regular classes.
	Concerns	- I am concerned that my workload will increase if I have students with disabilities in my class. - I am concerned that I will be more stressed if I have students with disabilities in my class.

37

TABLE 4.   Description of the STSE scale

Sub-scales (corresponding to factor names)	Descriptions
Mastery experience	- My own experiences on how well I have succeeded/done.
Vicarious experience	- My observations on other teachers having done well.
Verbal persuasion	- Comments on my work that I have received from other people.
Affective state	- The feelings teaching has aroused.
Teaching domains	
Instruction	- Teaching learning contents (e.g. ability to plan learning assignments that are challenging enough for students, ability to assess students' understanding).
Behaviour management	- Classroom management and behaviour management of individual students (e.g. ability to calm and prevent disruptive behaviours, ability to get students to follow classroom rules).
Collaboration	- Collaboration (e.g. ability to collaborate with families of students, ability to work with other professionals in the school, ability to work with professionals outside of school).
Student engagement	- Supporting students' school motivation (e.g. ability to motivate students who show little interest in school work, ability to support students beliefs in their own abilities).

3.3   Data analysis

The chapters below illustrate statistical analyses used in the current dissertation. All analyses were conducted using SPSS (International Business Machines Corporation [IBM], 2009) version 20-24 and Mplus software version 7 for Mac (Muthén & Muthén, 2012).

3.3.1   Analysis methods using SPSS

Descriptive statistics were performed in all three sub-studies (I-III) to explain participants' characteristics. In sub-study I, the mean scores of the overall scales and sub-scales, as well as confidence intervals, were calculated for the TEIP and SACIE-R scales to ascertain the Japanese teachers' levels of self-efficacy for inclusive practices and attitudes towards inclusive education. Furthermore, relationships between variables were investigated using Pearson's correlation coefficients. Finally, sub-study I included multiple regression analysis to assess the association between teachers' attitudes towards inclusive education and certain predictors, such as the sub-scales of the TEIP and their demographic variables.

3.3.2   Structural equation modelling with observed and latent variables

The other analytical methods used in this dissertation were Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). In sub-studies II and III, CFA was conducted to examine the factor structure of the TEIP, SACIE-R, and STSE scales. In addition, the model fit was assessed using two fit indices, namely Standardized Root Mean Square Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA), according to the two-index strategy (Hu & Bentler, 1999). The Comparative Fit Index (CFI) was also used for reference in sub-study III.

Since three first-order factors of the TEIP scale were highly correlated, it was assumed that a second-order factor model is suitable for sub-studies II and III. Thus, the second-order latent variable named 'general teacher self-efficacy for inclusive practices' was added to the model in both studies.

Based on the CFA model, the SEM model was designed to test the relationships between observed and latent variables in sub-studies II and III. More specifically, SEM was conducted to investigate the association between teachers' self-efficacy, attitudes, and demographic variables (II) and to reveal the unique contribution of sources of self-efficacy to teachers' self-efficacy for inclusive practices (III).

All the CFA, SEM, and the other analyses explained in the following chapters were performed by using Mplus. The robust maximum likelihood (MLR) estimator function was used in which cases with incomplete data were not removed. Rather, all model parameters were estimated on the basis of the cases with completed data and the missing values with Missing At Random (MAR) assumptions.

3.3.3 Tests of measurement invariance

In sub-studies II and III, Multi-Group Confirmatory Factor Analysis (MGCFA) was conducted to test measurement invariance across the groups. The analyses proceeded as follows: first, a theoretically driven CFA model was specified with no constraints between the groups to establish configural invariance. Second, metric invariance was investigated by setting factor loadings equal across the groups. Third, both factor loadings and intercepts were equated for Japan and Finland to assess scalar invariance. Fourth, based on the scalar invariance model, a second-order factor model was examined without any constraints with the second-order factor to show the configural invariance of the model. Finally, metric invariance of the second-order factor model was considered, by setting factor loadings of the second-order factor equivalent between groups.

Invariance between a series of sequential models was evaluated using different methods in sub-studies II and III. Sub-study II includes an analysis of noncentral chi-square distribution, introduced by MacCallum, Browne and Cai (2006). In the analysis, a small difference between the groups was allowed and defined using a range of RMSEA with values of .052 to .058 (see MacCallum et al., 2006 and the original article for details). Invariance among different consecutive models was tested using changes in RMSEA (ΔRMSEA) in sub-study III. It has been indicated that if the change in RMSEA is less than .015, model invariance is shown (Chen, 2007).

3.3.4 Multi-Trait Multi-Method (MTMM) analysis

In sub-study III, Multi-Trait Multi-Method (MTMM) analysis (Campbell & Fiske, 1959) was performed for the STSE scale, which has a unique structure for asking the questions. As mentioned above, the scale requires participants to answer how much the four sources exerted effect on their belief in their capability in light of four different teaching domains. Therefore, when the CFA model was conducted only for the four sources, it showed an insufficient fit because the items that belong to the same teaching domain had high correlations. To solve this problem, a MTMM model was designed where the four sources were treated as trait factors and the four teaching domains served as method factors. Each observed variable was loaded on not only the source factors but also the teaching domain factors, and the source factors and the teaching domain factors were not allowed to be correlated (Byrne, 2013). Consequently, covariance between the teaching domain factors was partialled out, and the related variance of the source factors remained for the further analyses.

3.3.5 Hierarchical regression analysis using the Cholesky decomposition approach

To find the unique contribution of each source of teachers' self-efficacy, hierarchical regression analysis using the Cholesky decomposition approach was conducted in sub-study III. The approach enables researchers to deal with multicollinearity in the regression analysis, in which independent variables are highly

correlated with each other (de Jong, 1999). Specifically, the variance of latent factors is partitioned into some Cholesky factors with a pre-fixed order, and the Cholesky factor, which was entered into the model last, includes the unique variance of one latent variable (see de Jong, 1999 and the original article for details).

4 OVERVIEW OF THE ORIGINAL PUBLICATIONS

4.1 Sub-study I: Japanese in-service teachers' attitudes towards inclusive education and self-efficacy for inclusive practices

The aim of sub-study I was to examine the extent of Japanese teachers' attitudes towards inclusive education and their self-efficacy for inclusive practices. In addition, the study investigated relationships between teachers' attitudes, self-efficacy, and background variables (i.e., years of teaching experience and gender). The analyses were conducted using a sample of 359 Japanese in-service teachers working at primary and secondary levels.

First, the mean scores of the overall scales and sub-scales with confidence intervals were calculated for both teachers' attitudes and self-efficacy. The result indicated that the Japanese teachers' overall attitudes towards inclusive education were neutral, where the mean score was slightly above the midpoint of the 4-point scale ($M = 2.69, SD = .40$). When looking into the details of the sub-scales, the Japanese teachers had positive sentiments about interacting with a person with disabilities ($M = 3.38, SD = .57$); however, they showed great concerns about including children with disabilities in their own classrooms ($M = 2.37, SD = .56$). In regard to Japanese teachers' self-efficacy, the mean score of the overall TEIP scale was considerably low ($M = 3.74, SD = .65$) compared to those in other countries as reported in extant research (Savolainen et al., 2012). The highest mean score was obtained with the sub-scale of self-efficacy in implementing inclusive instruction ($M = 3.84, SD = .68$), whereas the teachers had the least confidence in managing students' problematic behaviour ($M = 3.55, SD = .81$).

Furthermore, the relationship between Japanese teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education was examined using Pearson's correlation coefficient. There were statistically significant small to medium correlations (r ranging from .131 to .396) between the overall and all sub-scale scores of the TEIP and SACIE-R scales.

To investigate how teachers' sub-dimensions of self-efficacy and background variables predict their attitudes towards inclusive education, multiple regression analysis was conducted. The result suggests that three dimensions of self-efficacy (efficacy in inclusive instruction, managing behaviour, and collaboration) and two demographic variables (teaching experience and gender) explained 17% of the variance. It was shown that self-efficacy in collaboration was the most powerful predictor of teachers' attitudes in all five predictors ($B = .254$, $p < 0.01$). In addition, although the beta value was slightly lower than self-efficacy in collaboration, self-efficacy in managing behaviour is also a significant predictor of attitudes ($B = .232$, $p < 0.01$). These results indicate that the teachers with higher self-efficacy in collaborating with their colleagues and parents and in managing students' problematic behaviour held more positive attitudes towards inclusive education.

To conclude, these results suggest that there is an association between Japanese teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education. In addition, the findings showed that Japanese teachers' self-efficacy was relatively low compared to other countries. Together with the results of multiple regression analysis, the findings provide important insights into the need to develop Japanese teacher training that improves teachers' self-efficacy, especially in collaboration and managing behaviour.

4.2 Sub-study II: Teachers' attitudes and self-efficacy on implementing inclusive education in Japan and Finland

The sub-study II investigates relationships between teachers' attitudes towards inclusive education, self-efficacy for inclusive practices, and background variables (i.e., teaching career, experience in teaching students with disabilities, experience of interactions with persons with disabilities, and amount of inclusive education training). Moreover, the study aims to compare Japanese and Finnish samples and whether there are similarities and differences in those relationships. The Japanese sample was the same as sub-study I. The Finnish sample consisted of 872 in-service teachers who taught students from grade 1 to 9.

First, the hypothesised latent structures of the TEIP and SACIE-R, with three factors and one second-order factor for self-efficacy and three factors for sub-types of attitudes, were tested in the Japanese and Finnish samples using CFA. The CFA confirmed the hypothesised structure for the TEIP and SACIE-R in both countries. Therefore, MGCFA was conducted to test measurement invariance between the groups. Partial scalar invariance for the first-order factor model and metric invariance for the second-order factor model were achieved based on the analysis of noncentral chi-square distribution. Therefore, the cross-cultural construct validity of the used scales was shown.

Second, a hypothetical predictive model was tested. The path analysis revealed that a higher level of self-efficacy was associated with teachers' more positive attitudes towards inclusive education in both Japan and Finland. Furthermore, the four background variables were added to the model, which indicated

that interactions with persons with disabilities had a positive relationship with teachers' sentiments about interacting with persons with disabilities in both countries. In addition, teachers' greater experience in teaching students with disabilities was associated with higher self-efficacy and lower concerns about including students with disabilities in their own classrooms in both the Japanese and Finnish samples. However, the data also showed differences between the two countries. The higher score in interactions with persons with disabilities and a longer teaching career had positive associations with teachers' self-efficacy only in Japan. On the other hand, teachers' longer careers were negatively related to attitudes about accepting students with disabilities into mainstream classes in the Finnish sample. Interestingly, the statistically significant relationships between a greater amount of inclusive education training and more positive attitudes, fewer concerns, and higher self-efficacy were found only in the Finnish data.

Third, indirect paths from the four background variables to the three attitude factors through teachers' self-efficacy were analysed. The results indicated that teachers' self-efficacy served as a mediator between the three background variables (i.e., interactions with persons with disabilities, teaching career, and experience in teaching students with disabilities) and attitudes in Japan. For the Finnish sample, indirect paths from the amount of inclusive education training and experience in teaching students with disabilities to all three attitude factors via teachers' self-efficacy were statistically significant.

In summary, the study found that the two scales employed, TEIP and SACIE-R, measured the same constructs between Japan and Finland, which is a pre-requisite for a meaningful cross-cultural comparison. In both countries, more experience in teaching students with disabilities was associated with higher teachers' self-efficacy and fewer concerns about including students with disabilities. However, there were not only similarities but also differences in the paths; a longer teaching career was related to higher teachers' self-efficacy only in Japan and was negatively associated with teachers' attitudes only in Finland. Moreover, a greater amount of inclusive education training was associated with higher teachers' self-efficacy, more positive attitudes, and fewer concerns only in Finland.

4.3   Sub-study III: Teachers' self-efficacy and the sources of efficacy: A cross-cultural investigation in Japan and Finland

The third sub-study focused on sources of teachers' self-efficacy for inclusive practices in Japan and Finland. As mentioned above, it has been suggested that there are four sources of self-efficacy: mastery experience, vicarious experience, verbal persuasion, and affective state (Bandura, 1997). Although the existing literature on sources of self-efficacy is extensive and focuses particularly on quantitative measurements, there are few scales that measure all four sources and are psychometrically strong (Morris et al., 2017). In the current study, the data were collected from Japanese ($N = 261$) and Finnish ($N = 1123$) in-service teachers using

the TEIP and STSE scales, of which the latter was newly developed for the purpose of measuring all the four sources of self-efficacy.

Since a CFA model for the TEIP scale and a MTMM model for the STSE scale established a good fit in both the Japanese and Finnish samples separately, MGCFA was conducted to test measurement invariance between the groups. Scalar invariance for the first-order factor model and metric invariance for the second-order factor model were achieved, indicating that both scales used in this study measured the same constructs in the Japanese and Finnish data.

Multi-group SEM revealed medium to high factor correlations between the four sources in Finland and small factor correlations between the three sources, except for verbal persuasion, in Japan, which may indicate that the four sources overlap or mediate each other. Next, hierarchical regression analysis with the Cholesky decomposition approach yielded three main results. First, regarding the independent effect of each source, mastery experience was the most powerful and unique source predicting teachers' self-efficacy in both countries. Second, in both the Japanese and Finnish samples, verbal persuasion showed a unique contribution on teachers' self-efficacy, though it produced only a 2% increase in explanation rate in both countries. Interestingly, a positive relationship between verbal persuasion and teachers' self-efficacy was found in Finland, but the relationship was negative in Japan. Finally, the most remarkable result is that the four sources explained 54% of the variance of teachers' self-efficacy in the Finnish sample, but they explained only 15% in the Japanese sample. The result suggests that other sources of teachers' self-efficacy for inclusive practices may have a more powerful influence in Japan.

Together, these results indicate that the newly developed STSE scale performed psychometrically well; thus, it can be used to measure the four sources of self-efficacy in future research. The results confirmed that mastery experience is the most powerful source, which is consistent with previous literature. However, verbal persuasion influenced self-efficacy differently in Japan and Finland, in which the result must be understand through the lens of socio-cultural backgrounds. Further, there is a possibility that other sources exert more powerful influences in Japan.

5 GENERAL DISCUSSION

Current research views on inclusive education emphasise the importance of studying it in cross-cultural contexts (Artiles & Dyson, 2005; Mitchell, 2005; Savolainen et al., 2012). In addition, teachers are one of the most crucial players in implementing inclusive education. It has been suggested that to implement inclusive education efficiently, not only the appropriate skills and knowledge about inclusive education but also teachers' perspectives of inclusive education are essential (Avramidis & Norwich, 2002; de Boer et al., 2011). Thus, a number of studies have focused on teachers' points of view about inclusive education in multiple countries (e.g., Forlin et al., 2010; Malinen et al., 2013; Sharma et al., 2018). The purpose of this dissertation was to investigate teachers' perspectives of inclusive education in Japan and Finland. Specifically, there were three primary aims of the present research: a) to examine how teachers' self-efficacy for inclusive practices related to their attitudes towards inclusive education; b) to assess how teachers' demographic variables influence their self-efficacy and attitudes; and c) to identify sources of teachers' self-efficacy that might affect their self-efficacy for inclusive practices.

The analyses revealed that teachers' self-efficacy for inclusive practices affected their attitudes positively in both Japan and Finland. Moreover, it was found that experience in teaching students with disabilities had a positive effect on their self-efficacy and attitudes in both countries. However, there were differences between Japan and Finland in how teachers' teaching careers and inclusive education training predicted their self-efficacy and attitudes. In terms of sources of self-efficacy, mastery experience was the strongest source affecting teachers' self-efficacy independently and positively in both countries, as proposed by Bandura (1997). The second significant source was verbal persuasion in the two countries, but the way of predicting their self-efficacy differed between Japan and Finland. Overall, the results add to our understanding of teachers' self-efficacy for inclusive practices and its association with their attitudes towards inclusive education. These main findings are discussed in more detail in the following sections.

5.1 Cross-cultural reliability and the validity of the used scales in Japan and Finland

Testing cross-cultural reliability and validity is a prerequisite for a meaningful comparison in cross-cultural studies. Although previous research has investigated the reliability and validity of the TEIP and SACIE-R scales in different countries, including Finland (e.g., Forlin, Sharma, & Loreman, 2014; Malinen, Savolainen, & Xu, 2013; Savolainen et al., 2012), the applicability of the TEIP and SACIE-R scales has not been previously examined in Japan using a relatively large sample of in-service teachers. Furthermore, few studies have tested the measurement invariance of the two scales between multiple samples from different cultural contexts. In terms of the STSE scale, since it was newly developed for the aforementioned project, this is the first time testing its reliability and validity in different countries.

Our results attested that the TEIP and SACIE-R scales were reliable instruments to measure teachers' self-efficacy and attitudes towards inclusive education in Japan. In accord with a previous study conducted in China, item reliabilities were good for all the sub-scales of the TEIP (sub-scales: efficacy to use inclusive instructions, efficacy in collaboration, and efficacy in managing behaviour), and an acceptable reliability was shown for all the sub-scales of the SACIE-R (sub-scales: sentiments, attitudes, and concerns) (Malinen, Savolainen, et al., 2012).

The findings concerning the factor structure of the TEIP in Japan and Finland confirmed that three factor model (efficacy to use inclusive instructions, efficacy in collaboration, and efficacy in managing behaviour) fits the data well; however, the results indicated that the model, which consists of a second-order factor named 'general teacher self-efficacy for inclusive practices', is reasonable considering the relatively high correlations between three factors. These results are in line with Malinen, Savolainen, and Xu's (2013) findings, which indicated that teachers' self-efficacy for inclusive practices can be seen as both multi-componential and unidimensional phenomena. In light of teachers' attitudes, the three-factor structure of the SACIE-R (sentiments, attitudes, and concerns) was confirmed in both Japan and Finland. As mentioned above, MTMM analysis was conducted for the STSE scale because of its unique structure for asking questions. The results revealed that the MTMM model with four method factors (instruction, behaviour management, collaboration, and student engagement) and four trait factors (mastery experience, vicarious experience, verbal persuasion, and affective state) yielded a sufficient fit with both the Japanese and Finnish samples. The evidence from this study suggests that the three scales (i.e., TEIP, SACIE-R, and STSE) are applicable instruments in Japan and Finland.

Measurement invariance was examined to ensure that the variables used in the analyses were comparable constructs across the different country groups. The partial scalar invariance model for the TEIP and SACIE-R, in which some of the intercepts were relaxed, yielded an acceptable fit. Regarding the STSE scale, full scalar invariance was achieved with the MTMM model. According to Steenkamp and Baumgartner (1998), meaningful cross-cultural comparisons of factor means

can be expected if at least two items have invariant factor loadings and intercepts. Since our results fulfilled this criterion, it is confirmed that there is a universality in the factor structures of the TEIP, SACIE-R, and STSE scales. A recent literature review concluded that there are few instruments that measure all four sources of self-efficacy and are psychometrically strong (Morris et al., 2017). Therefore, it is noteworthy that the newly developed STSE scale performed well in terms of both construct and cross-cultural validities to measure four sources of self-efficacy at the same time.

Taken together, the present thesis showed that the three scales used in this research were reliable instruments not only in Finland but also in Japan, and cross-cultural analysis using the variables of the scales was meaningful between Japan and Finland.

5.2   Associations between teachers' self-efficacy and attitudes

Teachers' self-efficacy for inclusive practices and its association with attitudes towards inclusive education have been studied by many researchers using samples from different countries (e.g., Forlin et al., 2010; Savolainen et al., 2012; Sharma & Jacobs, 2016). However, few studies have investigated this relationship in Japan using a relatively large size of data with Japanese in-service teachers. Therefore, sub-study I focused on Japanese teachers' self-efficacy and attitudes in inclusive education. The results indicated that Japanese teachers' self-efficacy for inclusive practices was relatively low compared to Savolainen et al.'s (2012) findings, which presented Finnish and South African teachers' self-efficacy. This result accords with an earlier investigation that showed that Japanese teachers in high schools exhibited low self-efficacy in implementing inclusive education (Yoshitoshi, 2014). The findings further showed that in three sub-dimensions of self-efficacy, self-efficacy in using inclusive instruction was the highest, but self-efficacy in managing students' problematic behaviour was the lowest in the Japanese sample.

In terms of Japanese teachers' attitudes towards inclusive education, the results revealed that Japanese teachers did not have extreme attitudes in support of or against inclusion. This finding is consistent with that of de Boer et al. (2011), who reported that most teachers held neutral or negative attitudes towards inclusive education. While Japanese teachers expressed a neutral stance on inclusive education, their sentiments about interacting with a person with disabilities were the most positive among the three sub-scales of attitudes; however, they showed concerns about including students with disabilities in their own classrooms. In accordance with the present results, a previous study has demonstrated that Japanese teachers expressed great anxiety about including children with SEN in their classrooms, though many agreed on the importance of the concept of inclusive education (Ueno & Nakamura, 2011).

The results of the correlation analyses and multiple regression analysis confirmed that teachers' self-efficacy for inclusive practices is positively associated with their attitudes towards inclusive education in Japan. Specifically, self-

efficacy in collaboration and managing behaviour were significant predictors of Japanese teachers' attitudes towards inclusive education. Further, the results obtained from the SEM in sub-study II indicated that there was a positive relationship between teachers' self-efficacy and attitudes in both Japan and Finland.

In summary, these results suggested that teachers' self-efficacy for inclusive practices is an important factor for bringing teachers' attitudes towards inclusion in a positive direction. As mentioned in previous studies, it is essential to develop pre- and in-service teacher training, in which teachers can improve their skills in collaboration and managing challenging student behaviour in both Japan and Finland (Savolainen et al., 2012).

5.3   Factors correlating with teachers' self-efficacy and attitudes

The second aim of this dissertation was to identify variables correlating with teachers' self-efficacy and attitudes in implementing inclusive education. Four teachers' background variables were examined in the sub-study II: experience in interactions with persons with disabilities, experience in teaching students with disabilities, teaching career in years, and the amount of inclusive education training.

The results of this thesis showed that having a close relationship with persons with disabilities (i.e., interactions with persons with disabilities) was positively associated with teachers' general self-efficacy for inclusive practices and their sentiments on interacting with persons with disabilities in both countries. In other words, previous experience of interaction with persons with disabilities positively affects teachers' self-efficacy and their general attitudes towards person with disabilities. However, the results further indicate that having contact with persons with disabilities is not enough to lower teachers' concerns on teaching students with disabilities in their own classes.

The second variable that had a significant positive correlation with teachers' self-efficacy and their concerns about including children with disabilities in their classes in both Japan and Finland was their experience in teaching students with disabilities. Together with the findings of the section above, this study supports evidence from a previous study which suggested that experience in contact with students with SEN or persons with disabilities is a crucial variable for teachers' attitudes towards inclusive education (Avramidis & Norwich, 2002). The findings from this thesis further identified more detailed information about how specific kinds of contact experience influence teachers' particular attitudes towards inclusive education.

Teachers' years of teaching was the third variable that had significant associations with their self-efficacy or attitudes in the two countries, but the ways of influencing them were different between Japan and Finland. The results indicated that length of teaching career was negatively associated with teachers' attitudes towards inclusive education only in Finland, indicating that teachers with more teaching experience had more negative attitudes towards inclusive education. This finding matches those found in earlier studies (Glaubman & Lifshitz,

2001; Jahnukainen & Korhonen, 2003). A possible explanation for this, which is in line with the results of Forlin et al. (2008), might be that the concept of inclusive education is relatively new, and teachers in Finland with a longer experience have not received adequate up-to-date in-service training for implementing inclusive education.

Another interesting result regarding teaching career length is that in the Japanese sample, career length was positively correlated with teachers' self-efficacy for inclusive practices, signifying that teachers with longer careers had higher self-efficacy. However, no such relationship was found in the Finnish sample. These findings seem to be consistent with research that found that teaching career was not related to Finnish and South African teachers' self-efficacy but only to that of Chinese teachers' (Malinen, Savolainen, Engelbrecht, et al., 2013). The results could be explained by socio-cultural contexts in both countries. As mentioned, Japan is seen as a hierarchical society, where people generally respect those with more experience (Nishimura et al., 2008). Therefore, with their 'ingroup' relationship, it is probable that as they become more experienced, they become more confident. On the other hand, Finland is a horizontal society, in which equality in the group is emphasised regardless of whether the person is young or old. Thus, teachers' self-efficacy in Finland might not differ so directly in terms of teaching career length. Another explanation may be related to both countries' teacher training programmes, which will be discussed in detail in the next paragraph.

The final teachers' background variable examined in this thesis was the amount of inclusive education training they had previously received. It was found that the variable had positive correlations with teachers' self-efficacy and attitudes only in Finland. This finding suggests that Finnish teacher training regarding inclusive education is working effectively not only to increase teachers' self-efficacy but also to make their attitudes more positive. A result of well-organised inclusive education training may be that Finnish novice teachers have the same level of confidence as elder teachers after they graduate from teacher training programmes. Further work is required to reveal what kind of inclusive education training they receive in Finland and how it influences teachers' self-efficacy and attitudes towards inclusive education.

5.4   Sources of self-efficacy for inclusive practices

In line with previous studies (Malinen, Savolainen, et al., 2012; Savolainen et al., 2012; Sharma et al., 2018), evidence from the present thesis suggests that teachers' self-efficacy for inclusive practices is significantly associated with their attitudes towards inclusive education. Moreover, it may be related to their behaviours when implementing inclusive education. This study has raised questions regarding the sources of self-efficacy that might increase or decrease teachers' self-efficacy for inclusive practices. Bandura (1997) proposed that there are four sources of self-efficacy: mastery experience, vicarious experience, verbal persuasion, and affective state. The third aim of this dissertation was to identify which sources of

self-efficacy suggested by Bandura (1997) influence teachers' self-efficacy for inclusive practices.

The results from the correlation analyses of latent factors indicate that all the four sources of self-efficacy had moderate to strong positive associations with teachers' self-efficacy in Finland and the three sources, except verbal persuasion, had weak positive relationships in Japan. These findings concur with Bruce and Ross's (2008) idea that the four sources of self-efficacy are not independent but influence each other in combination.

Because of the correlational nature of these four sources, and the fact that only a few studies have investigated their independent influence on teachers' self-efficacy (Morris et al., 2017), a hierarchical regression analyses with the Cholesky decomposition approach (de Jong, 1999) was conducted in SEM to find the unique contribution of each source to teachers' self-efficacy. The present study showed that mastery experience was the strongest source that had positive independent effect on teachers' self-efficacy for inclusive practices in both Japan and Finland. This finding corroborates the ideas of Bandura (1997), as well as other previous studies (Bruce & Ross, 2008; Milner, 2002). In addition, these results also support evidence from the sub-study II, which found that teachers' experience in teaching students with disabilities affected their self-efficacy positively in the two countries.

Another source that made a small but significant independent contribution to teachers' self-efficacy in both countries was verbal persuasion. However, the direction of the relationship was opposite in both countries, with a positive prediction found in the Finnish sample but a negative prediction found in the Japanese sample when the effects of other sources were controlled for. To put it differently, although there was no significant correlation between verbal persuasion and teachers' self-efficacy in Japan, when the effects of the other sources were partialled out, it had a negative influence on teachers' self-efficacy. Thus, the more verbal persuasion (i.e., feedback or appraisal from others) teachers receive, the higher self-efficacy in Finland, but the lower their self-efficacy in Japan. These results may reflect each country's school context. For instance, a qualitative study described how Finnish schools develop a learning support network, in which teachers are able to receive daily feedback not only from colleagues but also from special education teachers (Engelbrecht et al., 2017). On the other hand, in Japan, the teacher evaluation system is nationally organised (MEXT, 2014), and, thus, Japanese teachers probably do not think of verbal persuasion from a principal or school management team as positive feedback for improving their teaching, rather they feel it is a formal appraisal for their teacher evaluation. Another possible explanation for this result may be related to cultural contexts. As noted, because Japan is a hierarchical society where elder people are more respected (Nishimura et al., 2008), it may be that younger teachers feel criticised by elder teachers' feedback. Taken together, these results suggest that the way of framing a persuasive message is extremely important, and, as mentioned by other researchers, developing collegiality may be necessary for the Japanese school community (Goto, 2014; Little, 1982; Tsukiyama, 2006).

The final interesting finding regarding sources of self-efficacy is that the four sources explained 54% of the variance of teachers' self-efficacy in Finland

but only 15% in Japan. These results suggest that there might be other sources related to Japanese teachers' self-efficacy for inclusive practices, such as the mastery of knowledge (Morris et al., 2017) and collective efficacy (Goddard & Goddard, 2001). Hence, it is important for future research to investigate sources of teachers' self-efficacy in Japan and other non-Western countries.

5.5   Theoretical implications and suggestions

Several theoretical implications can be drawn from the results of this dissertation (see Figure 8). Firstly, in light of Bandura's (2012) triadic reciprocal causal structure (see Figure 1), although behaviour determinants were not measured in this thesis, the findings confirm that teachers' self-efficacy for inclusive practices, which can be regarded as personal determinants, were influenced by external socio-cultural contexts (i.e., environmental determinants). As mentioned by Bandura (2012), self-efficacy plays a pivotal role in the way of thinking, level of motivation, and perseverance in coping with challenges. Therefore, it could be assumed that teachers' self-efficacy for inclusive practices influences their positive thinking about inclusion, their motivation to implement inclusive education, and their persistent stance on working with students with difficulties. Similarly, in terms of the TPB, the findings of this research echoed the theoretical model of Ajzen (2019), in which self-efficacy and attitudes are correlated with each other (see Figure 2). In the TPB, attitudes and self-efficacy are critical factors that predict one's intention to perform a specific behaviour (i.e., intention to implement inclusive education), which, in turn, predict one's behaviour (i.e., actual inclusive practices). Further research is required to measure all three determinants in the triadic reciprocal causal structure, or behavioural intention and actual behaviour in the TPB, to identify relationships between teachers' self-efficacy for inclusive practices, socio-cultural contexts, and their actual behaviour in implementing inclusive education.

Second, while the cross-cultural generality of the concept of self-efficacy has been stated (Bandura, 1997, 2002), one systematic literature review concluded that research on teachers' self-efficacy in non-North American contexts was limited (Klassen et al., 2011). In this regard, the findings of this research confirmed the generality and cultural adequacy of teachers' self-efficacy theory in a non-Western country, Japan. Nevertheless, the comparative analysis revealed that the level of teachers' self-efficacy and how it relates to other variables are different between countries.

Third, Bandura (2002) underscored the limitations of using the individualism/collectivism frameworks in cross-cultural self-efficacy research, as they risk producing misleading generalisations. The present study also took the position that the understanding of self cannot be explained only by dichotomic dimensions; however, the cultural framework provided some useful grounds for understanding the outcomes of this dissertation. Therefore, as suggested by Klassen (2004), future cross-cultural research with cultural frameworks will add useful insight for developing universal and inclusive understandings of teachers' self-

efficacy. Here again, caution is needed as researchers should recognise the importance of interpreting based on not only a cultural framework but also internal group differences.

Last but not least, the current dissertation has important implications for the theory of teachers' sources of self-efficacy. While the results confirmed that there were four sources of teachers' self-efficacy for inclusive practices in Japan and Finland, these four sources did not explain the variances of Japanese teachers' self-efficacy as well as those of Finnish teachers. Markus and Kitayama (1991) illustrated that current theories about self and self-in-relation-to-others were mostly developed in Western countries and indicated that different situations may exist in non-Western countries. The evidence from this thesis suggested that this argument can be applied to self-efficacy theory, and, therefore, it is necessary to further study sources of teachers' self-efficacy in non-Western cultural contexts.
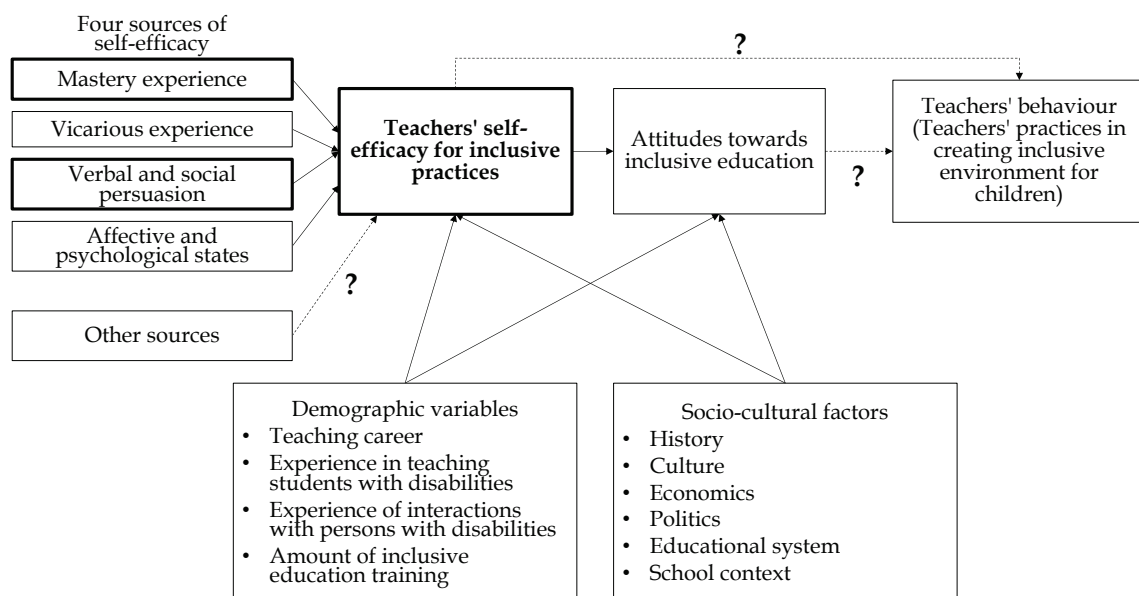
FIGURE 8.   Overall findings of this dissertation

5.6   Practical implications and suggestions

The findings from this dissertation also have significant practical implications. One of the implications is related to the use of instruments. The present thesis showed that the three scales applied in this research, TEIP, SACIE-R, and STSE, had cross-cultural reliability and validity in Japan and Finland for measuring teachers' self-efficacy for inclusive practices, its sources, and teachers' attitudes towards inclusive education. Since inclusive education is increasingly enforced as a global educational agenda (United Nations General Assembly, 2015), it is

important to assess continuously whether the new policies and systems are working well in practical terms. Therefore, these instruments can be used not only by researchers but also by administrators to examine the development of inclusive education from teachers' points of view.

The evidence from this thesis confirmed that teachers' self-efficacy for inclusive practices is a key factor in positively shaping their attitudes towards inclusive education. Moreover, based on the theories discussed above, it may further develop their behaviour in finding a solution for challenges towards inclusion. Then, the next question is: how can we improve teachers' self-efficacy for inclusive practices? One way is developing pre-service teacher training based on the findings of this thesis, especially in relation to sources of efficacy. In the present research, it was found that teachers' mastery experience in inclusive practices had a positive influence on their self-efficacy. Thus, developing pre-service teacher training where student-teachers can gain successful experience in teaching students with SEN might be beneficial. It is further worth noting it is important not only to increase student-teachers' experience in inclusive practices but also to improve the quality of the experience, as suggested previously (Bandura, 1997; Moberg et al., 2019). In addition, the present results indicate that verbal persuasion had a small but significant independent effect on teachers' self-efficacy. An implication of this for pre-service teacher training is that increasing collaborative work in courses and teaching practices, in which student-teachers can receive positive verbal persuasion from their peers and teachers, may be beneficial. As mentioned in a previous study, different types of teacher are trained in discrete teacher training programmes with few common courses in Finland (Malinen, Väisänen, et al., 2012), and the situation is the same not only in Japan but also elsewhere. Therefore, it may be useful to develop pre-service teacher training in which all kinds of student-teachers, including those who want to be special education teachers, guidance and counselling teachers, and even school psychologists and other professionals, can take common inclusive education courses. Such courses may increase student-teachers' awareness of what expertise other types of teacher and professions have and provide them with skills to collaborate with other teachers and school staff. They may also prepare future teachers to participate in school community development and to collaborate with community members (Naukkarinen, 2010). Although developing pre-service teacher training in a more collaborative direction also requires university faculty members to collaborate with each other, the work would be worthwhile to the extent that it improves student-teachers' self-efficacy and contributes to the development of inclusive education. Specifically, the findings from this study indicated that Japanese novice teachers were less confident in their practices than elder teachers, even though they have an equally demanding job. Hence, there is a pressing need to develop pre-service teacher training in Japan.

The findings of this dissertation also have significant implications for in-service teacher training. Particularly in Japan, it was reported that because in-service teacher training is mostly conducted in a lecture style, teachers often argue that it is not interesting and practical (Sakakibara et al., 2005). Like the suggestion above regarding pre-service teacher training, it would also be valuable to develop in-service teacher training in which teachers can gain practical mastery

experience and learn collaborative skills to develop school communities so that they can receive daily positive verbal persuasion from their colleagues. In addition, although vicarious experience did not make a unique contribution to teachers' self-efficacy, this may be because teachers do not have a chance to observe other teachers' practices in daily school life. Thus, increasing opportunities to observe other teachers who are successful in inclusive practices during in-service teacher training could be beneficial to boost teachers' self-efficacy. In Japan, 'lesson study' is often a part of in-service teacher training, in which teachers observe a lesson and discuss it together to improve the lesson plan and teaching strategies (Morishita, 2012). However, as the lesson study is mostly focused on specific subject teaching and not on inclusive practices, it may not influence the study's results on teachers' self-efficacy for inclusive practices. Conducting lesson study in regard to inclusive practices may contribute to teachers' self-efficacy in Japan. Another way to increase teachers' opportunities to observe other teachers' practices is to introduce co-teaching. Co-teaching refers to two or more teachers sharing the responsibility of teaching the same class, which has been shown to support teachers' professional development (Rytivaara & Kershner, 2012). Co-teaching may enable teachers to observe other teachers' practices on a daily basis and also to receive feedback from them (i.e., verbal persuasion).

Finally, one possible way to raise teachers' self-efficacy is to combine pre- and in-service teacher training. For instance, one project in Finland has attempted to support the life-long learning of teachers, teacher educators, and student-teachers, by encouraging them all to collaborate (University of Jyväskylä, 2019). In this new type of teacher training programme, student-teachers may have the opportunity to observe experienced teachers' practices, while in-service teachers may receive useful feedback from student-teachers and teacher educators.

Therefore, many practical implications can be drawn from this dissertation. As mentioned above, teachers are important stakeholders in implementing inclusive education, and their self-efficacy for inclusive practices may be a crucial factor in improving their behaviour in creating an inclusive environment for children, which further develops inclusive education. Thus, it is necessary to improve teachers' self-efficacy for inclusive education by means of pre- and in-service teacher training. These implications may be adopted not only in the two countries in this study but in other countries as well.

5.7 Limitations and future direction

Although this thesis has provided deeper insight into teachers' perspectives on inclusive education, there are some limitations. First, the generalisability of these results should be discussed with caution. For instance, as all the data used in this dissertation were collected using convenience sampling, there is possibility that the samples did not capture the wider population. In a similar vein, the sample size and the time of data collection were different between Japan and Finland. Therefore, the comparability of these data is subject to certain limitations. Further

studies using random sampling with same time point and similar sample size are strongly recommended.

Second, one source of limitation in this study was the use of cross-sectional data, which cannot identify causal relationships. Thus, to determine whether teachers' self-efficacy for inclusive practices predicts their attitudes, future research analysing longitudinal data will have to be conducted.

Third, even though cross-cultural reliability and validity were tested in the present research, it is still possible that the translated version of the questionnaire did not capture the full meaning of the original version. Similarly, since participants in this thesis were from relatively distinct cultural contexts, their understanding of the questions and response styles might be different, which could affect the results. Therefore, caution is needed to interpret the results.

Fourth, while a quantitative research method enables researchers to provide general insight about a population, the questionnaire used in this study did not offer a deep understanding about teachers' self-efficacy, its sources, and attitudes. For example, the verbal persuasion items in the STSE scale did not reveal what kinds of feedback teachers did receive and from whom it was provided. Further research using qualitative research methods, such as interviews and classroom observation, would be useful to understand teachers' perspectives on inclusive education in more detail.

Finally, an issue that was not addressed in this study was whether teachers' self-efficacy for inclusive practices and their attitudes towards inclusive education predict their actual behaviour in implementing inclusive education. According to social cognitive theory and the TPB, self-efficacy and attitudes are probably predictors of behaviour, but further research should be undertaken to measure teachers' behaviour in inclusive education and to explore relationships between teachers' self-efficacy, attitudes, and behaviour in inclusive settings.

6 CONCLUSION

The findings from this dissertation indicate that having self-efficacy for inclusive practices is crucial to teachers to improve their attitudes towards inclusive education in positive direction, and in turn it may affect teachers' behaviour to implement inclusive education. One way of developing teachers' self-efficacy as suggested by the findings might be to increase practical mastery experience of working with students with SEN in teacher training programmes. In addition, the results problematize two things. One is that Finnish elder teachers held more negative attitudes towards inclusive education than younger teachers. This can be explained that because concept of inclusive education was introduced recently, elder teachers feel they are not ready for it. Therefore, it might be necessary to develop in-service teacher training related to inclusive education in Finland. The other is that lower self-efficacy for novice teachers was indicated in Japan although they have to handle as same amount of demanding job as experienced teachers. Since this thesis also found how the four sources of self-efficacy influence teachers' self-efficacy, it might be useful to develop pre- and in-service teacher training focusing on increasing those specific sources.

The findings of this dissertation further highlight the importance of comparative inclusive education study in social, political, cultural, and historical frameworks. Although the same constructs, such as self-efficacy, its sources, and attitudes, are found among the two countries in this research, how they related to each other varied based on socio-cultural factors. In addition, based on Arnove's (1999) three dimensions of comparative education perspective, this cross-cultural comparative study enabled us to understand inclusive education in both scientific and pragmatic dimensions. The final dimension that Arnove (1999) suggested was the global dimension, which is to understand the international process towards inclusion and, in turn, to increase awareness of how a country's educational process is affected by globalisation. In Japan, our educational system has been highly influenced by global trends towards inclusion; however, teachers are struggling with the new ideas related to inclusive education, such as 'reasonable accommodation' stated in article 24 of the CRPD (United Nations, 2006), which is now included as a requirement in the new education system. It seems that the Japanese process towards inclusion is different from

that of Finland and, most likely, other countries, and it is still far from the goal of an inclusive society. There is no correct or right process towards inclusion; rather, it is important to understand that each country's process of developing inclusive education is unique and influenced by socio-cultural contexts. Thus, we need to find a way to improve inclusive education that is appropriate to each country based on its contexts.

58

YHTEENVETO (SUMMARY)

Inkluusio eli erityisoppilaiden opettaminen yleisopetuksen luokissa on ollut kansainvälisen koulutuspolitiikan keskiössä Unescon Salamancan julistuksesta (1994) lähtien. Opettajilla on epäilemättä tärkeä rooli inkluusion toteuttamisessa. On esitetty, että opettajan tietojen ja taitojen lisäksi myös hänen minäpystyvyytensä (eli luottamus omiin kykyihin) ja asennoitumisensa inklusiiviseen opetukseen vaikuttavat koulun inkluusiokäytäntöihin. Tässä väitöstutkimuksessa keskitytään inkluusioon opettajan näkökulmasta. Tutkimustavoitteita on kolme: a) selvittää, kuinka opettajien inklusiivinen minäpystyvyys on yhteydessä heidän inklusiivista opetusta koskeviin asenteisiinsa; b) tutkia, kuinka opettajien demografiset muuttujat vaikuttavat heidän minäpystyvyyteensä ja asenteisiinsa ja c) tunnistaa sellaisia opettajien minäpystyvyyden lähteitä, jotka voivat vaikuttaa heidän inklusiiviseen minäpystyvyyteensä. Tutkimuksen kohteena oli sekä japanilaisia että suomalaisia opettajia, koska vertaileva analyysi auttaa ymmärtämään inklusiivisen kasvatuksen merkitystä ja sitä, kuinka sosiaalinen, poliittinen, taloudellinen ja kulttuurihistoria saattavat vaikuttaa sen tulkintaan.

Väitöskirja koostuu kolmesta osatutkimuksesta. Aineisto kerättiin kyselylomakkeella yhteensä 620 japanilaiselta ja 1995 suomalaiselta opettajalta. Ensimmäiseen osatutkimukseen eli Japanin tilanteen kartoitukseen osallistui 359 japanilaista opettajaa. Toisessa osatutkimuksessa käsitellään opettajien inklusiivisen minäpystyvyyden, asenteiden ja taustamuuttujien välisiä suhteita 359 japanilaisen ja 872 suomalaisen opettajan muodostaman otoksen avulla. Kolmas osatutkimus pyrkii määrittämään minäpystyvyyden lähteitä 261 japanilaiselta ja 1123 suomalaiselta opettajalta kerätyn aineiston perusteella. Aineistoanalyysissä käytettiin SPSS- ja Mplus-tilasto-ohjelmistoja.

Ensimmäisessä osatutkimuksessa selvitettiin japanilaisten opettajien inklusiivista minäpystyvyyttä ja inkluusioasenteita. Tulokset osoittavat, että vaikka opettajien asenteet vammaisia henkilöitä kohtaan olivat yleisesti ottaen myönteisiä, japanilaisia opettajia huoletti inkluusion käytännön toteuttaminen omassa luokassaan. Japanilaisten tutkittavien minäpystyvyyden taso oli suhteellisen matala muiden maiden tasoon verrattuna erityisesti oppilaiden häiriökäyttäytymisen hallinnassa. Häiriökäyttäytymisen hallintaan ja yhteistoimintaan liittyvä minäpystyvyys oli lisäksi yhteydessä yleisiin inkluusiota koskeviin asenteisiin. Tutkimustulokset auttavat hahmottamaan japanilaisten opettajien tämänhetkistä tilannetta ja miettimään tarvittavia tukitoimia.

Toisen osatutkimuksen tavoitteena oli vertailla japanilaisten ja suomalaisten opettajien minäpystyvyyttä ja asenteita sekä taustamuuttujien vaikutusta niihin. Analyysien perusteella opettajien inklusiivinen minäpystyvyys vaikutti heidän asenteisiinsa myönteisesti sekä Japanissa että Suomessa. Lisäksi havaittiin, että kokemus vammaisten opiskelijoiden opettamisesta vaikutti myönteisesti minäpystyvyyteen ja asenteisiin molemmissa maissa. Joitakin maiden välisiä eroja kuitenkin havaittiin. Ensinnäkin pitkä opetusura ennakoi minäpystyvyyttä ainoastaan Japanissa, eli vanhemmat japanilaiset opettajat olivat nuoria itsevarmempia. Suomessa vastaavaa eroa ei havaittu. Toinen ero oli, että opetusuralla oli negatiivinen yhteys asenteisiin ainoastaan Suomessa: vanhemmat suomalaiset

opettajat asennoituivat inkluusioon nuoria opettajia kielteisemmin. Kolmas ero oli, että inkluusioon liittyvän opettajankoulutuksen määrä vaikutti positiivisesti opettajien minäpystyvyyteen ja asenteisiin vain Suomessa. Tuloksia tarkasteltiin molempien maiden sosiokulttuuristen kontekstien näkökulmasta, ja niitä voidaan hyödyntää kehitettäessä opettajien perus- ja täydennyskoulutuksen inkluusioon liittyviä sisältöjä.

Koska toinen osatutkimus osoitti, että opettajien minäpystyvyydellä on yhteys myönteisempiin inkluusioasenteisiin, kolmannessa osatutkimuksessa pyrittiin määrittämään minäpystyvyyden lähteitä sekä Japanissa että Suomessa. Bandura (1997) on esittänyt neljä minäpystyvyyden lähdettä (onnistumiskokemukset, sijaiskokemukset, verbaalinen vakuuttaminen sekä psykologiset ja affektiiviset tilat), joista onnistumiskokemukset vaikuttivat voimakkaimmin opettajien minäpystyvyyden tunteeseen molemmissa maissa. Verbaalinen vakuuttaminen eli toisilta opettajilta ja muulta henkilökunnalta saatu palaute vaikutti minäpystyvyyteen myönteisesti Suomessa – mutta kielteisesti Japanissa. Huomionarvoista oli myös, että edellä mainitut neljä minäpystyvyyden lähdettä selittivät 54 % suomalaisten opettajien minäpystyvyyden vaihtelusta mutta vain 15 % japanilaisen otoksen vaihtelusta. Näyttää siltä, että näiden neljän minäpystyvyyden lähteen vaikutukset riippuvat suuresti sosiokulttuurisesta kontekstista ja että Japanissa asiaan vaikuttavat voimakkaasti muutkin tekijät.

Kaiken kaikkiaan tutkimus osoittaa opettajien inklusiivisen minäpystyvyyden olevan ratkaisevan tärkeä tekijä haluttaessa muokata heidän inkluusioasenteitaan positiivisemmiksi. Tulosten perusteella minäpystyvyyden tunnetta voitaisi kehittää esimerkiksi sisällyttämällä opettajankoulutusohjelmiin enemmän käytännön kokemuksia työskentelystä erityisoppilaiden kanssa. Lisäksi tulokset nostavat esiin kaksi ongelmaa. Ensimmäinen niistä liittyy suomalaisten vanhempien opettajien nuoria kielteisempiin inkluusioasenteisiin. Tämä saattaa selittyä sillä, että inkluusio on käsitteenä melko uusi eivätkä vanhemmat opettajat tunne olevansa valmiita siihen. Siksi Suomessa voisi olla tarpeen kehittää inkluusioon liittyvää täydennyskoulutusta. Toinen tulosten esiin tuoma ongelma oli japanilaisten aloittelevien opettajien heikompi minäpystyvyys, vaikka heidän on suoriuduttava samasta määrästä vaativia tehtäviä kuin kokeneiden kollegoidensa. Koska havaitsimme myös, että Suomessa inkluusioon liittyvä opettajankoulutus vaikuttaa myönteisesti opettajien minäpystyvyyteen ja asenteisiin, tulevaisuudessa voisi olla hyödyllistä kartoittaa tarkemmin suomalaisia opettajankoulutusohjelmia.

Tämän väitöstutkimuksen perusteella on korostetun tärkeää tutkia inklusiivista kasvatusta sen sosiaalisessa, poliittisessa, kulttuurisessa ja historiallisessa viitekehyksessä. Vaikka samat käsitteet – minäpystyvyys ja sen lähteet, asenteet – voidaan tunnistaa kummassakin tutkimuksen maassa, niiden keskinäiset suhteet vaihtelivat kulttuurista ja historiallisesta taustasta riippuen. Aiemmissa tutkimuksissa on esitetty, että oman itsen ja muiden ymmärtämiseen liittyvät nykyteoriat viittaavat ensisijaisesti länsimaisiin kulttuurikonteksteihin ja että tilanne voi olla erilainen länsimaiden ulkopuolella. Lisätutkimusta opettajien inklusiivisesta minäpystyvyydestä ja asenteista tarvitaan näin ollen myös ei-länsimaisissa ympäristöissä, jotta saadaan selville teorioiden sovellettavuus erilaisiin kulttuurikonteksteihin. Tarkemmat inkluusiotutkimukset eri maiden kulttuuri-

historiallisissa viitekehyksissä tuottavat myös arvokasta tietoa, joka voi synnyttää uusia ideoita ja lähestymistapoja aiheeseen.

REFERENCES

Ajzen, I. (2012). Attitudes and persuasion. In K. Deaux & M. Snyder (Eds.), *The Oxford handbook of personality and social psychology* (pp. 367–393). New York, NY: Oxford University Press.

Ajzen, I. (2019). *Theory of planned behavior*. Retrieved from https://people.umass.edu/aizen/index.html

Ajzen, I., & Cote, N. G. (2008). Attitudes and the prediction of behavior. In W. D. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (pp. 289–311). New York, NY: Psychology Press.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474.

Alghazo, E. M., & Gaad, E. E. N. (2004). General education teachers in the United Arab Emirates and their acceptance of the inclusion of students with disabilities. *British Journal of Special Education*, 31(2), 94–99.

Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), *Handbook of social psychology* (pp. 789–844). Worcester, MA: Clark University Press.

Arnove, R. F. (1999). Reframing comparative education: The dialectic of the global and the local. In R. F. Arnove & C. A. Torres (Eds.), *Comparative education: The dialectic of the global and the local* (pp. 1–23). Lanham, MD: Rowman and Littlefield.

Artiles, A., & Dyson, A. (2005). Inclusive education in the globalization age: The promise of comparative cultural-historical analysis. In D. Mitchell (Ed.), *Contextualizing Inclusive Education: Evaluating old and new international perspectives* (pp. 37–62). London, England: Routledge.

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.

Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 213–262). Chicago, Il: Rand McNally.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian Journal of Social Psychology*, 2, 21–41.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1–26.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51(2), 269–290.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9–44.

Beppu, E. (2013). Tokubetsushienkyoiku ni okeru kyoshi no shidokonnan to konsarute-shon ni kansuru kenkyu no doko to kadai [Trends and issues in consultation for teachers of special needs education: A review]. *Japanese Journal of Special Education*, *50*(5), 463–472.

Björn, P. M., Aro, M. T., Koponen, T. K., Fuchs, L. S., & Fuchs, D. H. (2016). The many faces of special education within RTI frameworks in the United States and Finland. *Learning Disability Quarterly*, *39*(1), 58–66.

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. *Annual Review of Psychology*, *62*(1), 391–417.

Bruce, C. D., & Ross, J. A. (2008). A model for increasing reform implementation and teacher efficacy: Teacher peer coaching in grades 3 and 6 mathematics. *Canadian Journal of Education*, *31*(2), 346–370.

Byrne, B. M. (2013). *Structural equation modeling with M plus: Basic concepts, applications, and programming*. London, England: Routledge.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*(2), 81–105.

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(3), 464–504.

Chen, F. F., Sousa, K. H., & West, S. G. (2005). Teacher's corner: Testing measurement invariance of second-order factor models. *Structural Equation Modeling: A Multidisciplinary Journal*, *12*(3), 471–492.

Committee of Elementary and Lower Secondary Education in the Central Council for Education. (2012). *Kyoseishakai no keisei ni muketa ink-urushibukyoikushisutemukochiku no tame no tokubetsushienkyoiku no suishin [A report about the development of special needs education in order to construct inclusive education system toward creating co-existent society]*. Retrieved from http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/gijiroku/__icsFiles/afieldfile/2012/07/24/1323733_8.pdf

de Boer, A., Jan Pijl, S., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, *15*(3), 331–353.

de Jong, P. F. (1999). Hierarchical regression analysis in structural equation modeling. *Structural Equation Modeling*, *6*(2), 198–211.

Eagly, A., & Chaiken, S. (1993). *The psychology of attitudes.* Fort Worth, TX: Harcourt Brace Jovanovich College Publishers.

Eid, M., Langeheine, R., & Diener, E. (2003). Comparing typological structures across cultures by multigroup latent class analysis: A primer. *Journal of Cross-Cultural Psychology*, *34*(2), 195–210.

Engelbrecht, P., & Savolainen, H. (2018). A mixed-methods approach to developing an understanding of teachers' attitudes and their enactment of inclusive education. *European Journal of Special Needs Education*, *33*(5), 660-676

Engelbrecht, P., Savolainen, H., Nel, M., Koskela, T., & Okkolin, M-A. (2017). Making meaning of inclusive education: Classroom practices in Finnish and South African classrooms. *Compare: A Journal of Comparative and International Education, 47*(5), 684-702.

FNBE. (2010). *Perusopetuksen opetussuunnitelman perusteiden 2004 muuttaminen ja ta¨ydenta¨minen [Changing and supplementing the national core curriculum for basic education]*. Helsinki, Finland: Finnish National Board of Education.

FNBE. (2016). *National Core Curriculum for Basic Education 2014*. Helsinki, Finland: Finnish National Board of Education.

Forlin, C., Cedillo, I. G., Romero-Contreras, S., Fletcher, T., & Hernández, H. J. R. (2010). Inclusion in Mexico: Ensuring supportive attitudes by newly graduated teachers. *International Journal of Inclusive Education*, 14(7), 723–739.

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International*, 21(3), 50–65.

Forlin, C., Kawai, N., & Higuchi, S. (2015). Educational reform in Japan towards inclusion: Are we training teachers for success? *International Journal of Inclusive Education*, 19(3), 314–331.

Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian context. *International Journal of Disability, Development and Education*, 55(3), 251–264.

Forlin, C., Sharma, U., & Loreman, T. (2014). Predictors of improved teaching efficacy following basic training for inclusion in Hong Kong. *International Journal of Inclusive Education*, 18(7), 718–730.

Fujii, N. (2014). Inkuru-shibukyoikushisutemukochiku no hokosei ni kansuru kento: Kyoshokuin ni taisuru ki-wa-do no ninchidochosa wo toshite [Study into the directions in building the inclusive education system: Through teaching staff survey on keyword awareness]. *Bulletin of Center for Educational Research and Practice, Akita University*, 36, 89–98.

Fujita, H., & Nishimura, M. (2012). Tokubetsushienkyoikuronko [Special needs education in elementary schools]. *Memoirs of Osaka Kyoiku University, Ser.IV Education, Psychology, Special Support Education and Physical Culture*, 61(1), 221–227.

Gawronski, B. (2007). Editorial: Attitudes can be measured! But what is an attitude? *Social Cognition*, 25(5), 573–581.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569–582.

Glaubman, R., & Lifshitz, H. (2001). Ultra-orthodox Jewish teachers' self-efficacy and willingness for inclusion of pupils with special needs. *European Journal of Special Needs Education*, 16(3), 207–223.

Goddard, R., & Goddard, Y. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education*, 17(7), 807–818.

Goto, I. (2014). *Shogakkoshoninkyoyu no seicho hattatsu o sasaeru atarashii ikuseiron [New training theory to support the growth and development of novice elementary school teachers]*. Tokyo, Japan: Gakujutsu Shuppankai.

Graham, L. J., & Jahnukainen, M. (2011). Wherefore art thou, inclusion? Analysing the development of inclusive education in New South Wales, Alberta and Finland. *Journal of Education Policy*, 26(2), 263–288.

Groom, B., & Rose, R. (2005). Supporting the inclusion of pupils with social , emotional and behavioural difficulties in the primary school: The role of teaching assistants. *Journal of Research in Special Educational Needs*, *5*(1), 20–30.

Hakala, K., Björnsdóttir, K., Lappalainen, S., Jóhannesson, I. Á., & Teittinen, A. (2018). Nordic perspectives on disability studies in education: A review of research in Finland and Iceland. *Education Inquiry*, *9*(1), 1–19.

Halinen, I., & Järvinen, R. (2008). Towards inclusive education: The case of Finland. *Prospects*, *38*(1), 77–97.

Hamatani, N. (2012). Tsujogakyu ni okeru tokubetsushienkyoiku no kenkyuseika to kadai [Trends in special needs education in regular schools]. *The Annual Report of Educational Psychology in Japan*, *51*, 85–94.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81–112.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

IBM. (2009). SPSS Statistics [Computer software]. Retrieved from https://www.ibm.com/analytics/spss-statistics-software

Institute for Global Education and Culture. (2007). *Inkurushibukyoikukenkyuiinkaihokoku: Tokubetsushienkyoiku kara inkurushibukyoiku he [Report of committee of inclusive education research: From special needs education to inclusive education]*. Retrieved from http://www.k-soken.gr.jp/smarts/index/45/

Jahnukainen, M. (2011). Different strategies, different outcomes? The history and trends of the inclusive and special education in Alberta (Canada) and in Finland. *Scandinavian Journal of Educational Research*, *55*(5), 489–502.

Jahnukainen, M., & Itkonen, T. (2016). Tiered intervention: history and trends in Finland and the United States. *European Journal of Special Needs Education*, *31*(1), 140–150.

Jahnukainen, M., & Korhonen, A. (2003). Integration of Students with Severe and Profound Intellectual Disabilities into the Comprehensive School System: Teachers' perceptions of the education reform in Finland. *International Journal of Disability, Development and Education*, *50*(2), 169–180.

Katoh, H. (2016). Kyoshokukatei deno tokubetsushienkyoka no hisshuka no imisurumono [Implications of making the subject of special needs education compulsory in the teacher preparation curriculum]. *National University Corporation Tsukuba University of Technilogy Techno Report*, *23*(2), 27–32.

Kimura, Y. (2006). Iryokagensho toshite no "hattatsushogai": Kyoikugemba ni okeru kaishakukatei o chushin ni" [Developmental disabilities" as medicalization: Focusing the process of interpretation in the educational setting]. *The Journal of Educational Sociology*, *79*, 5–24.

Kivinen, O., & Kivirauma, J. (1989). Special education as a part of the school system and as a classification system: The case of Finland in the twentieth century. *Scandinavian Journal of Educational Research*, *33*(1), 67–78.

Kivirauma, J., & Ruoho, K. (2007). Excellence through special education? Lessons from the Finnish school reform. *International Review of Education*, *53*(3), 283–302.

Klassen, R. M. (2004). Optimism and realism: A review of self-efficacy from a cross-cultural perspective. *International Journal of Psychology*, *39*(3), 205–230.

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*(1), 21–43.

Lebra, T. S. (1976). *Japanese patterns of behaviour*. Honolulu, HI: University of Hawaii Press.

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.

Little, J. W. (1982). Norms of collegiality and experimentation: Workplace conditions of school success. *American Educational Research Journal*, *19*(3), 325–340.

MacCallum, R. C., Browne, M. W., & Cai, L. (2006). Testing differences between nested covariance structure models: Power analysis and null hypotheses. *Psychological Methods*, *11*(1), 19–35.

MacFarlane, K., & Woolfson, L. M. (2013). Teacher attitudes and behavior toward the inclusion of children with social, emotional and behavioral difficulties in mainstream schools: An application of the theory of planned behavior. *Teaching and Teacher Education*, *29*, 46–52.

Malinen, O-P. (2013). *Inclusive education from teachers ' perspective: Examining pre- and in-service teachers' self-efficacy and attitudes in mainland China*. University of Eastern Finland.

Malinen, O-P. (2014). *Improving teachers' sense of professional efficacy: Empirical investigation on the sources of teacher efficacy*. Paper presented at 2nd Global Teacher Education Summit, Beijing Normal University, China.

Malinen, O-P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education*, *33*, 34–44.

Malinen, O-P., Savolainen, H., & Xu, J. (2012). Beijing in-service teachers' self-efficacy and attitudes towards inclusive education. *Teaching and Teacher Education*, *28*(4), 526–534.

Malinen, O-P., Savolainen, H., & Xu, J. (2013). Dimensions of teacher self-efficacy for inclusive practices among mainland Chinese pre-service teachers. *Journal of International Special Needs Education*, *16*(2), 82–93.

Malinen, O-P., Väisänen, P., & Savolainen, H. (2012). Teacher education in Finland: A review of a national effort for preparing teachers for the future. *Curriculum Journal*, *23*(4), 567–584.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253.

Meijer, C. J. W., & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education*, *22*(3), 378–385.

MEXT. (2010). *Shogai no aru jidoseito no shugakusakikettei ni tsuite [Dicision making of educational placement for pupils with disabilities]*. Retrieved from

http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/044/siryo/__icsFiles/afieldfile/2010/08/18/1296501_03.pdf

MEXT. (2012). *Tsujo no gakkyu ni zaiseki suru hattatsushogai no kanosei no aru tokubetsuna kyoikutekishien wo hitsuyo tosuru jidoseito ni kansuru chosakekka ni tsuite [Report about students who have possibilities to have developmental disabilities and special needs support]*. Retrieved from http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1328729.htm

MEXT. (2013). *Gakkokyoikuhoshikorei no ichibukaitei ni tsuite [Enforcement ordinance of the school education law (revised)]*. Retrieved from http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1339311.htm

MEXT. (2014). *Kyoshokuinhyoka no genjo [The current situation of teacher evaluation]*. Retrieved from http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/052/siryo/__icsFiles/afieldfile/2016/01/05/1365651_10.pdf

MEXT. (2017a). *Kyoshokukateininteishinsei no tebiki [Guideline for teacher training program reauthorization application]*. Retrieved from http://www.mext.go.jp/component/a_menu/education/detail/__icsFiles/afieldfile/2018/01/16/1399047.pdf

MEXT. (2017b). *Tokubetsushienkyoikushiryo [Statistics of special needs education]*. Retrieved from http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1406456.htm

Milfont, T. L., & Fischer, R. (2010). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of Psychological Research*, *3*(1), 111–121.

Mills, N. (2011). Teaching assistants' self-efficacy in teaching literature: Sources, personal assessments, and consequences. *Modern Language Journal*, *95*(1), 61–80.

Milner, H. R. (2002). A case study of an experienced English teacher's self-efficacy and persistence through "crisis" situations : Theoretical and practical considerations. *The High School Journal*, *86*(1), 28–35.

Ministry of Education and Culture. (2007). *Special education strategy. Reports of the Ministry of Education, Finland, No. 47*. Helsinki, Finland: Ministry of Education and Culture.

Mitchell, D. (2005). Introduction: Sixteen propositions on the contexts of inclusive education. In D. Mitchell (Ed.), *Contextualizing inclusive education: Evaluating old and new international perspectives* (pp. 1–21). London, England: Routledge.

Miyoshi, M. (2009). Tokubetsushienkyoiku to inkuru-shibukyoiku no setten no tankyu: Nihon niokeru inkuru-shibukyoikuteichaku no kanosei [A study on contact between special support education and inclusive education: Possibility of establishment of inclusive education practice]. *Department Bulletin of Human and Environmental Studies, Kyoto University*, *18*, 27–37.

Moberg, S., Muta, E., Korenaga, K., Kuorelahti, M., & Savolainen, H. (2019). Struggling for inclusive education in Japan and Finland: Teachers' attitudes

towards inclusive education. *European Journal of Special Needs Education, 35*(1), 100-114.

Moberg, S., & Savolainen, H. (2003). Struggling for inclusive education in the North and the South: Educators' perceptions on inclusive education in Finland and Zambia. *International Journal of Rehabilitation Research*, *26*(1), 21–31.

Morishita, M. (2012). Kyoshi to kyoshishudan no seijuku jiritsu o neratta ressunsutadei ni kansuru jireitekikosatsu [A case study of a lesson study aimed at maturity and autonomy of individual teachers and a teachers' group]. *The Journal of Educational Research*, (11), 21–30. Retrieved from https://www.jstage.jst.go.jp/article/csssej/11/0/11_21/_article/-char/ja

Morris, D. B., Usher, E. L., & Chen, J. A. (2017). Reconceptualizing the sources of teaching self-efficacy: A critical review of emerging literature. *Educational Psychology Review*, *29*(4), 795–833.

Muta, E. (2002). Tokushukyoiku kara tokubetsushienkyoiku he [From special education to special needs education]. *The Annual Report of Educational Psychology in Japan*, *41*, 124–131.

Muta, E., Ando, H., Korenaga, K., Tsukimori, H., & Kinoshita, T. (2016). Nihon no kyoshi ni okeru inkurushibukyoiku heno taido: Moberg Attitude Scale ni yoru kekka to kanrenyoin [Japanese teachers' attitudes towards inclusive education: Results by Moberg Attitude Scale and some relevant factors]. *Bulletin of the Faculty of Humanities, the Seikei University*, (51), 53–66.

Muthén, L. K., & Muthén, B. O. (2012). Mplus version 7 [Computer software]. Los Angeles, CA: Muthén & Muthén.

Nagano, M., & Weinberg, L. A. (2012). The legal framework for inclusion of students with disabilities: A comparative analysis of Japan and United States. *International Journal of Special Education*, *27*(1), 128–143.

National Institute for Educational Policy Research. (2019). *Kyoinkankyo no kokusaihikaku: OECD kokusaishidokankyochosa (TALIS) nisenjuhachinen chosa kekkahokokusho [International comparison of teacher environment: A result report of Teaching and Learning International Survey (TALIS) 2018]*. Retrieved from https://www.nier.go.jp/kenkyukikaku/talis/pdf/talis2018_summary.pdf

Naukkarinen, A. (2010). From discrete to transformed? Developing inclusive primary school teacher education in a Finnish teacher education department. *Journal of Research in Special Educational Needs*, *10*(s1), 185–196.

Nishimura, S., Nevgi, A., & Tella, S. (2008). Communication style and cultural features in high/low context communication cultures: A case study of Finland, Japan and India. In A. Kallioniemi (Ed.), *Uudistuva ja kehittyvä ainedidaktiikka: Ainedidaktinen symposiumi 8.2.2008 Helsingissä* (pp. 783–796). Helsinki, Finland: Helsingin yliopisto. Retrieved from http://www.helsinki.fi/~tella/nishimuranevgitella299.pdf

OECD. (2011). *Lessons from PISA 2012 for the United States, Strong Performers and Successful Reformers in Education*. Paris, France: OECD Publishing.

Official Statistics of Finland. (2018). *Special education [e-publication]*. Helsinki: Statistics Finland. Retrieved from http://www.stat.fi/til/erop/2018/erop_2018_2019-06-19_tie_001_en.html

Ogiso, H., & Tsuzuki, S. (2016). Tokubetsushienkyoikutaisei to inkurushibukyoikushisutemu ni kansuru ichikosatsu [Consideration on the special support education system and inclusive education system]. *Shogaishakyoiku・fukushigakukenkyu*, 12, 155–163.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543–578.

Parliament of Finland. (2010). *Laki perusopetuslain muuttamisesta [Act on changing the Basic Education Act]*. Retrieved from http://www.finlex.fi/fi/laki/alkup/2010/20100642

Pesonen, H., Itkonen, T., Jahnukainen, M., Kontu, E., Kokko, T., Ojala, T., & Pirttimaa, R. (2015). The implementation of new special education legislation in Finland. *Educational Policy*, 29(1), 162–178.

Petkova, D. P. (2015). Beyond silence: A cross-cultural comparison between Finnish "quietude" and Japanese "tranquility." *Eastern Academic Journal*, (4), 1–14.

Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research*, 101(1), 50–60.

Rytivaara, A., & Kershner, R. (2012). Co-teaching as a context for teachers' professional learning and joint knowledge construction. *Teaching and Teacher Education*, 28(7), 999–1008.

Sakakibara, Y., Yamamoto, M., & Kobayashi, S. (2005). Jikoseisatsu o unagasu tanoshii kyoinkenshu no hoho: "Ataerareru" kara "tomo ni tsukuridasu" kenshu ni kansuru tsuishi [An pleasant off-the-job teacher education, that leads effective self-reflection: A repetitive research for "collaboration" in teacher e. *Journal of Applied Educational Research, University of Yamanashi*, 10, 71–86.

Sakurai, R. (2019). *Dynamics of inclusive education: Japanese teachers' perspectives*. Paper presented at World Education Research Association (WERA) 2019: Focal Meeting, Tokyo, Japan.

Saloviita, T., & Schaffus, T. (2016). Teacher attitudes towards inclusive education in Finland and Brandenburg, Germany and the issue of extra work. *European Journal of Special Needs Education*, 31(4), 458–471.

Savolainen, H. (2009). Responding to diversity and striving for excellence: The case of Finland. *Prospects*, 39, 281–292.

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.

Scherer, R., Jansen, M., Nilsen, T., Areepattamannil, S., & Marsh, H. W. (2016). The quest for comparability: Studying the invariance of the teachers' sense of self-efficacy (TSES) measure across countries. *PLoS ONE*, 11(3).

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., & Jacobs, D. K. (2016). Predicting in-service educators' intentions to teach in inclusive classrooms in India and Australia. *Teaching and Teacher Education*, *55*, 13–23.

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.

Shoji, M. (2015). Inkurushibukyoiku ha shogaiji no tame no kyoiku ka?: Tokubetsushienkyoiku no arikata ni kansuru tokubetsuiinkaihokoku kara gakko no yakuwari to goritekihairyo wo kakunin suru [Is inclusive education for children with disabilities?: A study confirming schools' role and reasonable accomodation based on the special committee report regarding special needs education]. *Kyoshoku Kenkyu*, *8*, 29–41.

Slee, R. (2011). *The irregular school: Exclusion, schooling, and inclusive education*. New York, NY: Routledge.

Song, J. (2016). Inclusive education in Japan and Korea: Japanese and Korean teachers' self-efficacy and attitudes towards inclusive education. *Journal of Research in Special Educational Needs*, *16*(1), 643–648.

Soodak, L. C., & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *The Journal of Special Education*, *27*(1), 66–81.

Spielberger, C. (Ed.). (2004). *Encyclopedia of applied psychology*. San Diego, CA: Elsevier Academic Press.

Steenkamp, J.-B. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Reserach*, *25*(1), 78–107.

Takala, M., & Hausstätter, R. S. (2012). Effects of history and culture on attitudes toward special education: A comparison of Finland and Norway. *ISRN Education*, *2012*, 1–7.

Takeda, H. (2005). *The political economy of reproduction in Japan: Between nation-state and everyday life*. London, England: Routledge.

Triandis, H. C. (2001). Individualism and collectivism: Past, present, and future. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 35–50). New York, NY: Oxford University Press.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*, 783–805.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, *23*(6), 944–956.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, *68*(2), 202–248.

Tsukiyama, T. (2006). Ima o ikiru seinenkyoshi o sasaerumono: Tomoni seicho suru yorokobi [Supporting novice teachers who are living in a present society]. *Hiroba, Quarterly Journal of Education Center of Kyoto*, (147). Retrieved from http://www.kyoto-kyoiku.com/hiroba2/hiroba147/hiroba147tukiyama.htm

TUEF. (2009). *Lausunto luonnoksesta hallituksen esityksestä eduskunnalle laiksi perusopetuksen muuttamisesta [Opinion on government proposal for parliament*

on the amendment of basic education]. Retrieved from
http://www.oaj.fi/cs/oaj/Lausunnot?contentID=1363787878356&page_na
me=luonnos+hallituksen+esityksesksi+eduskunnalle+laiksi+perusope&key
word=&year=2009&month=99

Ueno, K., & Nakamura, K. (2011). Inkuru-jonkyoiku ni taisuru
tsujogakkyukyoin no ishiki ni tsuite [A study of awareness of inclusion
education among regular-class teachers in elementary schools]. *Journal of
Health and Sports Science Juntendo University, 3*(2), 112–117. Retrieved from
http://library.sakura.juntendo.ac.jp/bunken/kiyou/vol60/vol60_p112.pd
f

UNESCO. (1994). *The Salamanca statement and framework for action on special needs
education.* Retrieved from
http://www.unesco.org/education/pdf/SALAMA_E.PDF

UNESCO. (2005). *Guidelines for inclusion: Ensuring access to education for all.*
Retrieved from
https://unesdoc.unesco.org/ark:/48223/pf0000140224?posInSet=1&query
Id=2012ce77-1b8f-46c9-afa5-a27cf905fcd4

UNESCO. (2009). *Policy guidelines on inclusion in education.* Paris, France:
UNESCO.

UNESCO. (2017). *A guide for ensuring inclusion and equity in education.* Retrieved
from https://unesdoc.unesco.org/ark:/48223/pf0000248254

United Nations. (2006). *Convention on the rights of persons with disabilities.*
Retrieved from
http://www.un.org/disabilities/documents/convention/convoptprot-
e.pdf

United Nations General Assembly. (2015). *Transforming our world: The 2030
agenda for sustainable development.* Retrieved from
http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1

University of Jyväskylä. (2019). *ULA: Uutta luova asiantuntijuus [Creative
expertise: Building bridges in teachers' basic education and continuing education].*
Retrieved from
https://www.jyu.fi/edupsy/fi/tutkimus/tutkimushankkeet/ula

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical
review of the literature and future directions. *Review of Educational Research,
78*(4), 751–796.

Watanabe, A. (2012). Shogaishakenrijoyaku no hijun ni muketa
kokunaikyoikuhosei no seibikadai: Inkurushibukyoiku to goritekihairyo
[Problems of educational legislation for ratification of Convention on the
Rights of Persons with Disabilities: Inclusive education and reasonable
accomodation]. *The Bulletin of the 71st Annual Conference of Japanese
Educational Research Association, 71,* 392–393.

Weisel, A., & Dror, O. (2006). School climate, sense of efficacy and Israeli
teachers' attitudes toward inclusion of students with special needs.
Education, Citizenship and Social Justice, 1(2), 157–174.

Yawata, Y. (2006). Shogaijikyoiku ni okeru jissenkadai to rekishitekihaikei [A
historical study of the practice subject in education of the disabled]. *Bulletin
of Naruto University of Education, 21,* 112–120. Retrieved from

https://naruto.repo.nii.ac.jp/?action=pages_view_main&active_action=re pository_view_main_item_detail&item_id=27634&item_no=1&page_id=13 &block_id=33

Yle. (2018). *Integration of special needs pupils adds to teacher workloads*. Retrieved from https://yle.fi/uutiset/osasto/news/integration_of_special_needs_pupils_ adds_to_teacher_workloads/10442186

Yoshitoshi, M. (2014). Inkuru-shibukyoiku ni taisuru kotogakkokyoin no jikokoryokukan: Tokubetsushienkyoikuko-deine-ta- wo taisho toshita shitsumonshichosa no bunseki [A survey of Japanese high school teachers' self-efficacy about inclusive education]. *Bulletin of Center for Teacher Education and Development, Okayama University*, 4(March), 1–5.

APPENDIXES

Appendix 1. Japanese version of the Teacher Efficacy for Inclusive Practices (TEIP) scale

以下の項目は、インクルーシブな教育環境を作る際に必要な教師の行動に関する質問です。
あなたに当てはまると思うものに〇をしてください。

		1 全く当て はまらない	2 当て はまらない	3 どちらかといえ ば当てはまらな い	4 どちらかといえ ば当てはまる	5 当てはまる		6 とても 当てはまる			
1.	児童生徒に期待する行動を明確に伝えることができる。	1	2	3	4	5	6				
2.	多動性や衝動性のある、または問題行動や妨害行動を起こす児童生徒を落ち着かせることができる。	1	2	3	4	5	6				
3.	親が気楽に学校に来られるようにすることができる。	1	2	3	4	5	6				
4.	子どもが学校で自分の力を最大限に発揮することができるように家族を支援することができる。	1	2	3	4	5	6				
5.	教えた内容に関する児童生徒の理解度を適切に評価することができる。	1	2	3	4	5	6				
6.	学力の高い児童生徒に対して彼らの能力に応じた適切な課題を与えることができる。	1	2	3	4	5	6				
7.	児童生徒が学級内で起こす問題行動や妨害行動を未然に防ぐ自信がある。	1	2	3	4	5	6				
8.	学級内で起こる問題行動や妨害行動をうまくコントロールすることができる。	1	2	3	4	5	6				
9.	特別な教育的ニーズのある児童生徒をもつ保護者に、学校行事に積極的に参加してもらう自信がある。	1	2	3	4	5	6				
10.	特別な教育的ニーズのある児童生徒の個々の教育的ニーズが考慮された学習活動を計画する自信がある。	1	2	3	4	5	6				
11.	子どもたちに学級のルールを守らせることができる。	1	2	3	4	5	6				
12.	特別な教育的ニーズのある児童生徒の指導計画を立案するために、他の専門家（たとえば、養護教諭やスクールカウンセラー）と協力することができる。	1	2	3	4	5	6				
13.	様々な専門家やスタッフ（たとえば、支援員や他の教員）とともに、教室で特別な教育的ニーズのある児童生徒を教えることができる。	1	2	3	4	5	6				
14.	児童生徒を二人一組または小グループで一緒に学習させる自信がある。	1	2	3	4	5	6				
15.	児童生徒を様々な方法やストラテジー（たとえば、ポートフォリオ評価、児童生徒の実態に応じて適宜変更を加えたテスト、指導成果の個別評価）で評価することができる。	1	2	3	4	5	6				

16.	特別な教育的ニーズのある児童生徒のインクルージョンに関する法律や施策について他の人に情報提供をする自信がある。	1	2	3	4	5	6
17.	暴力的な児童生徒に対応する際,適切に指導する自信がある。	1	2	3	4	5	6
18.	児童生徒が理解できずに困っているとき、別の方法で説明したり、例を与えたりすることができる。	1	2	3	4	5	6

Appendix 2. Japanese version of the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale

あなたの考えに当てはまるものに〇をしてください。インクルーシブ教育とは、様々な異なる背景や障害のある児童生徒が、同級生とともに通常学級で学び、全ての児童生徒のニーズに応じた支援を行うものです。

	1 当てはまらない	2 どちらかといえば 当てはまらない	3 どいらかといえば 当てはまる	4 当てはまる			
1.	私は特別な教育的ニーズのある児童生徒がクラスの児童生徒から受け入れられないのではないかと心配だ。			1	2	3	4
2.	考えを声に出して表現することに困難がある子どもも通常学級に在籍すべきである。			1	2	3	4
3.	私はインクルーシブな学級の中で、児童生徒全員にきちんと注意を向けることが難しいのではないかと心配だ。			1	2	3	4
4.	私は、障害のある人々との関わりを短くし、できるだけ早く終わらせようとする。			1	2	3	4
5.	注意力のない児童生徒も、通常学級に在籍すべきである。			1	2	3	4
6.	もし私のクラスに特別な教育的ニーズのある児童生徒がいたら、私の仕事量が増すのではないかと心配だ。			1	2	3	4
7.	コミュニケーションの支援技術（点字や手話など）が必要な児童生徒も通常学級に在籍すべきである。			1	2	3	4
8.	もし私のクラスに特別な教育的ニーズのある児童生徒がいたら、私のストレスが増すのではないかと心配だ。			1	2	3	4
9.	私は障害のある人の顔をまっすぐ見ることが恐い。			1	2	3	4
10.	試験で頻繁に赤点を取る（不合格になる）児童生徒も、通常学級に在籍するべきである。			1	2	3	4
11.	私は、重度の身体障害のある人々に会った時、最初の動揺を抑えることに難しさを感じる。			1	2	3	4
12.	私は特別な教育的ニーズのある児童生徒を指導するために必要な知識や技術を持っていないのではないかと心配だ。			1	2	3	4
13.	個別の指導計画が必要な児童生徒も、通常学級に在籍すべきである。			1	2	3	4

Appendix 3. Japanese version of the Sources of Teacher Self-Efficacy (STSE) scale

教員としてのあなたの能力に、以下にあげる4つの要因がどの程度影響しているかを評価して下さい。(1)全く影響していない から (9)とても影響している の間の9つの回答から、当てはまると思うものに○をしてください。(5)ある程度影響している は中間の程度を示す回答です。

1. 学習内容を教えることに関する能力（児童生徒の能力に適した学習課題を設定する能力、児童生徒の理解度を評価する能力、等）に以下の4つの要因はどのように影響していますか。

		全く影響していない		少し影響している		ある程度影響している		かなり影響している		とても影響している
1.1.	これまで自分がうまくやれた/成功した経験	1	2	3	4	5	6	7	8	9
1.2.	他の先生たちの良い実践を観察すること	1	2	3	4	5	6	7	8	9
1.3.	他の人たちからの自分の実践に対する助言	1	2	3	4	5	6	7	8	9
1.4.	指導実践を通して得られる感情	1	2	3	4	5	6	7	8	9

2. 学級運営および個々の児童生徒の行動指導に関する能力（問題行動を抑制・予防する能力、児童生徒をクラスのルールに従わせる能力、等）に以下の 4 つの要因はどのように影響していますか。

2.1.	これまで自分がうまくやれた/成功した経験	1	2	3	4	5	6	7	8	9
2.2.	他の先生たちの良い実践を観察すること	1	2	3	4	5	6	7	8	9
2.3.	他の人たちからの自分の実践に対する助言	1	2	3	4	5	6	7	8	9
2.4.	指導実践を通して得られる感情	1	2	3	4	5	6	7	8	9

3. 協働に関する能力（児童生徒の家族や学校内の他の教員・専門家と協働する能力、学校外の専門家と一緒に働く能力、等）に以下の 4 つの要因はどのように影響していますか。

3.1.	これまで自分がうまくやれた/成功した経験	1	2	3	4	5	6	7	8	9
3.2.	他の先生たちの良い実践を観察すること	1	2	3	4	5	6	7	8	9
3.3.	他の人たちからの自分の実践に対する助言	1	2	3	4	5	6	7	8	9
3.4.	指導実践を通して得られる感情	1	2	3	4	5	6	7	8	9

4. 児童生徒の学校でのモチベーションをサポートする能力（学校の活動にあまり興味を示さない児童生徒のモチベーションをあげる能力、児童生徒が自分の能力に自信を持てるようサポートする能力、など）に以下の 4 つの要因はどのように影響していますか。

4.1.	これまで自分がうまくやれた/成功した経験	1	2	3	4	5	6	7	8	9

4.2.	他の先生たちの良い実践を観察すること	1	2	3	4	5	6	7	8	9
4.3.	他の人たちからの自分の実践に対する助言	1	2	3	4	5	6	7	8	9
4.4.	指導実践を通して得られる感情	1	2	3	4	5	6	7	8	9

ORIGINAL PAPERS

I

JAPANESE IN-SERVICE TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION AND SELF-EFFICACY FOR INCLUSIVE PRACTICES

by

Akie Yada & Hannu Savolainen, 2017

Teaching and Teacher Education, vol 64, 222-229

Available online: http://dx.doi.org/10.1016/j.tate.2017.02.005

Japanese in-service teachers' attitudes toward inclusive education and self-efficacy for inclusive practices

Akie Yada[*], Hannu Savolainen

Department of Education, University of Jyväskylä, P.O. Box 35, FI-40014, Jyväskylä, Finland

HIGHLIGHTS

- Examined teachers' attitudes and self-efficacy related to inclusive education (IE).
- Japanese teachers had neutral attitudes toward IE but they had great concern.
- Japanese teachers' self-efficacy was low compared to that in other countries.
- Some dimensions of self-efficacy had relationships to attitudes.

ARTICLE INFO

ABSTRACT

Using a sample of 359 in-service teachers, this study examines Japanese teachers' attitudes toward inclusive education and their self-efficacy for inclusive practices. The results indicate that although teachers' sentiments toward disabilities were generally positive, the teachers had some concerns about implementing inclusive education in their classroom. The overall level of self-efficacy was relatively low in the Japanese sample compared to that of other countries, particularly in relation to managing problematic student behavior. Self-efficacy regarding managing behavior and collaboration was related to overall attitudes toward inclusive education. The findings can enable useful insights in developing pre-service and in-service teacher education.

© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

Since the Salamanca Statement on Principles (UNESCO, 1994), inclusive education has become the mainstream in global education policy. As a consequence, including students with diverse educational needs in mainstream schools has become the center of international attention in the planning of educational legislation and policy (Savolainen, Engelbrecht, Nel, & Malinen, 2012; Sharma, Loreman, & Forlin, 2012).

However, the definition of inclusive education is ambiguous and has been vastly debated around the world. According to the definition provided by UNESCO (2005, p.13), inclusive education is "a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education."

Even though inclusive education can be regarded as aiming at an equity agenda for all students, it is often understood as concerning only students with disabilities and those requiring special needs education (Artiles & Kozleski, 2007; Malinen & Savolainen, 2008; Waitoller & Artiles, 2013). On the basis of Oliver's (1996) writings, Graham and Jahnukainen (2011) simply described the difference between traditional special education and inclusive education in that the former locates the "problem" in an individual with a disability, who must be supported to "fit in" the social institutions pre-designed by others with able bodies, while the latter focuses on barriers that produce the disability, thereby constructing "the disabled" (Oliver, 1996). We understand inclusive education as making an effort to construct school systems that welcome all children (Savolainen, 2009). However, from a Japanese perspective, the term "inclusive education" is generally understood to mean including children with disabilities into mainstream schooling (Forlin, Kawai, & Higuchi, 2015). Therefore, in the current study, inclusive education is perhaps best defined as including children with disabilities into regular classrooms.

---

* Corresponding author.
E-mail addresses: ado.eika@gmail.com (A. Yada), hannu.k.savolainen@jyu.fi (H. Savolainen).

Furthermore, although it has been universally agreed that inclusive education enables equal opportunities and access for all students, educational policies and reform processes are different from country to country for reasons of culture and history (Savolainen et al., 2012). To take Japan as an example, since the government has only recently introduced a new scheme on inclusive education, it is doubtful whether teachers are ready for this new movement (Forlin, 2013). In addition, there are considerable gaps between the concepts of the policies and the actual practices (Miyoshi, 2009), and there are several challenges in implementing inclusive education, such as the lack of physical and personal resources. Comparative analyses conducted within a cultural-historical framework can give us a critical insight into the complex and dynamic local situation in which inclusive education is implemented (Engelbrecht, Savolainen, Nel, & Malinen, 2013). Some studies compare several countries in the context of inclusive education (e.g., Jahnukainen, 2011; Takala, Haussttatter, Ahl, & Head, 2012). However, few international studies focus on Japan. Thus, the present study explores the Japanese context in relation to inclusive education, particularly from the point of view of teachers. More specifically, the focus of this paper is on Japanese teachers' attitudes toward inclusive education and their self-efficacy for inclusive practices and the implications for the practice of inclusive education in Japan.

1.1. Inclusive education in Japan

In recent years, there has been an increasing amount of attention on inclusive education in Japan. This has been influenced by an international campaign supporting inclusion, such as the Convention on the Rights of the Child (United Nations, 1989), the World Declaration on Education for All and the Framework for Action to Meet Basic Learning Needs (UNESCO, 1990), the Dakar Framework for Action (UNESCO, 2000), and the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994). The Japanese government called for the partial revision of *Gakkokyoikuho* (the School Education Law) in April 2007 and promoted educational reform. The government replaced *Tokushukyoiku* (segregated special education), in which education is separately delivered on the basis of the type of disability in special places, with *Tokubetsushienkyoiku* (special needs education), in which appropriate support is given to each child with diverse educational needs (Central Council for Education, 2005). Since then, a new support system has been developed, which includes, for example, an establishment of a school committee and an appointment of special needs education coordinator in regular schools for children with diverse educational needs (Fujii, 2014). Moreover, the Japanese government signed the Convention on the Rights of Persons with Disabilities (United Nations, 2006) in September 2007, and *Shogaishakihonho* (the Basic Law for Persons with Disabilities) was amended accordingly in August 2011. In response to this, the Committee of Elementary and Lower Secondary Education (2012) submitted a report about the development of special needs education in order to implement inclusive education. This report indicated the following points: (1) ways of deciding study placement; (2) repletion of reasonable accommodation and basic environmental improvement; (3) cooperation between schools and related organizations; (4) development of exchange studies; and (5) enrichment of teachers' expertise (Fujii, 2014).

Thus far, political change regarding inclusive education has proceeded rapidly in Japan. However, it has not been properly implemented in practice, and there are several challenges involved. First, one of the most crucial barriers to inclusive education in Japan is that even though the government has promoted a special needs education system for inclusive education, Japanese special needs education is still delivered mainly in a segregated manner. There are 31,507 special classes and 1049 special schools at the primary and secondary level, and the number of special classes and special schools is increasing annually (Ministry of Education, Culture, Sports, Science and Technology, 2012). This phenomenon—the growing rate of enrollment for special schools and special classes—signals a diversion away from inclusive education (Miyoshi, 2009). Furthermore, Miyoshi (2009) held the view that the operation of special needs education has increased the number of children who are certified as "children with disabilities" and made a distinction between children with disabilities and children without disabilities.

Second, large class sizes are one of the notable challenges in Japan. The average number of students in primary education was 28 per class and 30 per class at the secondary level (OECD, 2011). It is said that about 6.3% of students in regular classes have some kind of developmental disability, such as learning disability (LD), attention deficit hyperactivity disorder (ADHD), or high-functioning autism (Committee of Elementary and Lower Secondary Education, 2012). To date, several studies have reported that the support system for children with disabilities in regular classes is underdeveloped (e.g., Hamaya, 2006; Hirose & Tojo, 2002). For instance, Ueno and Nakamura (2011) examined teachers' awareness of inclusive education and concluded that teachers found it difficult to implement inclusive education under the current inadequate support system.

Third, several studies have reported that Japanese teachers' expertise is not sufficient to carry out inclusive practices because they have not received adequate teacher training. According to the Committee of Elementary and Lower Secondary Education (2012), while every teacher is required to have basic knowledge and skills in special needs education, specialized courses in special needs education are not compulsory in current teacher education programs. Furthermore, despite the new policies, there are still few courses regarding inclusive education in Japanese teacher education programs for the regular teacher certificate (Forlin et al., 2015). Even though teachers' interest in inclusive education is relatively high and teachers realize that such education is necessary, their knowledge level is low, and they experience considerable anxiety about including children with disabilities in their classrooms (Ueno & Nakamura, 2011). Fujii (2014) carried out a survey exploring teachers' awareness of keywords relating to special needs education and inclusive education. The findings showed that the awareness level of an "inclusive education system" was lower, suggesting that it was necessary to enrich teacher training in inclusive education inside and outside of school.

Finally, collaboration with other school staff or parents appears to be an effective way of learning from the experience of others and improving teachers' expertise. However, since Japanese teachers have so many duties in addition to teaching, they do not have enough time for collaboration. According to the National Institute for Educational Policy Research (NIER, 2014), although Japanese teachers' working time of 53.9 h per week is the longest among OECD countries, where the average is 38.3 h, teachers spend more time in extracurricular activities and clerical work and less time collaborating with parents. Ogiso and Tsuzuki (2016) suggested that since teachers' time is completely taken up with regular duties, it is difficult to independently include children with disabilities and that the improvement of the consultation and supervision system on a daily basis in each school is indispensable in Japan.

1.2. Teachers' attitudes toward inclusive education

Attitude studies have a long-standing history, and the importance of the concept continues in the area of social psychology. Early on, Allport (1935) maintained that "the concept of attitude is

probably the most distinctive and indispensable concept." The term "attitude" is generally understood as an evaluation of attitude objects containing anything a person may hold in mind, which can be concrete or abstract (Bohner & Dickel, 2011). However, proper definitions have been actively debated, with the adoption of different views on whether attitudes are trait-like dispositions stored permanently in the memory or momentary judgments constructed from information (Gawronski, 2007). Since the aim of this study is not to delve into a discussion of the precise definition of attitude, it adopts the definition suggested by Eagly and Chaiken (1993, p.1), who saw the concept as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor."

In order to meet the diverse educational needs of students, schools and teachers need to change and adapt their practices (Kinsella & Senior, 2008). It has been argued that teachers are required to have positive attitudes toward inclusive education as well as the appropriate skills and knowledge if they are to successfully carry out inclusive practices (Avramidis & Norwich, 2002; Forlin, Cedillo, Romero-Contreras, Fletcher, & Hernandez, 2010; Ryan & Gottfried, 2012). Thus, a line of research has focused on teachers' attitudes toward inclusive education. Avramidis and Norwich (2002) pointed out that even though teachers have positive attitudes toward inclusive education, they do not agree on "total inclusion" and that attitudes are strongly influenced by child-related variables (e.g., the nature of students' disabilities) and educational environment-related variables (e.g., the availability of physical and human support).

In addition, some studies have suggested that attitudes toward inclusive education differ by country. For instance, previous research findings have indicated that teachers' attitudes toward inclusive education tend to be more negative in non-Western countries (Alghazo & Gaad, 2004; Malinen & Savolainen, 2008). Unfortunately, there are scarcely any studies on teachers' attitudes toward inclusive education in Japan. Forlin (2013) examined pre-service teachers' understanding of and attitudes toward inclusive education in a Japanese university. It was found that because of teachers' lack of knowledge and skills to teach students with special educational needs, pre-service teachers experience great levels of anxiety about workload increases due to these students being included in their future classrooms. Thus, in order to more positively develop pre-service teachers' attitudes toward inclusive education, more work is required to ensure that pre-service teachers gain a better understanding of inclusion and that they are presented with opportunities to explore their feelings about inclusive education (Forlin, 2013).

1.3. Teachers' self-efficacy for inclusive practices

Bandura (1977) first introduced the concept of self-efficacy, and more recently, he illustrated it as the main concept in his social cognitive theory (Bandura, 2001). He defined self-efficacy as an individual's belief that s/he can produce desired effects in a specific situation and the belief influences her/his cognitive, motivational, affective, and decisional processes (Bandura, 2006). Self-efficacy beliefs consist of four main sources: (1) mastery experiences in which a person has previous experience being successful in certain tasks; (2) vicarious experiences where a person observes similar people who are capable of performing the task; (3) social persuasion by others can strengthen one's belief in completing the task successfully; and (4) somatic and emotional states that are analyzed when a person's efficacy beliefs are formed (Bandura, 1997; Klassen, 2004). Bandura (1997) indicated that mastery experience was the most powerful source of self-efficacy beliefs. Any or all of these four sources may be influenced by the cultural

context or dimension, such as collectivism or individualism (Klassen, 2004).

Over the past 30 years, the concept of self-efficacy has been expanded to focus on teachers' feelings of confidence, and the result has been a large volume of published studies regarding teacher efficacy. The term "teacher efficacy" is generally understood to mean teachers' belief or conviction that they can influence their students' learning efficiently, even though these students might have difficulty or lower motivation (Guskey & Passaro, 1994). Bandura (1997) suggested that teachers' beliefs in their efficacy affect not only students' academic development but also their general orientation toward educational processes. Gibson and Dembo (1984) found that high-efficacy teachers are more persistent in correcting students' incorrect answers and never give student feedback in the form of criticism. In addition, teachers with high self-efficacy can lead students to correct responses more effectively (Gibson & Dembo, 1984).

Recently, there has been an increasing amount of literature on teachers' self-efficacy for inclusive practices. According to Forlin (2013), it is crucial for teachers to be confident in their own knowledge, skills, and abilities in practicing inclusive education so as to successfully implement the inclusive approach. Although there is much research on teachers' self-efficacy in Western countries, such research regarding non-Western countries is limited (Sharma et al., 2012), and Japan is no exception. Yoshitoshi (2014) investigated teachers' sense of self-efficacy for inclusive practices among 59 high school teachers and concluded that Japanese high school teachers had low self-efficacy for inclusive practices because of a lack of training. Few studies have focused on teachers' self-efficacy for inclusive practices among primary or lower secondary school teachers in Japan, even though it has been suggested that inclusive education would be an important starting point for children at an early age (Oohara, Hirota, & Suzuki, 2011).

1.4. The relationship between teachers' attitudes toward inclusive education and self-efficacy for inclusive practices

Attitudes and self-efficacy are the two main concepts examined in this study and are associated with successfully implementing the inclusive approach. Previous studies have reported a positive relationship between teachers' attitudes toward inclusive education and self-efficacy for inclusive practices (Malinen, Savolainen, & Xu, 2012; Meijer & Foster, 1988; Savolainen et al., 2012; Weisel & Dror, 2006). According to Meijer and Foster (1988), Dutch teachers with high self-efficacy are likely to see students with learning or behavioral problems as less problematic and in less in need of referral. Furthermore, it was conclusively shown that Israeli teachers' sense of efficacy is the only crucial factor affecting teachers' attitudes toward inclusive education (Weisel & Dror, 2006). A recent study by Malinen et al. (2012) examined Chinese teachers' self-efficacy and reported that self-efficacy in collaboration is the single most important factor predicting teachers' attitudes toward inclusive education.

1.5. Research questions

The main purpose of this study is to investigate Japanese teachers' general attitudes toward inclusive education and their self-efficacy for inclusive practices. In addition, the study examines whether Japanese teachers' self-efficacy relates to attitudes toward inclusive education. An additional aim of this research is to identify which types of self-efficacy and whether two demographic variables (teaching experience and gender) predict attitudes if there are relationships between them. According to these aims, the study addresses the following questions below:

1) What is the level of Japanese teachers' overall and specific attitudes toward inclusive education?
2) What is the level of Japanese teachers' overall and specific self-efficacy for inclusive practices?
3) Does Japanese teachers' self-efficacy for inclusive practices correlate with their attitudes toward inclusive education?
4) Can the three types of self-efficacy for inclusive practices along with the two demographic variables (teaching experience and gender) predict teachers' attitudes toward inclusive education?

2. Method

2.1. Research method

A survey approach was employed in the current study. It was chosen because information from a sample of entities enables us to construct quantitative descriptions of larger populations (Groves et al., 2009). The questionnaire design was based on an existing study (Savolainen et al., 2012); thus, the Japanese data could be compared with those of other countries. To collect the data, a convenience sampling method was adopted, in which the authors asked the first contact persons, such as professors in universities who had connections with principals or teachers, to deliver the questionnaire and to introduce it to others.

2.2. Participants

The data were obtained from 359 primary and secondary in-service school teachers working in Japanese private and public schools. Three-fourths of the participants (252, 72.2%) worked in public or national schools, and 96 (27.5%) worked in private schools. The schools were located in several different prefectures in the eastern and western parts of Japan, including the Tokyo metropolis and the prefectures of Kanagawa, Yamaguchi, Kagoshima, Chiba, Saitama, Kochi, Miyazaki, and Fukui. In addition, 157 (43.7%) participants were male, 192 (53.5%) were female, and 10 (2.8%) of them did not mention their gender. The teachers' were between the ages of 22 and 65, and the average age was 42.41 (SD = 11.82). They had an average of 18.42 (SD = 11.92) years' teaching experience. When asked what grade level they taught, the participants provided the following answers: 189 (52.6%) were in primary school (grades 1 to 6), 77 (21.4%) were in lower secondary school (grades 7 to 9), 55 (15.3%) were in upper secondary school (grades 10 to 12), 1 (0.3%) was in a combined primary and lower secondary school (grades 1 to 9), and 8 (2.2%) were in combined lower and upper secondary schools (grades 7 to 12). The participants also indicated their position in their schools. The majority of them (287, 79.9%) worked as regular teachers; 15 (4.2%) were principals; 17 (4.7%) were vice principals; 19 (5.3%) were chief teachers; and 10 (2.8%) were school nurses with teaching licenses. Furthermore, 349 of the participants mentioned their highest degree level obtained, and most (284, 79.1%) had a bachelor's degree. Among the remainder of the participants, 17 (4.7%) graduated from junior colleges, 46 (12.8%) had a master's degree, and 2 (0.6%) had a doctoral degree.

2.3. Research instruments

The data were collected using an instrument consisting of two scales. The first was the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale (Forlin, Earle, Loreman, & Sharma, 2011), which was designed to measure pre-service teachers' perception of the three constructs of inclusive education. It contained 13 items, and four response anchors from "strongly disagree" to "strongly agree." While the SACIE-R scale originally consisted of 15 items, two items were removed in the

current study because a previous study indicated that they ("I dread the thought that I could eventually end up with a disability" and "I would feel terrible if I had a disability") did not fit well with a factor model relating to attitudes (Savolainen et al., 2012). Several SACIE-R items are required to use reverse scoring in analyses. Higher SACIE-R scale scores imply more positive attitudes toward inclusive education. The alpha coefficient for the overall scale was moderate in the current study ($\alpha = 0.75$). The scale has three sub-scales: "Sentiments," "Attitudes," and "Concerns," which were consistent with previous studies (Forlin et al., 2011; Savolainen et al., 2012). For the three sub-scales, the alpha values ranged from 0.71 to 0.78, which were acceptable.

The second scale was the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012), which was developed to assess teachers' self-efficacy for inclusive practices. This scale involved 18 items with six response anchors ranging from "strongly disagree" to "strongly agree." Higher scores on the TEIP scale indicate participants' higher efficacy in implementing inclusive practices. In the current study, the TEIP scale had a high reliability, and the alpha coefficient for the scale was 0.93. Previous studies have noted that this scale also had three sub-scales: "Efficacy to use inclusive instructions," "Efficacy in managing behavior," and "Efficacy in collaboration" (Savolainen et al., 2012; Sharma et al., 2012). The Cronbach's alpha of these sub-scales was good, ranging from 0.83 to 0.88.

2.4. Translation of the questionnaires

Whole sections of the instrument were originally written in English, and it was first translated into Japanese by the author whose native language is Japanese, but who is fluent in English. A native Japanese master's degree student in education, who is fluent in English, checked the content and quality of the translation. Finally, a licensed guide interpreter, who had taught in Japanese high schools as an English teacher, proofread the translated Japanese version of the instrument, and corrections were agreed by the author to ensure maximum similarity with the original instrument.

The SACIE-R and TEIP scales had already been translated into Japanese (Forlin, 2013; Yoshitoshi, 2014), and these Japanese versions were used as references. However, several items of the SACIE-R scale used in Forlin's (2013) study were revised, and some of the content was changed, so the original version of the SACIE-R scale was adopted in the current study. For the TEIP scale, the style of writing in some items was marginally altered to fit more into the natural context of Japanese teachers. These changes were also discussed between the author and the interpreter.

2.5. Ethical issues

Ethical issues were taken into account in light of the official Finnish guidelines on Responsible Conduct of Research and Procedures for Handling Allegations of Misconduct in Finland (Finnish Advisory Board on Research Integrity, 2012). These guidelines match the ethical guidelines of Japanese research institutions. The purposes and nature of the study and the confidentiality of the data were explained to the participants by means of an information letter. Participation was voluntary, and participants had the right to withdraw at any time. Even though they were asked to answer some personal background information, such as their profession and educational background, none of the information that might identify them was presented in the study.

2.6. Data analysis

The data analysis was conducted using the SPSS software (IBM,

2012) version 20. First, the reliability of the overall scales and sub-scales was analyzed using Cronbach's alpha. Second, the mean scores of the overall scales and sub-scales with confidence intervals were used to assess the level of Japanese teachers' attitudes toward inclusive education and their self-efficacy for inclusive practices. Furthermore, in order to analyze the relationships between teachers' attitudes and self-efficacy, a series of correlations were calculated. Finally, regression analyses were conducted to test how the three different types of self-efficacy as well as some teachers' background variables jointly predict teachers' attitudes toward inclusive education.

3. Results

3.1. The level of Japanese teachers' attitudes toward inclusive education

The Japanese teachers' overall attitudes toward inclusive education were slightly above the neutral midpoint of the scale, which ranged from 1 to 4 ($M = 2.69$), thus indicating that the teachers did not express extreme attitudes for or against inclusive education. The teachers' average SACIE-R score varied statistically significantly across the three sub-dimensions of attitudes, as indicated by the non-overlapping 99% confidence intervals. The most positive attitude reported was on sentiments about interacting with a person with disabilities ($M = 3.38$). Their attitudes about including children with disabilities in mainstream classes were close to the neutral midpoint of the scale ($M = 2.58$). Their concerns about what would happen if children with disabilities were included in their classes were the lowest ($M = 2.37$) among the three sub-scales (Table 1).

3.2. The level of Japanese teachers' self-efficacy for inclusive practices

The Japanese teachers' overall self-efficacy for inclusive practices was at a low level ($M = 3.74$ on the TEIP scale, which ranged from 1 to 6) compared to the results of previous studies conducted in other countries (e.g., according to Savolainen et al. (2012), in Finland, the mean score was 4.53, and in South Africa, the mean score was 4.63). The teachers' average level on the TEIP score varied statistically significantly across the three sub-dimensions of self-efficacy, as indicated by the non-overlapping 99% confidence intervals. The Japanese teachers' level of self-efficacy in using inclusive instruction was the highest of the three sub-dimensions ($M = 3.84$), while they were least confident in managing students' problematic behavior in their classroom ($M = 3.55$) (Table 2).

3.3. Correlation between Japanese teachers' self-efficacy for inclusive practices and attitudes toward inclusive education

Japanese teachers' overall self-efficacy for inclusive practices correlated statistically significantly ($p < 0.01$) with overall attitudes and the three sub-scales. The highest correlation was found between the two full scales ($r = 0.396$). Moreover, overall self-efficacy for inclusive practices correlated moderately with concerns

Table 1
SACIE-R scale overall and sub-scale scores and 99% confidence interval (CI) of means.

	Mean	Lower CI	Upper CI
SACIE-R	2.69	2.63	2.74
Sentiments	3.38	3.30	3.46
Attitudes	2.58	2.50	2.66
Concerns	2.37	2.29	2.44

Table 2
TEIP scale overall and sub-scale scores and 99% confidence interval (CI) of means.

	Mean	Lower CI	Upper CI
TEIP	3.74	3.65	3.83
Inclusive instruction	3.84	3.75	3.94
Collaboration	3.79	3.68	3.89
Managing behavior	3.55	3.44	3.66

($r = 0.342$). Of the three sub-scales of self-efficacy for inclusive practices, self-efficacy in managing behavior correlated most strongly with overall attitudes ($r = 0.357$), and it was especially correlated with concerns ($r = 0.359$). Further, self-efficacy in collaboration was moderately correlated with overall attitudes ($r = 0.355$) (Table 3).

3.4. Self-efficacy sub-dimensions as predictors of attitudes toward inclusive education

Using multiple regression analysis, the three different types of self-efficacy were tested as predictors of general attitudes toward inclusive education. Furthermore, two demographic variables (teaching experience and gender) were tested as independent variables to ascertain how they affected overall attitudes toward inclusive education. The result showed that efficacy in collaboration was the strongest predictor of general attitudes toward inclusive education ($\beta = 0.254$, $p < 0.01$). In addition, the beta value for efficacy in managing behavior was slightly lower ($\beta = 0.232$, $p < 0.01$), but it was also a powerful predictor of general attitudes toward inclusive education. For the teachers' two demographic information variables, only their teaching experience ($\beta = -0.107$, $p < 0.05$) had an effect on general attitudes. The effect was negative, indicating that the teachers with longer periods of experience had slightly more negative attitudes (Table 4).

4. Discussion

The two measures used in the current study (the SACIE-R and TEIP scales) were reliable instruments in the Japanese samples, and their profiles replicated those of previous studies (Malinen et al., 2012; Savolainen et al., 2012). The results indicated that Japanese teachers' overall attitudes toward inclusive education were somewhat neutral. It has been suggested that teachers' attitudes toward inclusive education might be more negative in non-Western countries (Alghazo & Gaad, 2004; Malinen & Savolainen, 2008). However, this did not appear to be the case in the current study. What is more, even though teachers have neutral attitudes toward inclusive education in several countries, attitude profiles vary from country to country (Savolainen et al., 2012). The Japanese attitude profiles resembled those of Finland, where sentiments about interacting with persons with disabilities were significantly positive, but regarding their concerns about including children with disabilities in their own classrooms, the attitudes were relatively negative (Savolainen et al., 2012). This finding further supports the idea that the teachers were more critical about including children with disabilities in their own classrooms (Savolainen et al., 2012). It corroborates Ueno and Nakamura's (2011) research, which showed that Japanese teachers experienced high levels of anxiety about including children with disabilities in their classrooms, even though many of the teachers thought inclusive education was necessary.

Overall self-efficacy for inclusive practice was considerably low in the Japanese sample compared to those in other countries such as Finland and South Africa (Savolainen et al., 2012). This result supports that of Yoshitoshi's (2014) study, which showed that

Table 3
Pearson correlations between the SACIE-R and TEIP scales' overall scores and sub-scale scores.

	1	2	3	4	5	6	7
1. SACIE-R all	–						
2. Sentiments	0.629***	–					
3. Attitudes	0.626***	0.056	–				
4. Concerns	0.776***	0.482***	0.096	–			
5. TEIP all	0.396***	0.286***	0.189***	0.342***	–		
6. Inclusive instruction	0.344***	0.265***	0.166**	0.287***	0.939***	–	
7. Managing behavior	0.357***	0.248***	0.131*	0.359***	0.855***	0.742***	–
8. Collaboration	0.355***	0.248***	0.203***	0.270***	0.869***	0.744***	0.560***

Notes: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table 4
Regression models predicting overall attitudes toward inclusive education.

	Std Beta	t-value
Efficacy in inclusive instruction	0.006	0.060
Efficacy in managing behavior	0.232	2.959**
Efficacy in collaboration	0.254	3.207**
Teaching experience	−0.107	−2.006*
Gender	0.027	0.507
Model statistics	$F_{5,323} = 13.548$***	
R^2	0.173	

Notes: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Japanese high school teachers had low self-efficacy for inclusive practices. As Yoshitoshi (2014) suggested, inadequate training in inclusive practices might be one possible explanation for this result. However, NIER (2014) found that, generally, Japanese teachers have low self-efficacy for their practice, and it might be because they have higher expectations or that Japanese people have a greater disposition to be humble. Thus, these data must be interpreted with caution, and cultural and historical background must be considered. Further study is needed to explain why Japanese teachers' self-efficacy for inclusive practices is low. The self-efficacy profile in the current study was similar to that in the Finnish sample in which the level of self-efficacy was highest in implementing inclusive instruction, although those teachers had the least confidence in managing behavior (Savolainen et al., 2012). This finding was in line with that of a previous Japanese study, which concluded that Japanese teachers were concerned about students' problematic behavior in classrooms, regardless of academic achievement (Hirose & Tojo, 2002).

The third question sought to determine whether there was a relationship between Japanese teachers' self-efficacy for inclusive practice and attitudes toward inclusive education. There was a moderate correlation between self-efficacy and attitudes, as suggested by some previous studies (Malinen et al., 2012; Meijer & Foster, 1988; Savolainen et al., 2012; Weisel & Dror, 2006). In addition, self-efficacy was especially correlated with teachers' concerns. This result indicates that teachers who believed themselves to be more capable of implementing inclusive practices were less concerned about including learners with disabilities in their own classrooms. Moreover, self-efficacy in managing behavior had the strongest correlation with attitudes in the current study. Thus, teachers with stronger beliefs in their ability to manage students' problematic behavior had more positive attitudes toward inclusive education.

The final question aimed to identify the relative importance of different types of self-efficacy and two demographic variables (teaching experience and gender) as predictors of Japanese teachers' attitudes toward inclusive education. It is interesting to note that the rate of female participants in this study (53.5%) was low compared to that of other countries, such as in Finland (78.3%),

South Africa (82.1%), and China (85.4%) (Malinen et al., 2012; Savolainen et al., 2012). However, the results of this study failed to show teachers' gender as related to their attitudes toward inclusive education. Teaching experience had a relatively small but significant effect on attitudes toward inclusive education. This result corroborates those of a previous study indicating that teachers with more teaching experience had more negative attitudes toward inclusive education (Savolainen et al., 2012). A possible explanation for this might be that younger teachers have had more opportunities for training on inclusive education in their teacher education programs. It has been suggested that pre-service teachers who had more training on special needs education showed more positive attitudes toward inclusive education (Forlin et al., 2015). Another possible explanation is that teachers' attitudes became more negative through their teaching career because they have had difficulty including children with disabilities. Further studies on this topic will need to be undertaken. The most important finding was that efficacy in collaboration with other school staff and parents was the strongest predictor of general attitudes toward inclusive education. As Savolainen et al. (2012) suggested, not only pedagogy but also collaboration skills should be emphasized in future pre- and in-service teacher training. Furthermore, Fujii (2014) found that principals and vice principals had a deeper understanding of inclusive education in Japan. Therefore, collaboration between teachers and leadership groups could be one possibility in developing the inclusive system in schools. Collaboration with parents is also a crucial element in improving an inclusive environment. However, as mentioned above, Japanese teachers spent less time collaborating with parents compared to teachers in other OECD countries, even though Japanese teachers had the longest working hours (NIER, 2014). The government or policy-makers should devise a system to reduce teachers' workload so that teachers can allocate enough time to collaborate with other school staff and parents. Another important finding was that self-efficacy in managing behavior was a powerful predictor of attitudes toward inclusive education in the Japanese sample. This result was inconsistent with other countries, such as South Africa and China, in which self-efficacy in collaboration was the only predictor of attitudes (Malinen et al., 2012; Savolainen et al., 2012). It is crucial to develop Japanese teachers' skills in pre- and in-service training in managing challenging student behavior in order to positively alter teachers' attitudes toward inclusive education. Teacher education programs and in-service training should introduce courses aimed at a comprehensive understanding of disabilities and behavior management, which would optimally include concrete practical sessions. Opening up opportunities to gain successful experience to work with students of diverse educational needs is likely to affect teacher efficacy and change their attitudes toward inclusive education more positively. Schoolwide Positive Behavior Interventions and Supports is an example of an international approach based on an inclusive education philosophy, which would have a great deal

to offer Japanese teachers (Horner, Sugai, & Anderson, 2010).

5. Conclusion

The present study has shown that although the Japanese government promotes inclusive education, teachers have significant concerns about including children with disabilities in their own classrooms. Since it is assumed that effective inclusive education teachers need to have positive attitudes toward inclusive education (Avramidis & Norwich, 2002; Forlin et al., 2010), it is important to take measures to change teachers' attitudes, especially regarding concerns about inclusive education. One way of changing teachers' attitudes is to improve their self-efficacy for inclusive practices. The second major finding was that teachers' self-efficacy for inclusive practices was quite low in Japan compared to that in other countries, particularly regarding managing problematic student behavior. The results of this study indicate that more attention should be paid to teachers' lack of confidence regarding inclusive practice.

6. Limitations and implications for practice

There are a few noticeable limitations of the current study. First, even though an effort was made to include a wide variety of schools from different regions in Japan, the data were collected using convenience sampling. Thus, the findings cannot be generalized to the total population of Japanese in-service teachers. Second, in this study, the types (e.g., public schools or private schools) and levels (e.g., primary or secondary) of the schools in which teachers were working were not considered; nevertheless, there might be differences in teachers' attitudes and self-efficacy across these distinctions. Third, the questionnaire used in this study was translated from English to Japanese. While the equivalence between the two versions was carefully checked in the translation and reviewing processes, it is possible that some of the items in the Japanese version do not describe the same essence of those in the original version. Forth, since a cross-sectional analysis was applied in the current study, the correlation between teachers' self-efficacy for inclusive practices and attitudes toward inclusive education should be interpreted with caution. It is possible that the situation may provide differing results if another timeframe was chosen. Thus, a longitudinal analysis would give us more accurate insights about what kinds of contextual factors affect teachers' attitudes toward inclusive education and self-efficacy for inclusive practices as well as how attitudes and self-efficacy beliefs change over time. Finally, even though the questionnaire yielded psychometrically useful data, it could not elucidate the entirety of the situation regarding teachers' attitudes toward inclusive education and self-efficacy for inclusive practices. Further research in this direction using a qualitative method, such as interviews or observations, would offer more in-depth insights into teachers' perception of inclusive education.

As discussed in the introduction, global changes in educational policies on inclusive education have proceeded rapidly in Japan. However, there are significant gaps between the theoretical level of these policies and the educational practices, which are reflected in teachers struggling with applying inclusive education strategies in their own practices. This is the first study to investigate Japanese teachers' attitudes toward inclusive education and self-efficacy for inclusive practices. The current findings contribute to a more comprehensive understanding of teachers' situation and provide insight into how to improve teacher training for inclusive education. It is suggested that the government should organize teacher training so that teachers can develop skills for collaboration, for managing students' problematic behavior, as well as for pedagogy

through pre- and in-service training. In addition, teachers' workload, including teaching, club supervision, and clerical work, should be reduced so that teachers could allocate sufficient time for collaboration, which is crucial for inclusive education. Making inclusive education happen in reality also requires changes to the student environment (e.g., classrooms, teaching approaches) in Japan, which in turn necessitates changes in teacher education conditions so that teacher students can learn to become inclusive teachers and appreciate where they will work.

Acknowledgments

References

Alghazo, E. M., & Gaad, E. E. N. (2004). General education teachers in the United Arab Emirates and their acceptance of the inclusion of the students with disabilities. *British Journal of Special Education, 31*, 94–99.

Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), *Handbook of social psychology* (pp. 789–844). Worcester, MA: Clark University Press.

Artiles, A. J., & Kozleski, E. B. (2007). Beyond convictions: Interrogating culture, history, and power in inclusive education. *Journal of Language Arts, 84*(4), 351–358.

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.

Bandura, A. (1977). Self- efficacy: Towards a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*(1), 1–26.

Bandura, A. (2006). Adolescent development from an agentic perspective. In T. Urdan, & F. Pajares (Eds.), *Self-efficacy beliefs of adolescents* (pp. 1–43). Charlotte, NC: Information Age.

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. *Annual Review of Psychology, 62*, 391–417.

Central Council for Education. (2005). *Tokubetsushienkyoiku wo suishin suru tame no seido no arikata ni tsuite.* Retrieved on 23 March, 2015 from: http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/05120801/all.pdf.

Committee of Elementary and Lower Secondary Education in the Central Council for Education. (2012). *Kyoseishakai no keisei ni muketa inkuru-shibukyoikushisutemukochiku no tame no tokubetsushienkyoiku no suishin* [*A report about the development of special needs education in order to construct inclusive education system toward creating co-existent society*]. Retrieved on 17 March, 2015 from: http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/gijiroku/__icsFiles/afieldfile/2012/07/24/1323733_8.pdf.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes.* Fort Worth, TX: Harcourt, Brace, Jovanovich.

Engelbrecht, P., Savolainen, H., Nel, M., & Malinen, O. (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.

Finnish Advisory Board on Research Integrity. (2012). *Responsible conduct of research and procedures for handling allegations of misconduct in Finland.* Retrieved on 5 July, 2016 from: http://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf.

Forlin, C. (2013). Issues of inclusive education in the 21st century. *Gakushu Kaihatsugaku Kenkyu, 6*, 67–81.

Forlin, C., Cedillo, I., Romero-Contreras, S., Fletcher, T., & Hernandez, H. (2010). Inclusion in Mexico: Ensuring supportive attitudes by newly graduated teachers. *International Journal of Inclusive Education, 14*(7), 723–739.

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International, 21*(3), 50–65.

Forlin, C., Kawai, N., & Higuchi, S. (2015). Educational reform in Japan towards inclusion: Are we training teachers for success? *International Journal of Inclusive Education, 19*(3), 314–331.

Fujii, Y. (2014). Inkuru-shibukyoikushisutemukochiku no hokosei ni kansuru kento: Kyoshokuin ni taisuru ki-wa-do no ninchidochosa wo toshite [Study into the directions in building the inclusive education system: Through teaching staff

survey on keyword awareness]. *Bulletin of Center for Educational Research and Practice, Akita University, 36*, 89–98.

Gawronski, B. (2007). Editorial: Attitudes can be measured! But what is an attitude? *Social Cognition, 25*(5), 573–581.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569–582.

Graham, L. J., & Jahnukainen, M. (2011). Wherefore art thou, inclusion? Analysing the development of inclusive education in New South Wales, Alberta and Finland. *Journal of Education Policy, 26*(2), 263–288.

Groves, R. M., Fowler, F. J., Jr., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (Vol. 561). New York: John Wiley & Sons.

Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*(3), 627–643.

Hamaya, N. (2006). Shogakkotsujogakkyu ni okeru junkaisodan ni yoru keido-hattatsushogaiji tono kyoikujissen heno sienmoderu [Using itinerant consultation to support teachers in inclusive elementary schools: A model]. *Japanese Journal of Educational Psychology, 54*(3), 395–407.

Hirose, Y., & Tojo, Y. (2002). Tsujo no gakkyu ni okeru jiheishoji no kyoiku no genjo (2): Koko no jiheishoji no tokucho to tannin no ni-zu [Current situation of education for children with autism in regular classes (2): Features of individual children and teacher needs]. *Bulletin of the National Institute of Special Education, 29*, 129–137.

Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for school-wide positive behavior support. *Focus on Exceptional Children, 42*(8), 1–14.

IBM [The International Business Machines Corporation]. (2012). *SPSS software*. Retrieved on 3 November, 2015 from: http://www-01.ibm.com/software/analytics/spss/.

Jahnukainen, M. (2011). Different strategies, different outcomes? The history and trends of the inclusive and special education in Alberta (Canada) and in Finland. *Scandinavian Journal of Educational Research, 55*(5), 489–502.

Kinsella, W., & Senior, J. (2008). Developing inclusive schools: A systemic approach. *International Journal of Inclusive Education, 12*(5–6), 651–665.

Klassen, R. M. (2004). Optimism and realism: A review of self-efficacy from a cross-cultural perspective. *International Journal of Psychology, 39*(3), 205–230.

Malinen, O., & Savolainen, H. (2008). Inclusion in the east: Chinese students' attitudes towards inclusive education. *International Journal of Special Education, 23*(3), 101–109.

Malinen, O., Savolainen, H., & Xu, J. (2012). Beijing in-service teachers' self-efficacy and attitudes towards inclusive education. *Teaching and Teacher Education, 28*(4), 526–534.

Meijer, C. J. W., & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education, 22*(3), 378–385.

Ministry of Education, Culture, Sports, Science and Technology in Japan. (2012). *Tokubetsu shien kyoiku shiryo: Heisei 23 nen-do* [Special needs education statistics: 2012]. Retrieved on 31 March, 2014 from: http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1322973.htm.

Miyoshi, M. (2009). Tokubetsushienkyoiku to inkuru-shibukyoiku no setten no tankyu: Nihon ni okeru inkuru-shibukyoikuteichaku no kanosei [A study on contact between special needs education and inclusive education: Possibility of establishment of inclusive education practice in Japan]. *Department Bulletin of Human and Environmental Studies, Kyoto University, 18*, 27–37.

NIER [The National Institute for Educational Policy Research]. (2014). *Kyoinkankyo no kokusaihikaku: OECD kokusaishidokankyochosa (TALIS) nisenjusannen chosa-kekkahokokusho* [International comparison of teacher environment: A result report of Teaching and Learning International Survey (TALIS) 2013]. Tokyo, Japan: Akashishoten.

OECD [The Organization for Economic Cooperation and Development]. (2011). *Education at a glance 2011 (Table D2.1)*. Retrieved on 27 January 2014 from: http://

dx.doi.org/10.1787/888932465170.

Ogiso, H., & Tsuzuki, S. (2016). Tokubetsushienkyoikutaisei to ink-urushibukyoikushisutemu ni kansuru ichikosatsu [Consideration on the special support education system and inclusive education system]. *Shogaishakyoiku fukushigakukenkyu, 12*, 155–163.

Oliver, M. (1996). *Understanding disability: From theory to practice*. New York: St. Martin's Press.

Oohara, S., Hirota, E., & Suzuki, T. (2011). Inkuru-shibukankyo (yojikyoiku/hoi-kushisetsu) ni okeru tyokakushogaiji no shakaitekiasobi to komyunike-shonjokyo oyobi kanrenyoin no kento [Social play, communication and relative factors of deaf children in inclusive environment (preschool education/day-care institutions)]. *Audiology Japan, 54*(3), 230–238.

Ryan, T. G., & Gottfried, J. (2012). Elementary supervision and the supervisor: Teacher attitudes and inclusive education. *International Electronic Journal of Elementary Education, 4*(3), 563–571.

Savolainen, H. (2009). Responding to diversity and striving for excellence: The case of Finland. *Prospects, 39*(3), 281–292.

Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O. (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.

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.

Takala, M., Haussttatter, R. S., Ahl, A., & Head, G. (2012). Inclusion seen by student teachers in special education: Differences among Finnish, Norwegian and Swedish students. *European Journal of Teacher Education, 35*(3), 305–325.

Ueno, K., & Nakamura, K. (2011). Inkuru-jonkyoiku ni taisuru tsujogakkyukyoin no ishiki ni tsuite [A study of awareness of "Inclusion Education" among regular-class teachers in elementary schools]. *Journal of Health and Sports Science Juntendo, 3*(2), 112–117.

UNESCO. (1994). *The Salamanca statement and framework for action on special needs education*. Retrieved on 8 May, 2014 from: http://unesdoc.unesco.org/images/0009/000984/098427eo.pdf.

UNESCO. (2000). *The Dakar framework for action: Education for all: Meeting our collective commitments*. Retrieved on 27 July, 2015 from: http://www.undp.org.lb/programme/governance/institutionbuilding/basiceducation/docs/dakar.pdf.

UNESCO. (2005). *Guidelines for inclusion: Ensuring the access to education for all*. Retrieved on 9 June, 2014 from: http://unesdoc.unesco.org/images/0014/001402/140224e.pdf.

UNESCO [The United Nations Educational, Scientific and Cultural Organization]. (1990). *World declaration on education for all and framework for action to meet basic learning needs*. Retrieved on 27 July, 2015 from: http://www.ifa.de/fileadmin/pdf/abk/inter/unesco_jomtien.pdf.

United Nations. (1989). *Convention on the rights of the child*. Retrieved on 31 January, 2017 from: http://www.ohchr.org/Documents/ProfessionalInterest/crc.pdf.

United Nations. (2006). *Convention on the rights of persons with disabilities*. Retrieved on 2 November, 2015 from: http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf.

Waitoller, F. R., & Artiles, A. J. (2013). A decade of professional development research for inclusive education: A critical review and notes for a research program. *Review of Educational Research, 83*(3), 319–356.

Weisel, A., & Dror, O. (2006). School climate, sense of efficacy and Israeli teachers' attitudes toward inclusion of students with special needs. *Education, Citizenship and Social Justice, 1*(2), 157–174.

Yoshitoshi, M. (2014). Inkuru-shibukyoiku ni taisuru kotogakkokyoin no jikokor-yokukan: Tokubetsushienkyoikuko-deine-ta- wo taisho toshita shitsumon-shichosa no bunseki [A survey of Japanese high school teachers' self-efficacy about inclusive education]. *Bulletin of Center for Teacher Education and Development, Okayama University, 4*, 1–5.

II

TEACHERS' ATTITUDES AND SELF-EFFICACY ON IMPLEMENTING INCLUSIVE EDUCATION IN JAPAN AND FINLAND: A COMPARATIVE STUDY USING MULTI-GROUP STRUCTURAL EQUATION MODELLING

by

Akie Yada, Asko Tolvanen & Hannu Savolainen, 2018

Teachers' attitudes and self-efficacy on implementing inclusive education in Japan and Finland: A comparative study using multi-group structural equation modelling

Akie Yada [a, *], Asko Tolvanen [b], Hannu Savolainen [a, c]

[a] Faculty of Education and Psychology, Department of Education, University of Jyväskylä, P.O. Box 35 (Ruusupuisto), FI-40014, Jyväskylä, Finland
[b] Faculty of Education and Psychology, Methodology Centre for Human Sciences, University of Jyväskylä, P.O. Box 35 (Ruusupuisto), FI-40014, Jyväskylä, Finland
[c] Optentia Research Focus Area, North West University, Vaal Triangle Campus, P.O. Box 1174, Vanderbijlpark 1900, South Africa

HIGHLIGHTS

- Teacher self-efficacy and attitudes on inclusion in Japan and Finland are examined.
- Testing measurement invariance showed cross-cultural validity of the used scales.
- The strongest predictor was experience in teaching students with disabilities.
- A longer teaching career had a positive impact on teachers' self-efficacy in Japan.
- The amount of inclusive education training affected positively only in Finland.

ARTICLE INFO

ABSTRACT

This study aims to explore relationships between teachers' attitudes, self-efficacy, and background variables regarding inclusive education by using a sample of 359 Japanese and 872 Finnish teachers. A multi-group structural equation modelling was conducted to find similarities and differences in how the background variables predict teachers' attitudes and self-efficacy. Experience in teaching students with disabilities had a positive effect on teachers' attitudes and self-efficacy in both countries. However, teachers' teaching career and the amount of inclusive education training affected them differently in Japan and Finland. The findings could be used to improve inclusive education training for pre- and in-service teachers.

1. Introduction

After the Salamanca Statement and Framework for Action on Special Needs Education was published (UNESCO, 1994), there has been a growing trend to develop national education systems towards inclusive education around the world. This trend has been further enforced by the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006), which regards inclusive education as a universal human rights objective. The definition of inclusive education has been extended to school systems in which all children, including children from ethnic minorities, children from low socio-economic or otherwise disadvantaged background, and children with disabilities, can obtain access to their local schools (Mitchell, 2005; de Boer, Jan Pijl, Minnaert, & Tied, 2011; Savolainen, 2009). However, in many countries, the scope of inclusive education is often limited to specific types of children. In Japan, for example, inclusive education is still considered as an issue on how to educate students with disabilities in mainstream classrooms and how to arrange special needs education for those who need it (Forlin, Kawai, & Higuchi, 2015). Similarly, in Finland,

* Corresponding author. Tel.: +358 46 8895590.
E-mail addresses: ado.eika@gmail.com (A. Yada), asko.tolvanen@psyka.jyu.fi (A. Tolvanen), hannu.k.savolainen@jyu.fi (H. Savolainen).

inclusive education is most often understood as a pragmatic approach to offering the best possible support for those who need it, particularly students defined as having Special Educational Needs (SEN) (Malinen, Väisänen, & Savolainen, 2012).

Although providing quality education for all children is a global agenda (United Nations General Assembly, 2015), there are various ways to apply the concept of inclusion to policies and practices in each country, according to cultural and historical background (Artiles & Dyson, 2005; Savolainen, Engelbrecht, Nel, & Malinen, 2012). Therefore, comparative analysis needs to consider cultural-historical factors to understand what inclusive education means and how its meaning may be influenced by social, political, economic, and cultural histories (Savolainen et al., 2012). Furthermore, outcomes of comparative studies may create new ideas and approaches for developing inclusive education in different countries (Savolainen et al., 2012). Even though many studies compare inclusive education practices as implemented in several countries, only few are available focusing on Japan and other countries.

Japanese and Finnish education systems have gained prominence because the students have showed high academic achievement in international studies such as the OECD Programme for International Student Assessment (PISA) (e.g., Bulle, 2011; Green, Preston, & Sabates, 2003; OECD, 2011; Savolainen, 2009; Schleicher, 2009). On one hand, the two countries are similar in that both: (a) have relative cultural homogeneity; (b) perform consistently well in international comparative studies like PISA; (c) provide nine years of free, compulsory education; and (d) show socio-economically equitable variance of learning outcomes (OECD, 2011; Schleicher, 2009). On the other hand, there are several differences. The Japanese education system is one of the most meritocratic and competitive in the world (Bulle, 2011). Structural elements of this system include large class sizes, longer schooling hours, and detailed national curriculum standards that teachers throughout the country follow (OECD, 2011). The Finnish education system, by contrast, is based on social cohesion and trust, small class sizes, relatively short schooling hours, concise national core curriculum, and high autonomy for municipalities, schools, and teachers (OECD, 2011). As can be expected, Japan and Finland have applied different approaches to inclusive education. Therefore, the main purpose of this study is to compare elements of inclusive education in Japan and Finland – specifically, teachers' attitudes and self-efficacy concerning inclusive education in these two countries.

1.1. Inclusive education in Japan

After World War II, the Constitution of Japan based on democracy was promulgated. In the Constitution, the right to education was guaranteed for everyone, and several amendments to policies and school reforms were introduced to develop education systems correspondingly (Nishinaka, 2012). For students with disabilities, the compulsory special education system was started in 1979 (Muta, 2002). Until then, many students with disabilities did not have access to schools and stayed at home (Nagano & Weinberg, 2012). After this school reform, even children with severe disabilities gained access to public education (Muta, 2002); nevertheless, students with disabilities were educated separately in special schools (Nagano & Weinberg, 2012). Criticism against this segregated education was increasing in response to the worldwide trend towards inclusive education (Shimono, 2016), and the resource room system was established in 1993 in which students with mild disabilities could receive special education services while spending most of their time in regular classrooms (Muta, 2002; Nagano & Weinberg, 2012). Besides, the Japanese government replaced the special education system called *Tokushukyoiku* with the special needs education system called *Tokubetsushienkyoiku* in 2007, and this was a major turning point for Japanese inclusive education (Miyoshi, 2009; Shoji, 2015). The aim of this new system was to provide appropriate support for children with individual needs (Nagano & Weinberg, 2012). Until that time, special educational support was offered mainly for students belonging to special schools or special classes, but under the current system, officially everyone who needed support can obtain it at any type of school (Shoji, 2015). According to the Committee of Elementary and Lower Secondary Education in the Central Council for Education (2012), municipalities or schools must provide 'reasonable accommodations' for students with disabilities. This term was emphasised in the Article 24 of the UN Convention on the Rights of Persons with Disabilities and was defined as making necessary and suitable modifications and adjustments to ensure the rights of children with disabilities to receive education equal to that of other children without imposing a disproportionate or undue burden on municipalities or schools (United Nations, 2006). Furthermore, in 2013, the educational placement decision system for students with disabilities was revised through a partial amendment to the Enforcement Ordinance of the School Education Law (MEXT, 2013). In the new system, children with disabilities who formerly were persuaded to enrol in special schools gained alternative choices for educational placements (Forlin et al., 2015). Although an education board of each municipality determines school enrolment, it must respect children's and guardians' opinions as much as possible (MEXT, 2013). Overall, the school reform towards inclusive education was promoted rapidly within 10 years after the long history of segregated education in Japan.

Several challenges of inclusive education have been pointed out since the new special needs education system was established. First, Miyoshi (2009) argues that although this system is based on the concept of normalization, actual practices in schools differ from the concept, and segregated education continues. According to the MEXT (2016) report, there were 1114 special needs schools and 54,586 special needs classes at the primary and the secondary level. The number of pupils studying in such schools or classes is increasing, and this is a retrograde phenomenon towards inclusive education (Institute for Global Education and Culture, 2007). Additionally, it is suggested that children with disabilities and their guardians are not able to fully exercise their rights to state their opinions, as there is insufficient support not only in the law but also in practice to ask for necessary help in regular classrooms (Nagano & Weinberg, 2012). In the same vein, Watanabe (2012) claims that no legal regulations define reasonable accommodations for children with disabilities, with that task left to the discretion of municipalities and schools.

1.2. Inclusive education in Finland

Since Finland's independence in 1917, Finnish educational policies and systems have been constructed and reformed several times to improve basic education. According to Halinen and Järvinen (2008), the development of the Finnish education system towards inclusive education has been threefold: (a) the stage of 'access to education' in which the general compulsory education was developed according to the Compulsory School Attendance Act in 1921; (b) the stage of 'access to quality education' in which the current comprehensive school system was adopted in the 1960s and 1970s; and (c) the stage of 'access to success in learning' in which students' needs and quality instruction were discussed in the 1990s. Perhaps the most drastic change during the past 50 years occurred after the Educational Act was passed in Parliament in 1968 starting the nine-year comprehensive school system (Halinen & Järvinen, 2008; Kivirauma & Ruoho, 2007; Savolainen, 2009).

After the reform, the students previously divided into two streams − one practically oriented and the other with academic orientation − were able to obtain nine years of comprehensive schooling (Halinen & Järvinen, 2008; Kivirauma & Ruoho, 2007; Savolainen, 2009). From the perspective of inclusive education, an important element introduced as a result of the reform was part-time special education (Savolainen, 2009). This part-time special education was created to cope with pedagogical challenges expected due to students' increased heterogeneity (Kivirauma & Ruoho, 2007). The number of students receiving part-time special education increased continuously until 2010, when the system was again reformed (Savolainen et al., 2012). However, traditional special education continued to exist and grow along with the new type of special education. Increasing numbers of students with special needs were placed in separate special classes or schools (Halinen & Järvinen, 2008).

Children with severe disabilities had been exempted from education, however, and only in 1997 were municipalities obliged to include them in comprehensive education (Jahnukainen & Korhonen, 2003). Since then, practically all children − even those with severe disabilities − have had equal rights of access to the same nine-year basic education (Graham & Jahnukainen, 2011; Halinen & Järvinen, 2008).

In 2010, a major reform of special education occurred. It was preceded by a strategy of special education (Ministry of Education and Culture, 2007), amendments to the Act of Basic Education (Parliament of Finland, 2010), and updated curriculum guidelines (FNBE, 2010). According to the renewed model, there are three tiers of support for students: (a) general or universal support; (b) intensified support; and (c) special support. General support is offered for every student. In essence, it is about providing good education services, including differentiation, support teaching, part-time special education, and guidance, when needed (FNBE, 2016). These supports are launched quickly and do not involve official decisions but rather are practical pedagogical responses to observed challenges (Björn, Aro, Koponen, Fuchs, & Fuchs, 2016). Intensified support can be started when teachers and other school experts observe that general support is not enough for a student (Björn et al., 2016). A pedagogical plan for the support will be made, and the support is continued as long as needed. If intensified support is not adequate, a pedagogical review will be conducted by the multi-professional school team, and an individual support plan will be created (Björn et al., 2016). The beginning of this tertiary level support involves an administrative decision of ascribing the student a status of needing special education support, which parents can challenge (FNBE, 2016).

Finland's history of inclusive education is complex. On one hand, its education system has proven to be of good quality and high in equity, and some researchers have argued that extensive support for students with SEN is an important factor behind the positive development (Kivirauma & Ruoho, 2007; Moberg & Savolainen, 2006; Savolainen, 2009). On the other hand, the number of students enrolled in special education rose continuously until 2010, when special education was reformed. At that time, more than 8.5% of students were identified as having SEN, with almost 23% of all students receiving part-time special educational support (Official Statistics of Finland, 2016).

Thus far, it seems that the Finnish education system has succeeded in providing flexible education that is available to all students; however, there are some challenges concerning inclusive education. First, although the law and curriculum guidelines support inclusion, they do not strongly demand it, and municipalities are left to organise their education network. There is evidence that municipalities' decisions differ with regard to inclusion, and there is no guarantee of an equal and constant level of inclusiveness in

schools, as previously predicted by Halinen and Järvinen (2008). Furthermore, although the number of students in special schools has been declining dramatically in Finland every year (Jahnukainen, 2011), many students with disabilities are still taught in special classes (Jahnukainen, 2015). There is also renewed pressure by public media to keep special classes, and students with behavioural problems are often mentioned as a group that should not be included in the mainstream (TUEF, 2009).

1.3. Teacher training for inclusive education in Japan and Finland

Undoubtedly, teachers play an important role in implementing inclusive education into practice, and pre- and in-service teacher training for inclusive education is fundamental for successful implementation. The teacher education systems in both Japan and Finland are organised in a similar way that teacher education programmes for classroom teachers, subject teachers and special education teachers are respectively offered (Kobayashi, 1993; Malinen et al., 2012). However, there are several differences in structure and content of the teacher education programmes across these two countries. For instance, Japanese classroom teacher certificates are classified into three levels, and the first-class certificates are given to those who finished four years of study in universities (Kobayashi, 1993). On the contrary, it is required to complete master's degree studies to become a classroom teacher in Finland (Malinen et al., 2012).

To improve teacher training for inclusive education, a part of the Ordinance for Enforcement of the School Teacher's License Act was revised in 2017 in Japan, and it now requires at least one credit course regarding 'understanding of infants and students who need special support' as mandatory to get a teacher certificate (MEXT, 2017b). Earlier there was a conventional stipulation to include contents related to 'understanding of infants and students with disabilities or special needs' in a course of basic educational theory, but how much students were expected to learn was left to the discretion of each university and quality varied (Katoh, 2016). Consequently, a number of studies have reported that Japanese teachers are anxious about their role in inclusive practices due to inadequate preparation (e.g., Forlin et al., 2015; Fujii, 2014; Ueno & Nakamura, 2011). Similarly, it has been shown that while in-service teachers had relatively high interest in inclusive education and agreed that such education is essential, their level of knowledge was low, and they showed high anxiety regarding inclusive practices in their own classrooms (Ueno & Nakamura, 2011). Moreover, even though existing in-service training, including inclusive education training, is systematically improved by municipalities, teachers often argue that the in-service training as a whole is not attractive because it is usually organised based on lecture style presentations (Sakakibara, Yamamoto, & Kobayashi, 2005).

On the other hand, though Finnish universities have autonomy to decide what is taught in their teacher education programmes (Malinen et al., 2012), inclusive education and multicultural studies contents are embedded in several courses (Naukkarinen, 2010). One of the biggest challenges, not only in Finland but also for many other European countries, is how to maintain high-quality teachers and improve their expertise in responding to growing diversity and multiculturalism (Halinen & Järvinen, 2008; OECD, 2011). One specific challenge in the Finnish teacher education system is that different types of teachers (e.g., classroom teachers, subject teachers, and special education teachers) are educated in separate degree programmes that have surprisingly few courses in common (Malinen et al., 2012). This type of initial teacher training does not optimally support teachers' abilities and confidence in collaboration, which is essential for the implementation of inclusive education (Savolainen et al., 2012; Yada & Savolainen, 2017).

1.4. Teachers' self-efficacy and attitudes towards inclusive education

Extensive previous research has shown that teachers are required to acquire and maintain not only skills and knowledge but also positive attitudes towards inclusive education if they are to be effective inclusive practitioners (e.g., Avramidis & Norwich, 2002; Forlin, Cedillo, Romero-Contreras, Fletcher, & Hernandez, 2010; de Boer et al., 2011). Previous literature has highlighted several variables that influence teachers' attitudes towards inclusive education. Avramidis and Norwich (2002) have reviewed a number of studies on teachers' attitudes towards inclusive education and concluded that the variables related to attitudes could be divided into three types. These types include: (a) child-related variables, including severity and type of children's disabilities; (b) teacher-related variables, consisting of teachers' gender, years of teaching experience, amount of training, and experience with persons with disabilities; and (c) educational environmental-related variables, composed of physical environment and support from colleagues and specialists.

Moreover, previous studies have revealed that teachers' attitudes towards inclusive education appears to be positively related to their self-efficacy in implementing inclusive practices (Meijer & Foster, 1988; Soodak & Podell, 1993; Savolainen et al., 2012; Weisel & Dror, 2006; Yada & Savolainen, 2017). The term 'teacher self-efficacy' is generally defined as teachers' beliefs in their abilities to have a positive effect on student development in academic outcomes or interests and motivation (Bandura, 1997; Gibson & Dembo, 1984). According to Soodak and Podell (1993), US teachers with higher self-efficacy are more likely to accept students with learning and/or behavioural problems in regular classrooms. In addition, Yada and Savolainen (2017) recently found that Japanese teachers' self-efficacy in collaboration and managing problematic students' behaviour is the most important variable for predicting teachers' attitudes towards inclusive education.

Attitudes and self-efficacy regarding inclusive education have been discussed in respect of various cultures. Although it has been suggested that teachers typically hold negative or neutral attitudes towards inclusive education (de Boer et al., 2011), a number of studies have shown varying attitudes between countries based on their cultural and historical background. For example, some studies pointed out that teachers' attitudes are likely to be less positive in non-Western countries than in Western countries (Leyser, Kapperman, & Keller, 1994; Savolainen et al., 2008); however, Yada and Savolainen (2017) found that Japanese teachers had neutral attitudes towards inclusive education. Concerning the relationship between attitudes and self-efficacy in different countries, Savolainen et al. (2012) determined that teachers' efficacy in collaboration with parents and other staff members predicted their positive attitudes towards inclusive education in both Finland and South Africa, but efficacy in managing students' problematic behaviour predicted attitudes only in Finland. They emphasised that those results need to be explained with cultural-historical contexts in mind.

1.5. Test measurement invariance

Although cross-cultural comparative analysis provides researchers with useful insights, many challenges remain. One challenge is that the same educational concepts (e.g., 'inclusion' or 'disabilities') may have different meanings in different countries (Mitchell, 2005). Furthermore, even though identical instruments are used to measure the same educational concepts, people from each country may have specific cultural response styles that may depend on such things as collectivism/individualism of a culture and language differences (Vieluf, Kunter, & Van de Vijver, 2013).

The two countries in the current study differ in cultural background. For example, Japan is founded on a collectivist society, while Finland has a more individualist society (Nishimura, Nevgi, & Tella, 2008), and the two countries differ completely in their languages. One way of determining whether the same constructs are being measured in different independent groups is to test measurement invariance (Chen, Sousa, & West, 2005). Recently, a growing body of literature has recognised the importance of testing the equivalence of measured constructs in cross-cultural research (Eid, Langeheine, & Diener, 2003; Hoferichter, Raufelder, Eid, & Bukowski, 2014; Milfont & Fischer, 2010; Scherer, Jansen, Nilsen, Areepattamannil, & Marsh, 2016). Nonetheless, few studies have tested the measurement invariance between countries regarding teachers' self-efficacy and attitudes towards inclusive education. Therefore, the objectives of this research are as follows: First, determine whether we measured equivalent structures in Japan and Finland. Second, investigate the two countries' similarities and differences regarding teachers' self-efficacy and attitudes towards inclusive education.

1.6. Research aims

This study has four primary aims:

(1) To analyse whether the same constructs of the two scales used in this study are found in both the Japanese and Finnish data.
(2) To assess whether teachers' attitudes towards inclusive education can be predicted by their self-efficacy for inclusive practices in Japan and Finland.
(3) To examine which teachers' background variables predict self-efficacy and attitudes concerning inclusive education, and to find out what similarities and differences exist between the Japanese and Finnish predictive models.
(4) To explore whether teachers' background variables are indirectly related to attitudes towards inclusive education via self-efficacy for inclusive practices in the Japanese and Finnish samples.

2. Method

2.1. Participants

All together 1231 in-service teachers working in primary and secondary schools from Japan and Finland participated in this study. First, the Finnish data were collected as a part of the 'Comparative Analysis of Teachers' Roles in Inclusive Education' project in 2010, and the Japanese data were collected later in 2014. A total of 359 Japanese in-service teachers (53.5% female, 43.7% male; $M_{age} = 42.41$, $SD = 11.82$, age $= 22-65$) from the eastern and western parts of Japan, including the Tokyo metropolis and eight other prefectures, answered a questionnaire about their attitudes and self-efficacy regarding inclusive education. A return rate of questionnaires was 48.6% in Japan. The Finnish data were collected from six small to medium-sized municipalities in the eastern Finland region and from one big municipality in the south-west region, and the total number of Finnish in-service teachers was 872 (73.9% female, 20.4% male; $M_{age} = 44.46$, $SD = 9.07$, age $= 22-67$). Although the exact return rate was not reported for the Finnish sample, an estimation rate can be around 60% (Savolainen et al., 2012). Table 1 provides a summary of the participants' demographic background information. The ratio of female to male, the mean age and the average years of teaching were roughly represented the general teacher population in both countries (MEXT, 2017a; OECD, 2013).

Table 1
Participants' demographic background information.

	Japan	Finland
Gender	Female 53.5%	Female 73.9%
	Male 43.7%	Male 20.4%
Age (Mean, SD)	42.41 (11.82)	44.46 (9.07)
Teaching career in years (Mean, SD)	18.42 (11.92)	16.98 (9.41)
School type (Grade)	Primary school (1—6) 52.6%	Primary school (1—6) 53.8%
	Lower secondary school (7—9) 21.4%	Lower secondary school (7—9) 23.3%
	Combined primary and lower secondary school (1—9) 0.3%	Comprehensive school (1—9) 20.3%
	Combined lower and upper secondary school (7—12) 2.2%	
	Upper secondary school (10—12) 15.3%	
Experience in teaching students with disabilities	Very low 17.0%	Very low 6.9%
	Low 28.1%	Low 28.4%
	Average 33.1%	Average 33.0%
	High 12.8%	High 17.2%
	Very high 0.8%	Very high 10.3%
Experience of interactions with persons with disabilities	No 46.0%	No 44.8%
	Yes 45.7%	Yes 51.8%
Amount of inclusive education training	None 17.0%	None 36.2%
	Little 21.7%	Little 26.3%
	Some 32.3%	Some 22.7%
	A lot 15.6%	A lot 8.0%
	Very high level 5.0%	Very high level 3.9%

2.2. Measures

In this study, the data were collected using a questionnaire. The questionnaire contained a cover letter that proposed the objectives of the study and the confidentiality of the data. It also explained that participation was voluntary and that the participants could withdraw at any point. Participants answered the questions related to their background information and the two scales below.

Teachers' attitudes towards inclusive education were measured using the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale (Forlin, Earle, Loreman, & Sharma, 2011). Although the scale originally contains 15 items, Savolainen et al. (2012) indicated that the two items had small standardised factor loadings and did not fit well to a factor model for the attitudes. For this reason, these two items were removed from the original version of the SACIE-R scale. Only 13 items were adopted in the questionnaire. A four-point Likert scale, from 1 (strongly disagree) to 4 (strongly agree), was used to answer the questions. Some items were reverse coded so that high scores on the scale indicate positive attitudes towards inclusive education. The reliability of this scale was examined in previous studies. Cronbach's α was 0.75 in the Japanese sample (Yada & Savolainen, 2017) and 0.74 in the Finnish sample (Savolainen et al., 2012). The scale also contains three sub-scales that examine different kinds of attitudes, ranging from general to more concrete attitudes regarding teachers' own work. The first subscale, 'Sentiments', contains items that measure participants' general attitudes towards having social contacts with people with disabilities. The second sub-scale, 'Attitudes', contextualises attitudes towards work in school and measures participants' overall acceptance of students with difficulties in mainstream classes. The third and final sub-scale is specific to teachers' own work and measures their 'Concerns' about teaching students with disabilities in their classrooms (Forlin et al., 2011; Savolainen et al., 2012).

Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma, Loreman, & Forlin, 2012) was used to assess participants' self-efficacy for inclusive practices. The scale consists of 18 items, and participants responded to a six-point Likert scale, from 1 (strongly disagree) to 6 (strongly agree). Higher TEIP scores indicated higher self-efficacy for inclusive practices. Previous studies have shown that this scale has high reliability. In the Japanese sample, Cronbach's α was 0.93 (Yada & Savolainen, 2017), and in the Finnish

sample, Cronbach's α was 0.88 (Savolainen et al., 2012). It was suggested that the scale consists of three sub-scales (Sharma et al., 2012). The 'Efficacy in instruction' sub-scale has items that measure participants' efficacy belief in applying suitable approaches to develop an inclusive classroom. The 'Efficacy in collaboration' sub-scale contains items regarding participants' efficacy belief in working together with students' parents and school staffs. The third sub-scale, 'Efficacy in managing behaviour', includes items that evaluate participants' efficacy belief in dealing with students' problematic behaviour.

Since the original versions of the SACIE-R and TEIP scales were written in English, the researchers translated them into Finnish in 2010 and into Japanese in 2014. For the Japanese version, both of the scales were already translated into Japanese in previous studies (Forlin, 2013; Forlin et al., 2015; Yoshitoshi, 2014), and these previous translations were used as a reference. The translations were proofread by an authorised language translator for the Finnish version and by a licensed guide interpreter for the Japanese version. To ensure that the translated versions were as similar to the original versions as possible, corrections were discussed and agreed on between the language experts and researchers.

2.3. Statistical analyses

All analyses were done using the Mplus version 7.0 statistical programme for Mac (Muthén & Muthén, 1998). Model parameters were estimated using the full information maximum likelihood method with a robust standard error and scale corrected chi-square value (MLR estimator in Mplus). Any missing values were supposed to be Missing At Random (MAR). Since the likelihood ratio test has been deemed sensitive to the sample size (MacCallum, Browne, & Cai, 2006), a model fit was evaluated using Standardised Root Mean Square Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA). A cut-off value was 0.08 for SRMR and 0.06 for RMSEA, both of which indicated a good fit, and these two indices worked well using the two-index strategy (Hu & Bentler, 1999). Furthermore, to compare equalities between groups, we allowed for small differences using the method presented in MacCallum et al. (2006). The allowed difference between groups was defined using RMSEA with values of 0.052—0.058. With these, we obtained the critical value of chi-square (χ^2) differences using noncentral chi-square distribution.

The analysis followed three major stages using the Multi-Group Confirmatory Factor Analysis (MGCFA). In the first stage, we tested measurement invariance for both scales. First, theoretically driven CFA was estimated without any constraint between groups. With the help of modification indices, we re-specified the model, adding some error covariates between items to get an acceptable fit. Moreover, factor loadings were set to equal between groups, and the model was compared to the unconstraint model. Finally, factor loadings and intercepts were set to equal between groups to investigate whether there was scalar invariance.

If first-order factors are highly correlated, and it is assumed that higher-order factors explain the relations between the first-order factors, a second-order factor model is suitable (Chen et al., 2005). Since the above conditions were met in the TEIP scale, it was hypothesised that there was the second-order factor structure of the TEIP scale with the three primary factors as the lower-order factors, and a 'General teacher self-efficacy for inclusive practices' as the higher-order factor. Since this solution is consistent with the previous study that also used the TEIP scale, we named the second-order factor after that of the study (Malinen, Savolainen, & Xu, 2013). In the second stage, first, configural invariance was tested for the second-order factor to ensure that all factor loadings are statistically significant. Next, the factor loadings were set to equal for the second-order factor.

The third stage was to test the hypothetical predictive model for explaining teachers' attitudes and self-efficacy towards inclusive education. We used four background variables: (a) teaching career in years; (b) experience in teaching students with disabilities (ranging from 1 = very low to 5 = very high); (c) experience in interactions with persons with disabilities (1 = no or 2 = yes); and (d) the amount of inclusive education training (ranging from 1 = none to 5 = very high level). These variables were added to the second-order factor model to examine if they could predict teachers' attitudes and self-efficacy and if these paths were similar or different between groups. These four variables were chosen based on previous studies (Avramidis & Norwich, 2002; Malinen et al., 2013), which showed that teachers' background variables could influence their attitudes. In addition, this model included both mediating and direct effects. Thus, mediation analysis (Sobel, 1982) was conducted to assess the indirect effects of the four background variables. In other words, it was examined whether the four background variables lead to changes in self-efficacy for inclusive practices, which in turn affects their attitudes towards inclusive education.

3. Results

3.1. Testing first-order factor model

The theoretically driven factor structure was replicated in both countries for the first stage, and all factor loadings with first-order factors were statistically significant. Then measurement invariance was investigated. First, configural invariance was tested using a multi-group model. As presented in Table 2, Model 1 had an adequate fit (RMSEA = 0.052 and SRMR = 0.061) with the data supporting the configural validity between the Japanese and Finnish samples. Model 2 also had an acceptable fit (RMSEA = 0.053 and SRMR = 0.071) when tested for metric invariance. This additional constrains did not result in a significant difference between Model 1 and Model 2 when using an analysis of noncentral chi-square distribution. The result provided support for the metric invariance between the two groups. Third, scalar invariance was examined (Model 3). Table 2 below indicates that Model 3 provided an insufficient fit for full scalar invariance (RMSEA = 0.067 and SRMR = 0.093). Modification indices were studied, and it revealed that the insufficient fit for the full scalar invariance model was due to a lack of invariance in some item intercepts. The constrains of the SACIE-R scale item 1, 3, 5, and 11 and the TEIP scale item 1, 5, 13, 17, and 18 were relaxed, in which the intercepts of three to five items in each factor were still set invariant across groups except 'Sentiments' factor from which two of three intercepts were set equal. Partial scalar invariance model (Model 4) yielded an acceptable fit (RMSEA = 0.055 and SRMR = 0.073) and did not result a significant difference using the analysis of noncentral chi-square distribution. According to Steenkamp and Baumgartner (1998), if partial scalar invariance is achieved, it is sufficient to continue with further tests of invariance. Therefore, we move on to the next step of analysis based on the partial scalar invariance model.

3.2. Testing second-order factor model

In the second stage, a second-order factor model for the TEIP scale was tested. All three primary factors had high loadings (1.022, 0.887, and 0.840 for the Japanese sample and 0.894, 0.815, and 0.709 for the Finnish sample, respectively). The second-order factor was named the 'General teacher self-efficacy for inclusive practices'. First, an unrestricted model for the second-order factor (Model 5) was tested. In this model, the factor loadings for the

Table 2
Test of measurement invariance for the multi-group measurement model.

Model	Explanation	Fit Indices				Nested model comparison using noncentral χ^2					
		χ^2	df	RMSEA	SRMR	δ^*	λ	$\Delta\chi^2$	Δdf	p	Model comparison
1	No constrains	2177.963	824	0.052	0.061	–	–	–	–	–	–
2	Equal factor loadings	2290.049	849	0.053	0.071	0.628	772.366	107.499	25	p > .99	2 vs. 1
3	Equal intercepts and factor loadings	3276.493	874	0.067	0.093	0.644	792.661	1025.745	25	p < .001	3 vs. 2
4	Equal intercepts and factor loadings. Freeing intercepts of SACIE-R 1, 3, 5, 11 and TEIP 1, 5, 13, 17, 18	2461.709	865	0.055	0.073	0.614	755.422	174.054	16	p > .99	4 vs. 2
5	Add second-order factor with no constrains	2508.221	877	0.055	0.075	0.611	751.860	47.509	12	p > .99	5 vs. 4
6	Equal factor loadings of second-order factor	2539.325	882	0.056	0.079	0.596	732.637	29.922	5	p > .99	6 vs. 5
7	Add four background variables	3182.705	1122	0.058	0.082	–	–	–	–	–	–
8	Add some regressions and covariates based on modification indices	3143.806	1112	0.055	0.075	–	–	–	–	–	–

Note. RMSEA = Root Mean Square Error of Approximation; SRMR = Standardised Root Mean Square Residual. Test of nested model comparison using noncentral chi-square distribution was based on MacCallum et al. (2006). The purpose of this test is to test a small difference in fit, that is, to examine a null hypothesis of the form H_0: $(F^*_A - F^*_B) \leq \delta^*$, where F^* is population discrepancy function values. The idea is that to predetermine acceptable value of RMSEA between the two nested models and to calculate the critical value using noncentral chi-square reference distribution. By using following procedure, one can determine critical value and whether the sample value of the test statistic is sufficiently large to reject the null hypothesis H_0. The procedure is: (a) Specify values of RMSEA for the non/less constraint model (ε_A) and the more constraint model (ε_B) ($\varepsilon_A = 0.052$ and $\varepsilon_B = 0.058$ in the present study) so as to represent a small difference in fit between the models; (b) Calculate $\delta^* = df_A \times \varepsilon_A^2 - df_B \times \varepsilon_B^2$; (c) Calculate noncentrality parameter $\lambda = (N-1) \times \delta^*$; and (d) The decision on whether reject the null hypothesis H_0 at the α level is calculated by $\alpha = 1 - G(c^*; df_A - df_B, \lambda)$, where the $G(c^*; df_A - df_B, \lambda)$ is the cumulative distribution function of a noncentral chi-square reference distribution. MacCallum et al. (2006) provided SAS code for performing the necessary computation in their article.

second-order factor were freely estimated. It can be seen from the data in Table 2 that Model 5 had an adequate fit to the data (RMSEA = 0.055 and SRMR = 0.075). Next, the second-order factor loadings were constrained to be equal across groups (Model 6). The RMSEA was 0.056, the SRMR was 0.079, and the non-central chi-square distribution test was not significant. It is evident from the results that the factor loadings of the second-order factor were invariant across the Japanese and Finnish samples.

3.3. Testing hypothetical predictive model

In the third stage, a hypothetical predictive model (Model 7), in which the four background variables were added to the second-order factor model, was tested. This model had an acceptable fit (RMSEA = 0.058 and SRMR = 0.082). According to modification indices, several regressions and covariates were included into the model (Model 8), and these additions resulted in an adequate fit (RMSEA = 0.055 and SRMR = 0.075). The result of Model 8 was presented in Fig. 1. Panel A represents the Japanese sample and Panel B represents the Finnish sample.

Furthermore, what similarities or differences can be found in the regressions of the four background variables on the efficacy and attitudes factors were examined across groups. As presented in Table 3, the paths from 'Interactions with persons with disabilities' to 'Sentiments' were statistically significant in both groups. Thus, in both countries, teachers who have had the relationships with persons with disabilities had more positive attitudes about interacting with persons with disabilities. In addition, the paths from 'Experience in teaching students with disabilities' to 'General teacher self-efficacy' and to 'Concerns' were statistically significant in both countries. The result indicated that both Japanese and Finnish teachers who had taught students with disabilities had higher general self-efficacy and fewer concerns about including students with disabilities in their own classrooms.

On the other hand, the paths from both 'Interactions with persons with disabilities' and 'Teaching career' to 'General teacher self-efficacy' were significant only in the Japanese data. This indicated that Japanese teachers who have had the relationships with people with disabilities and/or longer teaching experience have higher general self-efficacy. The paths from 'Amount of inclusive education training' to 'Attitudes', 'Concerns', and 'General teacher self-efficacy' were statistically significant only in the Finnish sample, as can be seen from Table 3. It is noteworthy in this data that the amount of inclusive education training did not have any significant effect on attitudes and self-efficacy towards inclusive education in the Japanese sample. Finally, the path from 'Teaching career' to 'Attitudes' was significant even though it was negative in Finland. That is, Finnish teachers who have taught longer have more negative attitudes about accepting students with disabilities into mainstream classes.

3.4. Testing indirect effects

Finally, indirect effects were tested in both groups. As shown in Table 4, for the Japanese data, the indirect paths from 'Interactions with persons with disabilities' to 'Sentiments', 'Attitudes', and 'Concerns' via 'General teacher self-efficacy' were significant. Although there were no direct effects from 'Teaching career' to the three attitude factors, there were the indirect effects to all of them via 'General teacher self-efficacy'. The indirect paths from 'Experience in teaching students with disabilities' to all three factors of attitudes towards inclusive education via 'General teacher self-efficacy' were also significant. These results led to the conclusion that 'General teacher self-efficacy' serves as a mediator between the three background variables and teachers' attitudes towards

inclusive education in Japan. In the Finnish sample, the indirect paths from 'Amount of inclusive education training' to 'Sentiments', 'Attitudes', and 'Concerns' via 'General teacher self-efficacy' were significant. Moreover, the indirect paths from 'Experience in teaching students with disabilities' to all three factors of attitudes towards inclusive education via 'General teacher self-efficacy' were also significant. In summary, these results show that two teachers' background variables, 'Amount of inclusive education training' and 'Experience in teaching students with disabilities', mediate 'General teacher self-efficacy' to teachers' attitudes towards inclusive education in Finland.

4. Discussion

The starting point of this research was to investigate whether the two scales used in this study, SACIE-R and TEIP, were measuring the same constructs in both Japan and Finland. Measurement invariance was tested in order to answer this question. The achievement of full metric invariance indicates that the participants in the two countries responded to the items in the same way (Steenkamp & Baumgartner, 1998). In addition, the achievement of full scalar invariance implies that differences in the means of item responses can be regarded as differences in the means of latent variables regardless of which group the participants belong (Marsh et al., 2017; Steenkamp & Baumgartner, 1998). Although the full scalar invariance was not achieved in this study, relaxing four constraints for the SACIE-R scale and five constraints for the TEIP scale resulted in substantial improvement in the model fit. It has been mentioned that if at least two items have invariant factor loadings and intercepts, cross-national comparisons of factor means can be meaningful (Steenkamp & Baumgartner, 1998). Since the results of the current study met this criterion, it is very probable that there is an adequate universality in the structures of teachers' attitudes and self-efficacy on implementing inclusive education even though some items have a different degree of association with each contributing factor.

The second objective of this study was to determine whether teachers' self-efficacy for inclusive practices could be a predictor of their attitudes towards inclusive education in both countries. The results indicate that a higher-order factor model is reasonable considering the high correlations between three factors of self-efficacy. Hence, the model consists of the second-order factor named 'General teacher self-efficacy for inclusive practices' and three first-order factors of the TEIP scale adopted in the present study. This result is consistent with the findings of Malinen, Savolainen, Xu (2013), who suggested that teachers' self-efficacy for inclusive practices can be seen not only as multi-dimensional but also as unidimensional phenomena. In light of the higher-order factor model, the results of the current study, as well as those of earlier studies (Savolainen et al., 2012; Yada & Savolainen, 2017), confirm that teachers' attitudes towards inclusive education can be predicted by teacher self-efficacy for inclusive practices in both Japan and Finland.

The main aim of the current study was to explore whether there are similarities and differences in how teachers' background variables directly and/or indirectly predict their attitudes and self-efficacy on implementing inclusive education across the two countries. First, the results indicate that teachers' close relationships with persons with disabilities (see Fig. 1, 'Interactions with persons with disabilities') improved their attitudes towards interacting with persons with disabilities ('Sentiments') in both samples. It should be noted that interactions with persons with disabilities did not directly affect teachers' 'Concerns' about including students with disabilities in their own classrooms or their more general 'Attitudes' towards inclusion in either country. In
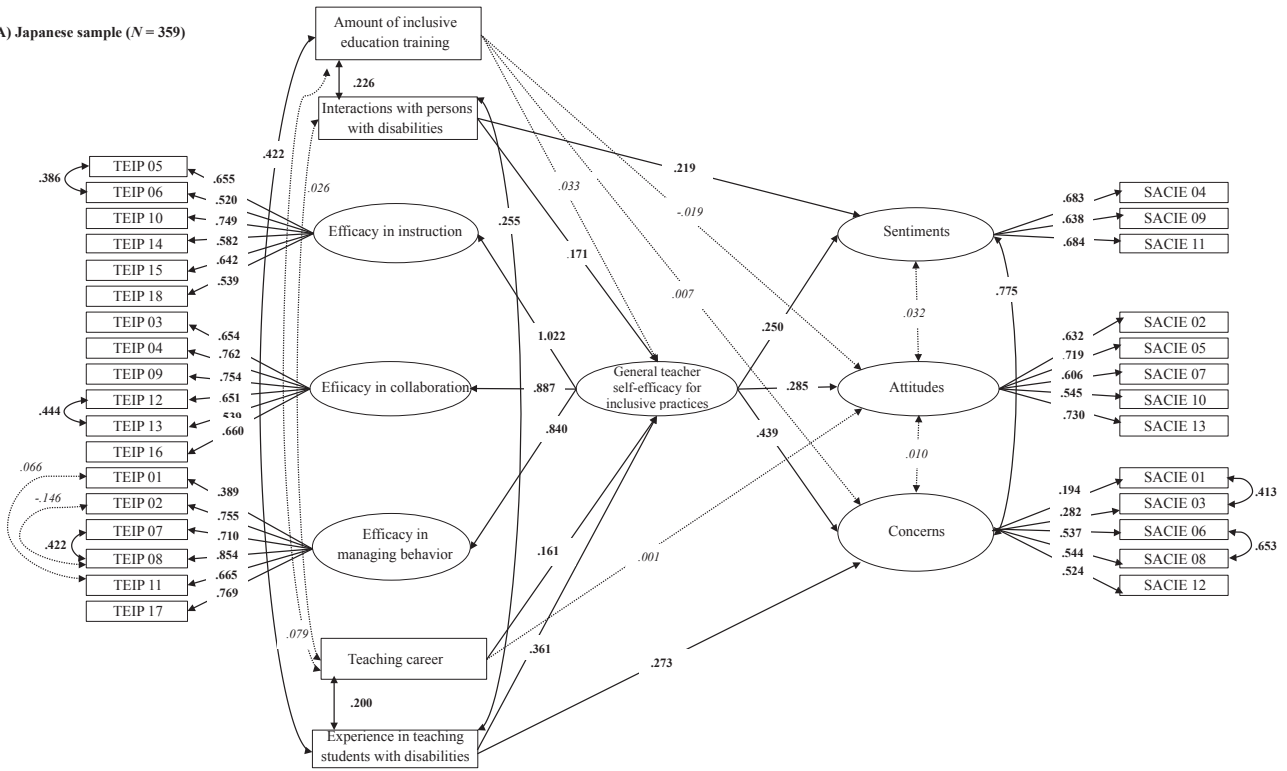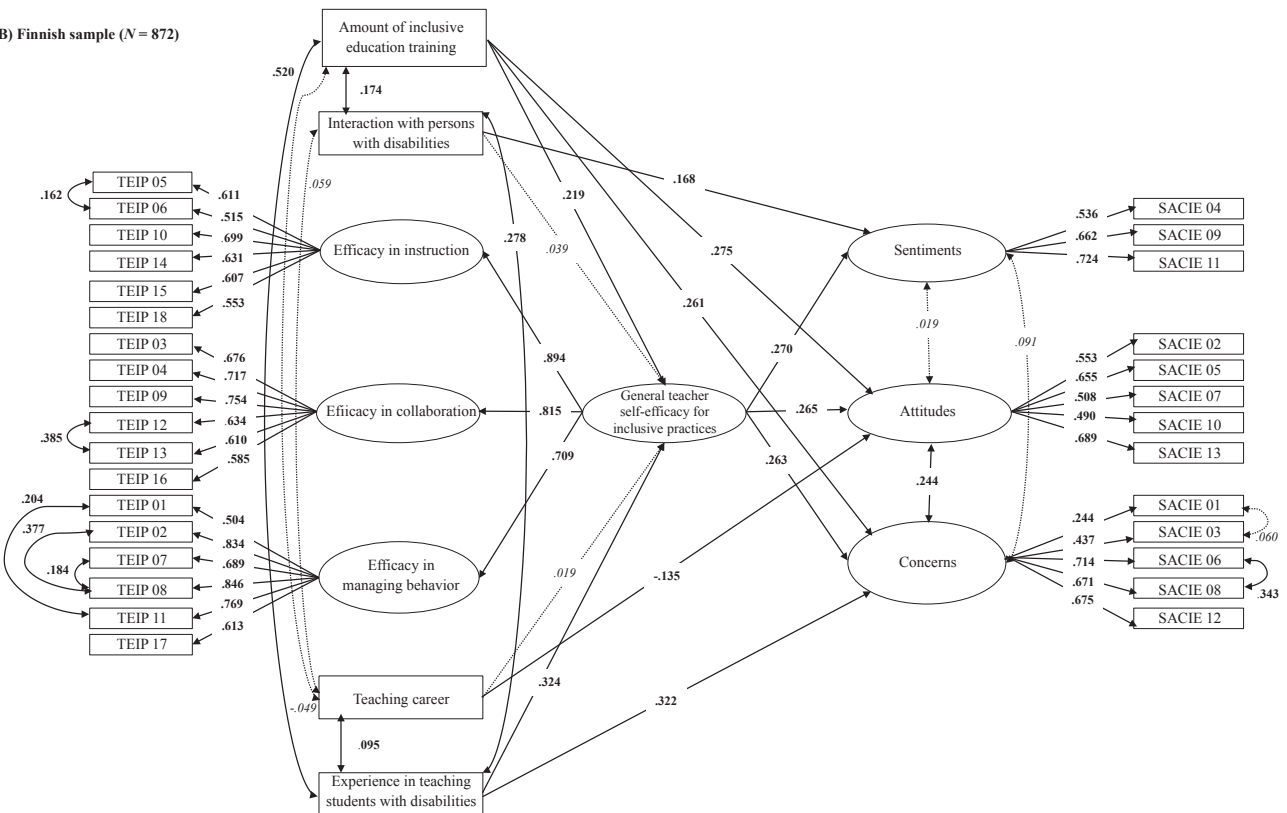
Fig. 1. Final predictive models in Japan (Panel A) and in Finland (Panel B). Note. Standardised path estimates are reported. The estimate numbers that were significant are shown in bold and not significant are in italic.

Table 3
Regressions of the factors on the background variables and the results of difference testing.

Path of regression	Japanese	Finnish	Diff (Jap-Fin)
Training → Attitudes	-.008 (−.019)	.108*** (.275)	-.116**
Training → Concerns	.001 (.007)	.048*** (.261)	-.047**
Training → GTSE	.017 (.033)	.098*** (.219)	-.080*
Interactions → Sentiments	.204*** (.219)	.124*** (.168)	.080
Interactions → GTSE	.202** (.171)	.039 (.039)	.162*
Career → GTSE	.008** (.161)	.001 (.019)	.007*
Career → Attitudes	.000 (.001)	-.006** (−.135)	.006*
Teaching SD → GTSE	.219*** (.361)	.149*** (.324)	.070
Teaching SD → Concerns	.040** (.273)	.060*** (.322)	-.020

Note. Training = Amount of inclusive education training; Interactions = Experience of interactions with persons with disabilities; Career = Teaching career; Teaching SD = Experience in teaching students with disabilities; GTSE = General teacher self-efficacy for inclusive practices.
The non-standardised path estimates are reported, and the standardised path estimates are reported in brackets.
*$p < .05.$, **$p < .01.$, ***$p < .001$.

Table 4
Summary of indirect effects via 'General teacher self-efficacy for inclusive practices'.

	Sentiments	Attitudes	Concerns
Japanese sample			
Training	.008	.009	.015
Interactions	.043**	.049**	.075**
Career	.040**	.046**	.071**
Teaching SD	.090***	.103***	.158***
Finnish sample			
Training	.059***	.058***	.058***
Interactions	.011	.010	.010
Career	.005	.005	.005
Teaching SD	.087***	.086***	.085***

Note. Training = Amount of inclusive education training; Interactions = Experience of interactions with persons with disabilities; Career = Teaching career; Teaching SD = Experience in teaching students with disabilities.
The standardised path estimates are reported.
*$p < .05.$, **$p < .01.$, ***$p < .001$.

other words, an experience of contact with persons with disabilities is not enough to directly reduce teachers' concerns about teaching students with disabilities. However, 'Interactions with persons with disabilities' is indirectly and positively related to teachers' attitudes as measured by all three sub-scales via their self-efficacy in Japan. Thus, having social contact with persons with disabilities helps to improve Japanese teachers' self-efficacy and, consequently, changes their attitudes towards inclusion in a positive way. Of particular importance is that this effect is most significant on teachers' concerns about including students with disabilities in their own classes.

Second, 'Experience in teaching students with disabilities' predicted a lower level of 'Concerns' for teachers with regard to implementing inclusive practices as well as their general self-efficacy for inclusive practices in both Japan and Finland. Moreover, 'Experience in teaching students with disabilities' had positive indirect association with global attitudes via self-efficacy across the two countries. These results indicate that not only social contact but also experience in teaching students with disabilities are important in changing teachers' overall attitudes in a positive direction. These findings corroborate the ideas of Avramidis and Norwich (2002), who reviewed several studies and suggested that specific experience with children with SEN is important in influencing teachers' attitudes positively towards inclusive education. Nonetheless, our findings reveal more detailed information about specific types of contact experience that affect their particular attitudes towards inclusive education.

Third, one interesting finding in this study was that teachers' number of years of teaching experience ('Teaching career') worked differently in Japan than in Finland, although the values of the regression coefficient were quite small for both countries. In the Japanese sample, more years of teaching predicted teachers' higher general self-efficacy directly and their overall attitudes towards inclusion indirectly, but not in the Finnish sample. This result is in agreement with the previous study showing that a teaching career was not related to teachers' self-efficacy in managing student behaviour in the Finnish and South African samples but had a positive relationship in the Chinese sample (Malinen, Savolainen, Engelbrecht et al., 2013). This may be because, in the Finnish sample, the association between the teaching career and self-efficacy could be nonlinear, with fluctuations throughout the career span (Klassen & Chiu, 2010), and this process, when it increases/decreases, may not be universal (Bandura, 1997). The results could also correlate with the cultural-historical background of each country and not only with the teachers' educational background. Japan is a hierarchical society, and Japanese people highly respect elders in general (Nishimura et al., 2008). Thus, the more experience Japanese teachers gain, the more confident they may become in their practices. In contrast, Finnish people respect the teaching occupation; it is considered one of the most attractive career options (Simola, 2005). Accordingly, teacher education programmes are highly valued and difficult to get into (Malinen et al, 2012). Thus, if teachers can pass an entrance exam for a teacher education programme, that fact itself could affect their self-efficacy. Another possible explanation is that Japan has a position classification system (MEXT, 2007) in which teachers can be promoted to higher positions (e.g., leading teacher, chief teacher, vice principal, and principal) if they obtain specific in-service training and pass the exams. This process usually correlates with their teaching career. In contrast, Finland has no such promotion options, other than becoming a principal. Hence, in Japan, career experience-related promotion options could lead to gaining confidence. However, more research is required to determine what kind of contextual factors influence the relationship between the teaching career and self-efficacy.

Longer terms of teaching experience predicted teachers' negative attitudes in accepting students with disabilities into mainstream classes ('Attitudes') only in the Finnish sample. This finding further supports previous studies indicating that teachers with less teaching experience held more positive attitudes towards inclusive education than teachers with more experience (Glaubman & Lifshitz, 2001; Jahnukainen & Korhonen, 2003; Savolainen et al., 2012). There are several likely explanations for this result. First, because inclusive education was introduced only recently into teacher education programmes in many countries, younger teachers could be more knowledgeable about inclusion. Thus, they may be more willing to accept the idea, whereas more experienced teachers may feel insufficiently trained in inclusive education. Another possible explanation is that the teachers who have a great deal of experience may think their skills or knowledge is too 'stale' to teach students with SEN (de Boer et al., 2011), and they have not received enough in-service training for their professional development. Furthermore, it is probable that teachers with longer teaching career have less positive or successful experiences associated with teaching students with SEN in their classrooms. The literature suggests that teaching career and experience in teaching students with SEN seem to be inconsistent with each other (de Boer et al., 2011). It may be because inclusive education was adopted in recent years and students with SEN were educated separately in special schools or special classes before, thus the older teachers were likely to have few opportunities to teach students with SEN in spite of their long teaching career.

Finally, another interesting difference between Japan and Finland is that the 'Amount of inclusive education training' was positively linked with the Finnish teachers' higher general teacher self-efficacy, higher acceptance of students with disabilities in mainstream classes ('Attitudes'), and fewer concerns regarding including students with disabilities in their own classrooms ('Concerns'). In contrast, these relationships were not found among the Japanese teachers. In addition, self-efficacy mediated the effect of amount of inclusive training to all three types of attitudes only in Finland. Thus, it seems that inclusive education training helps to improve teachers' self-efficacy and attitudes towards inclusive education directly and indirectly in Finland but not in Japan. We can assume that even if different types of teachers are educated separately, with classroom teachers and subject teachers not fully trained in inclusive education, Finnish teacher training programmes offer enough training to develop their self-efficacy and attitudes. There are several possible explanations for this finding. First, one obvious difference between Japan and Finland in terms of teacher education programmes is the amount of teaching practice provided. For example, primary teacher education requires a minimum of 20 European Credit Transfer System (ECTS) credits of teaching practice, earned over several years, in Finland (Niemi, 2012). One ECTS credit corresponds to 25—30 h of study, according to the European Commission (2009). In addition to that, many university programmes have much more practice in their curricula. On the other hand, Japanese primary teacher education programmes require only five credits (with one credit equal to about 45 h of study) of teaching practice (MEXT, n. d.). This teaching practice usually takes about one month and occurs in the final year of the programme. It is possible that Finnish teachers have more opportunities to experience teaching diverse students during their teaching practice sessions. Moreover, even though the educational policies in Japan emphasise inclusive education, a course regarding inclusive education has become mandatory for all students who want to be teachers only recently (Katoh, 2016; MEXT, 2017b), and there was no such course until then (Forlin et al., 2015). In Finland, all teachers have completed at least some courses on inclusive education, and quite a few classroom teachers take special education as a minor subject (25 ECTS credits). Hence, Finnish students in teacher education programmes may receive more pre-service inclusive education training than Japanese students receive. Finally, in general, Japanese in-service teacher training is conducted through lecture-style study, and teachers have seen it as unattractive (Sakakibara et al., 2005). This is consistent with anecdotal evidence from answers to open questions in our Japanese questionnaire. In their responses, many teachers stated that they wanted to obtain more pragmatic in-service training, including observation, case study, and teaching practice with students with SEN. Conversely, Finnish teachers may readily obtain in-service training that is more practically related to inclusive education. Also, Finnish teachers in general are quite active in attending in-service training to learn about challenges and approaches to meeting SEN in schools. These in-service trainings are supported at a national scale by the Finnish National Agency of Education. Further research should be undertaken to investigate what kinds of differences exist in inclusive education training between the two countries.

5. Limitations and future research

This is the first study of its kind to test measurement invariance that constructs cross-cultural validity of these two scales (SACIE-R and TEIP) by using MGCFA. The results of this study supported partial scalar invariance of the scales across Japan and Finland, which means there is universality in the concepts of attitudes and self-efficacy on implementing inclusive education. Since we included only these two countries, a future study investigating measurement invariance using data from other countries would be very interesting and useful for confirming the cross-cultural validity of the two scales.

The contribution of this study is to show that there is both universality in the structure of attitudes and self-efficacy and also local differences in how contexts relate to them due to the cultural-historical background of the two countries. However, this study was limited by the use of only four teachers' background variables for which further detailed information would be needed. The 'Amount of inclusive education training' element, for example, included both pre- and in-service training as one variable, although there might be differences between pre- and in-service training in terms of what teachers learn and how it affects self-efficacy. Similarly, the two background variables, 'Interactions with persons with disabilities' and 'Experience in teaching students with disabilities', did not ask about which type of disabilities the persons/students had. Several previous studies have pointed out that teachers' attitudes could change based on the type of students' disabilities (e.g., Avramidis & Norwich, 2002; Forlin et al., 2015; de Boer et al., 2011). Thus, experience with persons/students who have particular types of disabilities is likely associated with teachers' self-efficacy and attitudes in specific ways. This study, therefore, suggests many questions in need of future investigation.

Additional indicators concerning teachers' background variables that are not included in our study might also influence teachers' attitudes and self-efficacy. For instance, according to Bandura (1997), self-efficacy originates from four main sources: (a) mastery experience; (b) vicarious experience; (c) social persuasion by others; and (d) somatic and emotional states. Those sources might place different emphasis on self-efficacy in different countries. For instance, the self-oriented sources (mastery experience and somatic and emotional states) could work strongly in an individualist society, while the other-oriented sources (vicarious experience and social persuasion) may be more important in a collectivist society (Klassen, 2004). Moreover, one obvious difference between Japan and Finland is that municipalities assign at least one special education teacher to every school in Finland (Engelbrecht, Savolainen, Nel, Koskela, & Okkolin, 2017), whereas the same does not occur in Japan. Thus, Finnish teachers could easily obtain daily vicarious experience, including observation through co-teaching and professional support teaching, discussions with teachers who specialise in teaching students with SEN, and getting direct feedback and positive social persuasion from colleagues (Engelbrecht et al., 2017). It would be interesting to assess the effects of those sources on teachers' self-efficacy and attitudes in the two countries.

Last but not least, the generalisability of these results is subject to certain limitations. One source of weakness in this study which could have affected the measurements was about four years difference in the time points of collecting the data between Japan and Finland. There have been worldwide changes in the area of inclusive education due to the Convention on the Rights of Persons with Disabilities (United Nations, 2006), the time distance might have implications for the comparability of the two samples. Likewise, although the sample size was quite large in this study, the cross-sectional data were obtained by using convenience sampling from certain areas of each country. More research using random sampling and longitudinal data could provide higher generalisability and useful insight into how teachers' self-efficacy and attitudes develop over time. In addition, further qualitative research including interviews with teachers, students, and parents, as well as observations of classrooms and inclusive education training settings, may lead into a deeper understanding of teachers' attitudes and self-efficacy on implementing inclusive education.

6. Practical implications and conclusion

The findings of this study have a number of important implications for future practice. First, this research provides evidence of universal applicability of the two scales for the purpose of assessing teachers' attitudes and self-efficacy concerning inclusive education. Since measuring educational development continuously is essential to evaluate whether new policies and systems are working well in practice, these measures can be one option for not only researchers but also administrators to monitor the development. Second, the current study has shown that the experience of teaching students with disabilities influences teachers' self-efficacy and attitudes positively in both countries. Thus, it will be beneficial to include more practice teaching students with SEN in both pre- and in-service teacher training while developing knowledge and skills connected with inclusive education. Finally, we have shown that there are direct and indirect effects of inclusive education training on attitudes and self-efficacy in Finland. Thus, it could be worthwhile to investigate what kind of inclusive education training Finland employs and how it works and to reinforce the aspects that might positively influence teachers' attitudes towards inclusive education. Furthermore, although inclusive education training has a positive effect on self-efficacy and attitudes in Finland, some teachers might not receive sufficient in-service training on inclusive education during their teaching career. Therefore, it would be profitable to promote professional development programmes on inclusive education that are customised to fit teachers' needs at a specific career stage (Klassen & Chiu, 2010). Conversely, inclusive education training itself does not have any influence in the Japanese data. Thus, it could be argued that the inclusive education training used in Japan should be improved. In the light of this study, a promising composition in Japan would be that teachers gain more experience in teaching students with SEN and/or have more interactions with persons with disabilities to improve their self-efficacy not through the training, but during their teaching career. The importance of having stronger self-efficacy when beginning to work as a teacher is highlighted by the fact that an increasing percentage of teachers quit their jobs after the first year of work in Japan (Waida & Kameyama, 2011). While this high turnover may not be directly related to development in inclusive education, the essential implication of our findings is that inclusive education training should be reinforced in teacher education programmes. Doing so could allow future teachers to increase their self-efficacy and attitudes before beginning their demanding work. Our conclusion is also supported by Forlin et al. (2015).

The present study provides additional evidence for cross-cultural validity of the two scales, TEIP and SACIE-R. This validity is a requirement for meaningful comparative studies across different countries. The results of cross-cultural analysis showed interesting similarities and differences between Japan and Finland that will contribute to efforts to improve inclusive education in both countries. One of the key findings in this study is that social contact and teaching experience with persons or students with disabilities linked positively to teachers' self-efficacy and attitudes in both countries. It is likely that this phenomenon could be universal, not only across countries but also across teachers and students. In other words, although the present study relates to teachers' attitudes and self-efficacy towards inclusive education, having social contact with students with disabilities might be also beneficial for typically developing students (Hung & Paul, 2006). Improving teachers' self-efficacy and attitudes on implementing inclusive education is likely to promote inclusive classrooms where students can get know each other, which may positively affect their attitudes towards persons with disabilities. If the children who bear the next generation have positive attitudes towards inclusion, they may lead us into a more inclusive society in the future.

References

Artiles, A., & Dyson, A. (2005). Inclusive education in the globalization age: The promise of comparative cultural-historical analysis. In D. Mitchell (Ed.), *Contextualizing inclusive education: Evaluating old and new international perspectives (pp. 37–62)*. London: Routledge.

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.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.

Björn, P. M., Aro, M. T., Koponen, T. K., Fuchs, L. S., & Fuchs, D. H. (2016). The many faces of special education within RTI frameworks in the United States and Finland. *Learning Disability Quarterly, 39*(1), 58–66. http://doi.org/10.1177/0731948715594787.

de Boer, A., Jan Pijl, S., Minnaert, A., & Tied, F. (2011). Regular primary school-teachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education, 15*(3), 331–353. http://doi.org/10.1080/13603110903030089.

Bulle, N. (2011). Comparing OECD educational models through the prism of PISA. *Comparative Education, 47*(4), 503–521. http://doi.org/10.1080/03050068.2011.555117.

Chen, F. F., Sousa, K. H., & West, S. G. (2005). Teacher's corner: Testing measurement invariance of second-order factor models. *Structural Equation Modeling: A Multidisciplinary Journal, 12*(3), 471–492. http://doi.org/10.1207/s15328007sem1203_7.

Committee of Elementary and Lower Secondary Education in the Central Council for Education. (2012). Kyoseishakai no keisei ni muketa inkurushibukyoikushisutemukochiku no tame no tokubetsushienkyoiku no suishin [A report about the development of special needs education in order to construct inclusive education system toward creating co-existent society]. Retrieved on 30 October, 2017 from http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/gijiroku/__icsFiles/afieldfile/2012/07/24/1323733_8.pdf.

Eid, M., Langeheine, R., & Diener, E. (2003). Comparing typological structures across cultures by multigroup latent class analysis: A primer. *Journal of Cross-Cultural Psychology, 34*(2), 195–210. http://doi.org/10.1177/0022022102250427.

Engelbrecht, P., Savolainen, H., Nel, M., Koskela, T., & Okkolin, M.-A. (2017). Making meaning of inclusive education: Classroom practices in Finnish and South African classrooms. *Compare: A Journal of Comparative and International Education, 47*(5), 684–702. https://doi.org/10.1080/03057925.2016.1266927.

European Commission. (2009). *ECTS users' guide*. Luxembourg: Office for Official Publications of the the European Communities. http://doi.org/10.2766/88064.

FNBE [Finnish National Board of Education]. (2010). *Perusopetuksen opetussuunnitelman perusteiden 2004 muuttaminen ja täydentäminen [Changing and supplementing the national core curriculum for basic education]*. Helsinki: Finnish National Board of Education.

FNBE. (2016). *National core curriculum for basic education 2014*. Helsinki: Finnish National Board of Education.

Forlin, C. (2013). Issues of inclusive education in the 21st century. *Gakushu Kaihatsugaku Kenkyu, 6, 67–81*.

Forlin, C., Cedillo, I., Romero-Contreras, S., Fletcher, T., & Hernandez, H. (2010). Inclusion in Mexico: Ensuring supportive attitudes by newly graduated teachers. *International Journal of Inclusive Education, 14*(7), 723–739. http://doi.org/10.1080/13603111003778569.

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International, 21*(3), 50–65.

Forlin, C., Kawai, N., & Higuchi, S. (2015). Educational reform in Japan towards inclusion: Are we training teachers for success? *International Journal of Inclusive Education, 19*(3), 314–331. http://doi.org/10.1080/13603116.2014.930519.

Fujii, N. (2014). Inkurushibukyoikushisutemukochiku no hokosei ni kansuru kento: Kyoshokuin ni taisuru kiwado no ninchidochosa wo toshite [Study into the directions in building the inclusive education system: Through teaching staff survey on keyword awareness]. *Bulletin of Center for Educational Research and Practice, Akita University, 36, 89–98*.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569–582. http://doi.org/10.1037/0022-0663.76.4.569.

Glaubman, R., & Lifshitz, H. (2001). Ultra-orthodox Jewish teachers' self-efficacy and willingness for inclusion of pupils with special needs. *European Journal of Special Needs Education, 16*(3), 207–223. http://doi.org/10.1080/08856250110074373.

Graham, L. J., & Jahnukainen, M. (2011). Wherefore art thou, inclusion? Analysing the development of inclusive education in New South Wales, Alberta and Finland. *Journal of Education Policy, 26*(2), 263–288. http://doi.org/10.1080/02680939.2010.493230.

Green, A., Preston, J., & Sabates, R. (2003). Education, equality and social cohesion: A distributional approach. *A Journal of Comparative and International Education, 33*(4), 453–470. http://doi.org/10.1080/0305792032000127757.

Halinen, I., & Järvinen, R. (2008). Towards inclusive education: The case of Finland.

Prospects, 38(1), 77—97. http://doi.org/10.1007/s11125-008-9061-2.
Hoferichter, F., Raufelder, D., Eid, M., & Bukowski, W. M. (2014). Knowledge transfer or social competence? A comparison of German and Canadian adolescent students on their socio-motivational relationships in school. *School Psychology International, 35*(6), 627—648. http://doi.org/10.1177/0143034314552345.
Hu, L, & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1—55. http://doi.org/10.1080/10705519909540118.
Hung, H. L., & Paul, P. V. (2006). Inclusion of students who are deaf or hard of hearing: Secondary school hearing students' perspectives. *Deafness and Educational International, 8*(2), 62—74. http://doi.org/10.1002/dei.190.
Institute for Global Education and Culture. (2007). Ink-urushibukyoikukenkyuiinkaihokoku: Tokubetsushienkyoiku kara ink-urushibukyoiku he [Report of committee of inclusive education research: From special needs education to inclusive education]. Retrieved on 30 October, 2017 from http://www.k-soken.gr.jp/smarts/index/45/.
Jahnukainen, M. (2011). Different strategies, different outcomes? The history and trends of the inclusive and special education in Alberta (Canada) and in Finland. *Scandinavian Journal of Educational Research, 55*(5), 489—502. http://doi.org/10.1080/00313831.2010.537689.
Jahnukainen, M. (2015). Inclusion, integration, or what? A comparative study of the school principals' perceptions of special and inclusive education in Finland and in Alberta, Canada. *Disability & Society, 30*(1), 59—72. http://doi.org/10.1080/09687599.2014.982788.
Jahnukainen, M., & Korhonen, A. (2003). Integration of students with severe and profound intellectual disabilities into the comprehensive school system: Teachers' perceptions of the education reform in Finland. *International Journal of Disability, Development and Education, 50*(2), 169—180. http://doi.org/10.1080/1034912032000089666.
Katoh, H. (2016). Kyoshokukatei deno tokubetsushienkyoka no hisshuka no imi-surumono [Implications of making the subject of special needs education compulsory in the teacher preparation curriculum]. *National University Corporation Tsukuba University of Technilogy Techno Report, 23*(2), 27—32.
Kivirauma, J., & Ruoho, K. (2007). Excellence through special education? Lessons from the Finnish school reform. *International Review of Education, 53*(3), 283—302. http://doi.org/10.1007/s11159-007-9044-1.
Klassen, R. M. (2004). A cross-cultural investigation of the efficacy beliefs of South Asian immigrant and Anglo Canadian nonimmigrant early adolescents. *Journal of Educational Psychology, 96*(4), 731—742. http://doi.org/10.1037/0022-0663.96.4.731.
Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology, 102*(3), 741—756. http://doi.org/10.1037/a0019237.
Kobayashi, T. (1993). Japan's teacher education in comparative perspectives. *Peabody Journal of Education, 68*(3), 4—14.
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. http://doi.org/10.1080/0885625940090101.
MacCallum, R. C., Browne, M. W., & Cai, L. (2006). Testing differences between nested covariance structure models: Power analysis and null hypotheses. *Psychological Methods, 11*(1), 19—35. http://doi.org/10.1037/1082-989X.11.1.19.
Malinen, O.-P., & Savolainen, H. (2008). Inclusion in the East: Chinese students' attitudes towards inclusive education. *International Journal of Special Education, 23*(3), 101—109.
Malinen, O.-P., Savolainen, H., & Xu, J. (2013). Dimensions of teacher self-efficacy for inclusive practices among mainland Chinese pre-service teachers. *Journal of International Special Needs Education, 16*(2), 82—93. https://doi.org/10.9782/2159-4341-16.2.82.
Malinen, O.-P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., et al. (2013b). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education, 33*, 34—44. https://doi.org/10.1016/j.tate.2013.02.004.
Malinen, O.-P., Väisänen, P., & Savolainen, H. (2012). Teacher education in Finland: A review of a national effort for preparing teachers for the future. *Curriculum Journal, 23*(4), 567—584. https://doi.org/10.1080/09585176.2012.731011.
Moberg, S., & Savolainen, H. (2006). Reading literacy and special education: The particular case of Finland. In A. Lascioli, & M. Onder (Eds.), *Proceedings of the symposium on special pedagogy. State of the art in practical work, research and education* (pp. 481—494). Verona: University of Verona.
Marsh, H. W., Guo, J., Parker, P. D., Nagengast, B., Asparouhov, T., Muthén, B., et al. (2017). *What to do when scalar invariance fails: The extended alignment method for multi-group factor analysis comparison of latent means across many groups.* Psychological Methods. Advance online publication https://doi.org/10.1037/met0000113.
Meijer, C. J. W., & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education, 22*(3), 378—385. http://doi.org/10.1177/002246698802200309.
MEXT [Ministry of Education, Culture, Sports, Science and Technology Japan]. (n.d.). Kyoikushokuinmenkyoho oyobi kyoikushokuinmenkyohoshikokisoku [School Teacher's License Act and the ordinance for enforcement of the school Teacher's License Act]. Retrieved on 30 October, 2017 from: http://www.mext.go.jp/a_menu/koutou/kyoin/1268593.htm.
MEXT. (2007). Gakkokyoikuhoto no ichibu wo kaisei suru horitsu ni tsuite [Partial revision of the School Education Act]. Retrieved on 30 October, 2017 from

http://www.mext.go.jp/b_menu/hakusho/nc/07081705.htm.
MEXT. (2013). Gakkokyoikuhoshikorei no ichibukaitei ni tsuite [Enforcement ordinance of the school education law (revised)]. Retrieved on 30 October, 2017 from http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1339311.htm.
MEXT. (2016). Tokubetsushienkyoikushiryo: Heisei 27 nendo [Special needs education statistics: 2015]. Retrieved on 30 October, 2017 from http://www.mext.go.jp/a_menu/shotou/tokubetu/material/1373341.htm.
MEXT. (2017a). Gakkokyointokeichosa: Heisei 28 nendokekka no gaiyo [Statistics in school teachers: Outline of the survey results in 2016]. Retrieved on 12 March, 2018 from http://www.mext.go.jp/b_menu/toukei/chousa01/kyouin/kekka/k_detail/1395309.htm.
MEXT. (2017b). Kyoshokukateininteishinsei no tebiki [Guideline for teacher training program reauthorization application]. Retrieved on 19 March, 2018 from http://www.mext.go.jp/component/a_menu/education/detail/__icsFiles/afieldfile/2018/01/16/1399047.pdf.
Milfont, T. L., & Fischer, R. (2010). Testing measurement invariance across groups: Applications in cross-cultural research. *International Journal of Psychological Research, 3*(1), 111—121. http://doi.org/. https://doi.org/10.21500/20112084.857.
Ministry of Education and Culture. (2007). *Special education strategy* (Reports of the Ministry of Education, Finland, No. 47). Helsinki: Ministry of Education and Culture.
Mitchell, D. (2005). Introduction: Sixteen propositions on the contexts of inclusive education. In D. Mitchell (Ed.), *Contextualizing inclusive education: Evaluating old and new international perspectives (pp. 1—21)*. London: Routledge.
Miyoshi, M. (2009). Tokubetsushienkyoiku to inkurushibukyoiku no setten no tankyu: Nihon ni okeru inkurushibukyoikuteichaku no kanosei [A study on contact between special support education and inclusive education: Possibility of establishment of inclusive education practice]. *Department Bulletin of Human and Environmental Studies, Kyoto University, 18*, 27—37.
Muta, E. (2002). Tokushukyoiku kara tokubetsushienkyoiku he [From special education to special needs education]. *The Annual Report of Educational Psychology in Japan, 41*, 124—131.
Muthén, L. K., & Muthén, B. O. (1998). *Mplus version 7 [Statistical software].* Los Angeles, CA: Muthén & Muthén.
Nagano, M., & Weinberg, L. A. (2012). The legal framework for inclusion of students with disabilities: A comparative analysis of Japan and United States. *International Journal of Special Education, 27*(1), 128—143.
Naukkarinen, A. (2010). From discrete to transformed? Developing inclusive primary school teacher education in a Finnish teacher education department. *Journal of Research in Special Educational Needs, 10*(s1), 185—196. http://doi.org/10.1111/j.1471-3802.2010.01168.x.
Niemi, H. (2012). The societal factors contributing to education and schooling in Finland. In H. Niemi, A. Toom, & A. Kallioniemi (Eds.), *Miracle of education: The principles and practices of teaching and learning in Finnish schools (pp. 19—38)*. Rotterdam: SensePublishers.
Nishimura, S., Nevgi, A., & Tella, S. (2008). Communication style and cultural features in high/low context communication cultures: A case study of Finland, Japan and India. In A. Kallioniemi (Ed.), *Uudistuva ja kehittyvä ainedidaktiikka: Ainedidaktinen symposiumi 8.2.2008 helsingissä (pp. 783—796)*. Helsinki: Helsingin yliopisto. Retrieved on 29 October, 2017 from http://www.helsinki.fi/~tella/nishimuranevgitella299.pdf.
Nishinaka, K. (2012). Yogogakko no gimusei wo meguru shomondai no kosatsu: 1979nen shochuyogogakko ni kansuru seireishikogo no ugoki ni shoten wo atete [consideration of problems regarding the compulsory system of schools for disabled children in Japan: Focus on the controversy following enforcement of the government's ordinance on schools for disabled children at the elementary and middle school levels in 1979]. *Core Ethics, 8*, 305—315.
OECD [The Organization for Economic Cooperation and Development]. (2011). *Lessons from PISA 2012 for the United States, strong performers and successful reformers in education.* Paris, France: OECD Publishing. http://doi.org/10.1787/9789264207585-en.
OECD. (2013). Key findings from the teaching and learning international survey (TALIS). Retrieved on 15 March, 2018 from http://www.oecd.org/finland/TALIS-2013-country-note-Finland.pdf.
Official Statistics of Finland. (2016). *Special education [e-publication].* Helsinki: Statistics Finland. Retrieved on 30 October, 2017 from http://www.stat.fi/til/erop/2015/erop_2015_2016-06-13_tie_001_en.html.
Parliament of Finland. (2010). Laki perusopetuslain muuttamisesta [Act on changing the basic education Act]. Retrieved on 1 June, 2017 from http://www.finlex.fi/fi/laki/alkup/2010/20100642.
Sakakibara, Y., Yamamoto, M., & Kobayashi, S. (2005). Jikoseisatsu wo unagasu tanoshii kyoinkenshu no hoho: "Ataerareru" kara "tomonitsukuridasu" kenshu ni kansuru tsuishi [An pleasant off-the-job teacher education, that leads effective self-reflection: A repetitive research for "collaboration" in teacher education instead of "to be given"]. *Journal of Applied Educational Research, University of Yamanashi, 10*, 71—86.
Savolainen, H. (2009). Responding to diversity and striving for excellence: The case of Finland. *Prospects, 39*, 281—292. https://doi.org/10.1007/s11125-009-9125-y.
Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implication for pre-service and in-service teacher education. *European Journal of Special Needs Education, 27*(1), 51—68. https://doi.org/10.1080/08856257.2011.613603.
Scherer, R., Jansen, M., Nilsen, T., Areepattamannil, S., & Marsh, H. W. (2016). The quest for comparability: Studying the invariance of the teachers' sense of self-efficacy (TSES) measure across countries. *PLoS One, 11*(3). http://doi.org/10.1371/

journal.pone.0150829.

Schleicher, A. (2009). Securing quality and equity in education: Lessons from PISA. *Prospects, 39*(3), 251—263. http://doi.org/10.1007/s11125-009-9126-x.

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. http://doi.org/10.1111/j.1471-3802.2011.01200.x.

Shimono, M. (2016). Daigaku ni okeru inkurushibukyoikushisutemukochiku: Shogaigakuseishien toshite no goritekihairyo wo chushin ni [Inclusive education in university: Reasonable accommodations for students with disabilities]. *Departmental Bulletin of Asahi University, 41*, 1—18.

Shoji, M. (2015). Inkurushibukyoiku ha shogaiji no tame no kyoiku ka?: Tokubetsushienkyoiku no arikata ni kansuru tokubetsuiinkaihokoku kara gakko no yakuwari to goritekihairyo wo kakunin suru [Is inclusive education for children with disabilities?: A study of schools' role and reasonable accommodations based on report of special committee regarding special needs education]. *Kyoshoku Kenkyu, 8*, 29—41.

Simola, H. (2005). The Finnish miracle of PISA: Historical and sociological remarks on teaching and teacher education. *Comparative Education, 41*(4), 455—470. http://doi.org/10.1080/03050060500317810.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology, 13*(1982), 290—312. http://doi.org/10.2307/270723.

Soodak, L. C., & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *The Journal of Special Education, 27*(1), 66—81. http://doi.org/10.1177/002246699302700105.

Steenkamp, J.-B. E. M., & Baumgartner, H. (1998). Assessing measurement invariance in cross-national consumer research. *Journal of Consumer Reserach, 25*(1), 78—107. http://doi.org/10.1086/209528.

TUEF [The Trade Union of Education in Finland]. (2009). Lausunto luonnoksesta hallituksen esityksestä eduskunnalle laiksi perusopetuksen muuttamisesta [Opinion on government proposal for Parliament on the Amendment of Basic Education]. Retrieved on 29 October, 2017 from http://www.oaj.fi/cs/oaj/Lausunnot?contentID=1363787878356&page_name=luonnos+hallituksen+esitykseksi+eduskunnalle+laiksi+perusope&keyword=&year=2009&month=99.

Ueno, K., & Nakamura, K. (2011). Inkurujonkyoiku ni taisuru tsujogakkyukyoin no ishiki ni tsuite [A study of awareness of "Inclusion Education" among regular-class teachers in elementary schools]. *Journal of Health and Sports Science Juntendo University, 3*(2), 112—117.

UNESCO [United Nations Educational, Scientific and Cultural Organization]. (1994). The Salamanca statement and framework for action on special needs education. Retrieved on 29 October, 2017 from http://www.unesco.org/education/pdf/SALAMA_E.PDF.

United Nations. (2006). Convention on the rights of persons with disabilities. Retrieved on 29 October, 2017 from http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf.

United Nations General Assembly. (2015). Transforming our world: The 2030 agenda for sustainable development. Retrieved on 25 May, 2017 from http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1.

Vieluf, S., Kunter, M., & Van de Vijver, F. J. R. (2013). Teacher self-efficacy in cross-national perspective. *Teaching and Teacher Education, 35*, 92—103. http://doi.org/10.1016/j.tate.2013.05.006.

Waida, S., & Kameyama, Y. (2011). Shinninkyoin no tekio oyobi shoninshakenshu ni kansuru kenkyu [Support system to adapt the work as a new teacher and official professional trainings for the first year teachers]. *Human Ecology, Literature and Education Research, Nagoya Women's University*, (5), 1—10.

Watanabe, A. (2012). Shogaishakenrijoyaku no hijun ni muketa kokunaikyoikuhosei no seibikadai: Inkurushibukyoiku to goritekihairyo [Problems of educational legislation for ratification of Convention on the Rights of Persons with Disabilities: Inclusive education and reasonable accommodations]. In *The bulletin of the 71st annual conference of Japanese educational research association, 71* pp. 392—393).

Weisel, A., & Dror, O. (2006). School climate, sense of efficacy and Israeli teachers' attitudes toward inclusion of students with special needs. *Education, Citizenship and Social Justice, 1*(2), 157—174. http://doi.org/10.1177/1746197906064677.

Yada, A., & Savolainen, H. (2017). Japanese in-service teachers' attitudes towards inclusive education and self-efficacy for inclusive practices. *Teaching and Teacher Education, 64*, 222—229. https://doi.org/10.1016/j.tate.2017.02.005.

Yoshitoshi, M. (2014). Inkurushibukyoiku ni taisuru kotogakkokyoin no jikokoryokukan: Tokubetsushienkyoikukodeineta wo taisho toshita shitsumon-shichosa no bunseki [A survey of Japanese high school teachers' self-efficacy about inclusive education]. *Bulletin of Center for Teacher Education and Development, Okayama University, 4*, 1—5.

III

**TEACHERS' SELF-EFFICACY AND THE SOURCES
OF EFFICACY: A CROSS-CULTURAL INVESTIGATION
IN JAPAN AND FINLAND**

by

Akie Yada, Asko Tolvanen, Olli-Pekka Malinen, Kyoko Imai-Matsumura,
Hiroshi Shimada, Rihei Koike, & Hannu Savolainen, 2019

Teaching and Teacher Education vol 81, 13-24

Available online: https://doi.org/10.1016/j.tate.2019.01.014

Teachers' self-efficacy and the sources of efficacy: A cross-cultural investigation in Japan and Finland

Akie Yada [a, *], Asko Tolvanen [b], Olli-Pekka Malinen [c, d], Kyoko Imai-Matsumura [e], Hiroshi Shimada [e], Rihei Koike [f], Hannu Savolainen [a, g]

[a] Faculty of Education and Psychology, Department of Education, University of Jyvaskyla, P.O. Box 35 (Ruusupuisto), 40014, Jyväskylä, Finland
[b] Faculty of Education and Psychology, Methodology Centre for Human Sciences, University of Jyväskylä, P.O. Box 35 (Ruusupuisto), 40014, Jyväskylä, Finland
[c] Niilo Mäki Institute, P.O. Box 35, 40014, Jyväskylä, Finland
[d] EduCluster Finland, Affiliate of the University of Jyväskylä, Lutakonaukio 7, 40100 Jyväskylä, Finland
[e] Graduate School of Education, Hyogo University of Teacher Education, 942-1 Shimokume, Kato, Hyogo, 673-1494, Japan
[f] Himeji Municipal Shikama-chubu Junior High School, 206 Shikamaku Hosoe, Himeji, Hyogo, 672-8064, Japan
[g] Optentia Research Focus Area, North West University, Vaal Triangle Campus, P.O. Box 1174, Vanderbijlpark, 1900, South Africa

HIGHLIGHTS

- Teachers' self-efficacy (TSE) and its sources were examined in Japan and Finland.
- Measurement invariance testing confirmed the scales' construct validity.
- Mastery experience made the strongest unique contribution to TSE in both countries.
- The influence of verbal persuasion on TSE differed between Japan and Finland.
- Sources other than those proposed by Bandura (1977) may influence TSE in Japan.

ARTICLE INFO

ABSTRACT:

The study explores the extent and sources of Teachers' Self-Efficacy (TSE) for inclusive practices among 261 Japanese and 1123 Finnish teachers. Measurement invariance was tested to ensure the chosen scales' cross-cultural validity. In both countries, mastery experience was identified as the strongest of the four sources contributing uniquely to TSE. However, the two groups differed in how verbal persuasion predicted TSE. The findings indicate that the effects of the four sources on TSE depend strongly on socio-cultural context, and that, in Japan, other sources may exert a powerful influence. Practical implications are discussed, with particular regard to teacher training programs.

© 2019 Elsevier Ltd. All rights reserved.

1. Introduction

Since the publication of the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994), inclusive education has gradually entered the mainstream around the world, reinforcing a global agenda to offer equal educational opportunities to all children (United Nations, 2006; United Nations General Assembly, 2015). Teachers clearly play an important role in implementing inclusive education, and a number of studies have highlighted factors associated with teachers who create an inclusive classroom environment (e.g., Avramidis & Norwich, 2002; de Boer, Jan Pijl, & Minnaert, 2011). One such factor that has attracted research interest is Teachers' Self-Efficacy (TSE) for inclusive

practices (e.g., Malinen, Savolainen, & Xu, 2013; Meijer & Foster, 1988; Soodak & Podell, 1993). For instance, Meijer and Foster (1988) suggested that teachers' higher self-efficacy scores were associated with lower ratings of student problem seriousness—that is, whether a pupil is seen to be causing a significant problem in their classroom. TSE was also related to whether teachers thought it better to refer such pupils to special education (Meijer & Foster, 1988). Some studies of the sources of TSE refer to Bandura's (1997) theory (see Morris, Usher, & Chen, 2017), but while there has been extensive research on TSE for inclusive practices, much less is known about the sources of TSE in this context.

A substantial body of recent literature emphasizes the need for cross-cultural studies of TSE, which is often contingent on cultural and historical background (e.g., Chiu & Klassen, 2009; Klassen, 2004b; Markus & Kitayama, 1991; Mitchell, 2005). Markus and Kitayama (1991) demonstrated that current theories about the understanding of self and others refer principally to Western cultural contexts and noted that the situation may differ in non-Western contexts. As the development of self-efficacy entails understanding oneself in relation to others, how the sources of self-efficacy affect TSE for inclusive practices is also likely to depend on cultural background. As very little is known about the sources of TSE in different cultural historical settings or in different countries, the purpose of this paper is to explore the relationship between TSE for inclusive practices and its sources in one non-Western country in East Asia (Japan) and one Western country in Nordic region (Finland).

1.1. TSE and its sources

Bandura (1977) introduced the term *self-efficacy* as an element of his social cognitive theory, defining it as the belief that one can perform effectively in a given situation. TSE is specific to teachers, which can be understood as a teacher's beliefs about their ability to promote student learning (Klassen, Tze, Betts, & Gordon, 2011; Ross & Bruce, 2007). This is assumed to relate both to teachers' behavior and affect (e.g., adopting new teaching strategies, burnout, and stress) and to student outcomes such as academic achievement, motivation, and efficacy (Klassen et al., 2011; Ross & Bruce, 2007; Tschannen-Moran, Hoy, & Hoy, 1998).

Various studies have assessed TSE for teaching with different academic domains such as teaching math, physical education or language (Klassen et al., 2011). One of the domains on which researchers' attention has focused in last decade is TSE for inclusive practices. It has been suggested that teachers with higher sense of TSE for inclusive practices are more willing to teach students with special needs in their classrooms (e.g., Meijer & Foster, 1988; Savolainen, Engelbrecht, Nel, & Malinen, 2012). Futhermore, several variables (e.g., experience in teaching student with special needs, amount of inclusive education training and knowledge of legislation and policy) have been found to predict TSE for inclusive practices (Forlin, Sharma, & Loreman, 2014; Yada, Tolvanen, & Savolainen, 2018). A number of authors have also considered the effects of socio-cultural contexts on TSE for inclusive practices and the similarities and differences were discussed using cultural-historical and legal frameworks (e.g., Savolainen et al., 2012; Sharma, Aiello, Pace, Round, & Subban, 2018; Yada et al., 2018). For instance, the result of a study (Yada & Savolainen, 2017) indicated that TSE for inclusive practices was relatively low in Japan. The result was explained from the perspective of Japanese educational system (e.g., inadequate training for teachers in inclusive practices) and its culture (e.g., Japanese people's disposition to be modest).

Bandura (1997) proposed that there are four sources of self-efficacy. The first of these is mastery experience—that is, experience of success or failure in a specific situation. How this affects

self-efficacy will depend on the process and on the effort made to overcome obstacles. Self-efficacy is higher when individuals frame their past accomplishments in a positive way (Chen & Usher, 2013). Previous studies have supported Bandura's view that mastery experience is the most powerful of the four sources of self-efficacy (Tschannen-Moran & Hoy, 2007; Usher & Pajares, 2008). The second source is vicarious experience based on modeling the attainments of others, and group norms and one's relationship with others can enhance or diminish efficacy beliefs. Vicarious experience has been shown to exert a more powerful influence when the model is perceived as similar in terms of ability and/or personal characteristics such as age, gender, and ethnicity (Bandura, 1997; Usher & Pajares, 2008). Vicarious experience plays a fundamental role in situations where one is given a new task for which the criteria of proficiency are unclear (Bandura, 1997; Chen & Usher, 2013). The third source of self-efficacy is verbal persuasion, which can be defined as appraisal or evaluative feedback from others. Although verbal persuasion alone is less powerful than the two preceding sources (Bandura, 1997), it can improve efficacy beliefs where positive and sincere evaluation realistically reflects the agent's capabilities (Schunk, 1984). The opposite is also true; devaluative feedback can undermine self-efficacy (Hattie & Timperley, 2007). Bandura's fourth source of self-efficacy is psychological and affective state. When people judge their capabilities, they sometimes utilize somatic information—for example, higher stress levels or negative emotional proclivities can undermine perceived self-efficacy (Bandura, 1997). In their review of the literature, Morris et al. (2017) pointed out that negative psychological and affective states are more often investigated in this context, even though positive states (e.g., feelings of excitement) can contribute to enhanced self-efficacy (Mills, 2011).

Several variables such as gender or ethnicity are known to contribute to the influence of different sources of self-efficacy. Usher and Pajares (2008) demonstrated that gender differences in the influence of specific sources were often domain-specific; for example, while male students reported more mastery experience in the area of science (Britner & Pajares, 2006), female students showed greater mastery experience in writing (Pajares, Johnson, & Usher, 2007). To study the role of ethnicity, Stevens, Olivárez, and Hamman (2006) compared math self-efficacy and its sources among Hispanic and White students in the 4th to 10th grades. They found that Hispanic students more frequently mentioned access to good models (vicarious experience) as a source of efficacy, with fewer experiences of praise (verbal persuasion) and success (mastery experience) than among White students. In another study, Klassen (2004a) investigated the differential impact of the four sources on mathematics efficacy beliefs among grade 7 Indo-Canadian and Anglo-Canadian students. Vicarious experience and verbal persuasion were significant predictors of mathematics efficacy in Indo-Canadian students but not among Anglo-Canadian students. The results may indicate that self-oriented sources (mastery experience and psychological and affective states) predominated in an individualist cultural group while other-oriented sources (vicarious experience and verbal persuasion) were stronger in a collectivist culture (Klassen, 2004a). Although the above results refer to students' self-efficacy, these findings may also be applicable to teachers.

Over the past decade, much more information has emerged in relation to sources of TSE. In a recent systematic literature review, Morris et al. (2017) found that over half of the studies meeting their search criteria were published between 2010 and 2015. Based on this literature, it is clear that mastery experience is the strongest source of TSE while the other three sources also exert a positive or negative influence (e.g., Bruce & Ross, 2008; Milner, 2002). Although many existing studies provide important insights into the

sources of TSE, Morris et al. (2017) identified several problems and inconsistencies. First, they argue that few scales measure all four sources, and these scales are not psychometrically strong enough. For instance, Poulou's (2007) factor analysis of the sources of TSE among 198 student teachers revealed that the mastery experience and verbal persuasion factors did not separate psychometrically as expected. Morris et al. (2017) suggest that this is also the case in other studies because the four sources mediate and moderate each other's effect on TSE. Additionally, they contended that existing accounts have not dealt with the independent effect on TSE of each hypothesized source (Morris et al., 2017). In a professional development training program designed to influence the four sources of TSE information, Ross and Bruce (2007) found that the program had a positive effect on teachers' beliefs about their ability to manage mathematics classrooms. However, they failed to specify which source of TSE information contributed to the change in participants' efficacy.

Beyond the four sources of TSE, other factors may also contribute. For example, some authors (Morris et al., 2017; Palmer, 2011; Wheatley, 2005; Wyatt, 2014) have suggested that gaining sufficient knowledge in specific areas (e.g., pedagogical, technological and subject-matter knowledge), which Morris et al. (2017) refer to as "mastery of knowledge," may add some variation to TSE. Previous studies have also found that respect and confidence from students and parents can strengthen TSE (Cheung, 2008; Milner, 2002; Milner & Hoy, 2003). Similarly, a sense of collective efficacy, which means teachers' shared perception that the school faculty as a whole is able to produce positive effect on their students by organizing and executing the courses of action, can increase or decrease TSE (Goddard & Goddard, 2001). There may be further sources beyond those referred to here, and there is ongoing discussion as to whether those other factors are independent or form part of the four known sources (e.g., mastery of knowledge may form part of mastery experience) (Morris et al., 2017).

1.2. Cultural context for inclusive education in Japan and Finland

Both the Japanese and Finnish governments have promoted inclusive education in line with the Salamanca Statement (UNESCO, 1994), the Convention on the Rights of Persons with Disabilities (United Nations, 2006), and the 2030 Agenda for Sustainable Development (United Nations General Assembly, 2015). However, the two countries have adopted different approaches based on their unique historical and cultural background. Although the general concept of inclusive education encompasses groups such as children from ethnic minorities, low socioeconomic groups, or otherwise disadvantaged backgrounds (Mitchell, 2005), the Japanese inclusive education model focuses more on supporting children with disabilities (Forlin, Kawai, & Higuchi, 2015; MEXT, 2012). This may be because Japan's highly homogenous society includes fewer immigrants or refugees than other countries (OECD, 2018; Smith, Bond, & Kâğıtçıbaşı, 2006). In addition, it seems that the Japanese education system still relies on the medical model of disability (Ichikawa, 2016), and children who cannot accommodate the demands of mainstream schooling norms are likely to receive "custodial forms of care" (Borovoy, 2008) in separate special schools or classes. In light of the present situation, MEXT (2012) proposed that as many children as possible, regardless of disabilities, should study in regular schools, with special education schools serving as centers to support children, parents, teachers, and school staff and to build community networks. Yet, although the government has set this goal for inclusive education, deficits in appropriate teacher knowledge (Fujii, 2014; Ueno & Nakamura, 2011), pre- and in-service teacher training (Forlin et al., 2015), and collaborative work in schools (Ogiso & Tsuzuki, 2016) continue

to challenge Japan's implementation of inclusive education.

In Finland, the latest significant reforms in relation to inclusive education began with the Strategy of Special Education (Ministry of Education of Finland, 2007). The multi-tiered system of support called "Learning and Schooling Support" was adopted following the Act for Amendment of Basic Education Act in 2010 (Jahnukainen & Itkonen, 2016). This support is mandatory in all schools and comprises three levels: general support, intensified support, and special support (Björn, Aro, Koponen, Fuchs, & Fuchs, 2016; Jahnukainen & Itkonen, 2016). Part-time special education, remedial teaching, and/or guidance are offered for all children who need them in tier 1 (general support). Administrative decisions are required only in tier 3 (special support) if children need long-term support (FNBE, 2016). While the Finnish education system seems to succeed in offering flexible and equal education for every child, some critics have argued that some challenges remain. For example, it has been noted that some students regarded as incapable of attending regular classrooms are instead placed in self-contained special classes or schools, even though tier 3 support can also be organized in full-time inclusive settings through an individual education plan (Jahnukainen, 2011; Kivirauma, Klemelä, & Rinne, 2006). These "segregated tracks" continue beyond post-compulsory education into the individual's adult life (Hakala, Björnsdóttir, Lappalainen, Jóhannesson, & Teittinen, 2018). Another concern is that although municipalities and schools must comply with the Act, authority to organize how special education is delegated to each municipality and school, giving them considerable autonomy in formulating and implementing school curricula (Pesonen et al., 2015). Consequently, special education philosophy and implementation strategies are seen to vary by municipality and even by school (Pesonen et al., 2015).

1.3. Validity of cross-cultural research

In a recent review of the TSE literature, Klassen et al. (2011) concluded that further investigation is essential in different cultural settings, especially in non-North American contexts, to strengthen the validity and generalizability of TSE theory. While cross-cultural research helps to identify interesting similarities and differences across countries, there are some challenges in ensuring valid comparison of different groups. A first major drawback of this approach is that educational concepts such as "inclusive education" or "self-efficacy" may be differently understood in different countries, even when using the same research instruments (Mitchell, 2005). Second, as one element of sociocultural divergence, linguistic differences may affect participants' responses (Jahnukainen, 2015). Finally, cultural differences such as individualism or collectivism may influence both study results and participants' response style. Several theories of cultural dimensions have been proposed (e.g., Hall, 1976; Hofstede, 2001; Schwartz, 1999); more specifically, previous studies have explored how living in an individualist or collectivist culture influences definitions of "self" (Klassen, 2004b; Markus & Kitayama, 1991). An individualist culture is characterized by an emphasis on "I" consciousness and the independence of groups to which a person belongs (e.g., family, organization, nation). In collectivist culture, on the other hand, high value is placed on "we" consciousness and group interdependence (Hofstede, 2001; Markus & Kitayama, 1991).

The additional perspective of horizontal and vertical cultures has further enhanced understanding of the different kinds of individualism and collectivism (Triandis, 2001). While a horizontal culture emphasizes equality, a vertical culture is characterized by hierarchy; together, these generate the four dimensions of horizontal individualism, horizontal collectivism, vertical individualism, and vertical collectivism (Triandis, 2001). Of the two

countries in this study, Japan can be characterized as a vertical collectivist culture, in which people regard group superiority as important (Spielberger, 2004). Finland can be understood as a culture of horizontal individualism, emphasizing the equality of all people and each person's uniqueness (Triandis, 2001). As one example of the possible cultural contingency of participants' response style, "modesty bias" is assigned greater weight in the collectivist culture of East Asian countries (including Japan), where it is preferable to present oneself as average within a group. This is likely to result in lower scores on such measures as self-esteem and self-efficacy (Kagitçibasi, 1997; Markus & Kitayama, 1991; Vieluf, Kunter, & van de Vijver, 2013), even though Finnish people consider modesty to be one of their national virtues (Nishimura, Nevgi, & Tella, 2008).

Although it is impossible to completely eliminate such influences, measurement invariance is commonly tested to determine whether the same constructs are being measured in independent groups (Chen, Sousa, & West, 2005). While some TSE studies have tested cross-cultural measurement invariance (e.g., Brouwers & Tomic, 2001; Klassen et al., 2009; Yada et al., 2018), measurement invariance has not yet been investigated in relation to the sources of TSE in different countries.

1.4. Research questions

While a number of previous studies have investigated TSE for inclusive practices, only a few have examined the sources of TSE for inclusive practices, and still fewer have compared the sources of TSE across different cultural contexts. The aim of the present study was to measure all four sources of TSE for inclusive practices in two countries with differing cultural and historical backgrounds. In addition, this is the first study to use a psychometrically developed scale to examine the relationships between the four sources and TSE for inclusive practices, and in particular whether each source contributes uniquely to TSE. To that end, the study addressed the following research questions.

(1) Do the two scales used in this study measure the same constructs of TSE and sources of efficacy in both Japan and Finland?
(2) How do the four sources of self-efficacy predict TSE, and what is their individual contribution in predicting TSE in Japan and Finland?

Based on previous findings (Bandura, 1997; Klassen, 2004a; Tschannen-Moran & Hoy, 2007; Usher & Pajares, 2008), we formulated the following hypotheses in relation to the second research question.

Hypothesis 1. Mastery experience is the most influential source of TSE for inclusive practices in both Japan and Finland.

Hypothesis 2. The self-oriented sources of TSE (mastery experience and psychological and affective states) are more influential in Finland, which is a more individualist culture, while the other-oriented sources (vicarious experience and verbal persuasion) are more influential in Japan, which is a collectivist culture.

2. Method

2.1. Participants and procedure

The participants in the current study were in-service teachers working in primary and/or lower secondary schools in Japan and Finland. Teachers' participation was voluntary, and participants were informed by letter about the purposes of the research, data confidentiality, and their right to withdraw at any time. The schools represent a convenience sample of those that agreed to participate in the study.

The Japanese sample ($N = 261$) was collected from schools in western Japan in 2017. Hard copies of the questionnaire were distributed at each school, and the researcher visited the school to collect these on completion.

The Finnish sample ($N = 1123$) was drawn in the first phase of the ProKoulu project (2013—2014) from schools in the eastern part of Finland. The project, which ran from 2013 to 2016, investigated how school-wide positive behavior support works at school level. An online survey strategy was adopted for the Finnish component. Details of participants from both countries are presented in Table 1. In both cases, gender ratio and mean age were close to those of the general population of teachers (MEXT, 2017; OECD, 2013). Regarding to gender ratio, 11.0% in Finland and 0.4% in Japan had missing data in this variable.

2.2. Measures

TSE for inclusive practices was measured using the 18-item Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma, Loreman, & Forlin, 2012), which was developed specifically to measure this construct. Six items measure participants' *efficacy in instruction* (e.g., "I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated"). Six further items measure *efficacy in collaboration* (e.g., "I am confident in my ability to get parents involved in school activities of their children with disabilities" and "I am able to work jointly with other professionals and staff (e.g., aides and other teachers) to teach students with disabilities in the classroom"). The remaining six items measure *efficacy in managing behavior* (e.g., "I am able to calm a student who is disruptive or noisy"). TEIP items were originally scored from 1 (*Strongly Disagree*) to 6 (*Strongly Agree*), and the same Likert scale was adopted for the Japanese data. However, the Finnish data used a nine-point Likert scale ranging from 1 (*Not at all*) to 9 (*Very much*) and the reason for this transformation was to maintain consistency with other scales used in the larger study where the Finnish data of this study was taken from. Thus, to ensure that the both data were comparable, for the purposes of this study, we transposed TEIP scores from both data sets to match to a range between 0 and 1, where 0 indicates the lowest TEIP score and 1 indicates the highest. This was done by subtracting one from each score and dividing the result by five (for 6-point scores) or by eight (for 9-point scores)—that is, $(X\text{-}1)/(n\text{-}1)$. The TEIP scale was earlier validated in Japan by Yada and Savolainen (2017), and in Finland by Savolainen et al. (2012).

The sources of TSE were assessed using the Sources of Teacher Self-Efficacy (STSE) scale, which was developed as part of the ProKoulu project in Finland (Malinen, 2014). The scale comprises 16 items exploring the extent to which the four sources have affected

Table 1
Participant background information.

	Japan	Finland
Gender	Female 60.5%	Female 65.9%
	Male 39.1%	Male 23.1%
Mean age (SD)	39.82 (11.49)	45.19 (9.43)
School type (Grade)	Primary school (1—6) 57.5%	Primary (1—6) or comprehensive (1—9) school 65.0%
	Lower secondary school (7—9) 42.5%	Lower secondary school (7—9) 35.0%

participants' perceptions of their capabilities in each of the four teaching domains (instruction, behavior management, collaboration, and student engagement). The items can be divided into four subscales: a) mastery experience; b) vicarious experience; c) verbal persuasion; and d) affective state. A Likert-type scale ranging from 1 (*Not at all*) to 9 (*Very much*) was used in both countries.

The TEIP scale had already been translated into Japanese and Finnish in previous studies (Savolainen et al., 2012; Yada & Savolainen, 2017). As the STSE scale was originally written in Finnish, the researchers first translated it into English and then into Japanese. The Japanese version of the STSE scale was sent to translators for proofreading, and any changes were carefully discussed with the researchers.

2.3. Statistical analysis

Statistical analysis was performed using Mplus software (version 7) for Mac (Muthén & Muthén, 2012). Using the MLR estimator function, model parameters were estimated with robust standard error and scale corrected chi-square values using the maximum likelihood method of full information. Missing values accounted for 1.1% of the Japanese data and 1.3% of the Finnish data. The Missing At Random (MAR) option was applied to handle missing values where full information was utilized without imputing the missing values. As the likelihood ratio test is known to be sensitive to sample size (MacCallum, Browne, & Cai, 2006), model fit was evaluated using a two-index strategy (Hu & Bentler, 1999), in which a cutoff value close to 0.06 for Root Mean Square Error of Approximation (RMSEA) and 0.08 for Root Mean Squared

Residual (SRMR) indicates a good fit of model. In addition, a Comparative Fit Index (CFI) close to 0.95 was used for reference.

Utilizing Structural Equation Modeling (SEM), the analysis consisted of two main stages. In the first stage, measurement invariance was tested for both scales to answer research question 1. In the first step, theoretically driven Multi-Group Confirmatory Factor Analysis (MGCFA) was performed for the TEIP and STSE scales. As the STSE scale's unique structure assesses the extent to which the four sources affect teachers' capabilities in the four teaching domains, items that belong to the same teaching domain show a high correlation when MGCFA is performed only for the source factors. To resolve this problem, we applied a Multi-Trait Multi-Method (MTMM) design (Campbell & Fiske, 1959), in which the four sources served as trait factors, and the four teaching domains were treated as method factors. As can be seen from the hypothesized model (Fig. 1), each observed variable loaded onto both trait and method factors, and the correlations between trait and method factors were set to zero (Byrne, 2013). The model enabled partialing out of the covariance between the method factors, and only the variance related to source factors remained for further analysis. Following implementation of the freely estimated models for both scales, some error covariances between items were added for the TEIP scale as suggested by modification indices to improve the model. In the second step, factor loadings were set as equal between groups to test metric invariance. Changes in RMSEA (ΔRMSEA) were used to evaluate invariance among different consecutive models. According to Chen (2007), a change of less than 0.015 in RMSEA indicates model invariance. In the third step, scalar invariance was tested by setting factor loadings and
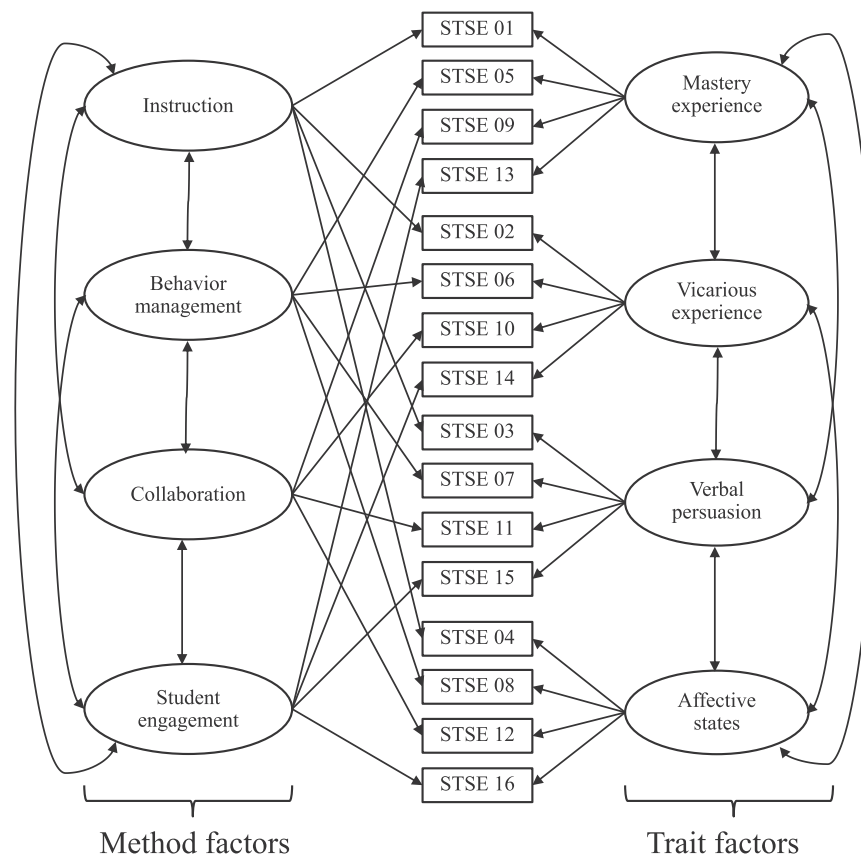

Fig. 1. Hypothesized MTMM model for STSE scale.

intercepts as equal across the two groups. Previous studies have shown that a second-order factor model is applicable to the TEIP scale because of the high correlations between primary factors (Malinen et al., 2013; Yada et al., 2018). For that reason, the next step was a no-constraint second-order factor model, with *efficacy in instruction*, *efficacy in collaboration*, and *efficacy in managing behavior* as the lower order factors. In the final step, the factor loadings were set as equal for the second-order factors in order to determine whether there was metric invariance between groups.

The second stage of analysis addressed research question 2; in this stage, the Japanese and Finnish data were analyzed separately. As the latent factors of the four sources were highly correlated, the Cholesky decomposition (de Jong, 1999) was employed to determine the unique contribution to TSE of those latent factors. This approach addresses the problem of multicollinearity utilizing a hierarchical regression analysis conducted in SEM (de Jong, 1999). More specifically, the four Cholesky factors partitioning the variance of the latent factors were entered into the regression model in a pre-determined order, and the Cholesky factor inserted lastly into the model represented the unique contribution of that factor to TSE (See Fig. 2 for an example of the Cholesky decomposition model where *affective states* was inserted lastly into the model.).

3. Results

3.1. Testing measurement invariance

The first stage assessed the theoretically driven MGCFA model for the TEIP scale and the MTMM model for the STSE scale. All factor loadings for TEIP primary factors and STSE trait factors were statistically significant in both Japan and Finland. Table 2 below summarizes the results of model fit indices from less constrained to stricter model. First, the freely estimated model (Model 1) yielded a sufficient fit (RMSEA = 0.038; SRMR = 0.041; CFI = 0.957). Second, metric invariance was investigated (Model 2), and the model was found to exhibit adequate fit (RMSEA = 0.042; SRMR = 0.066;

CFI = 0.946). The change in RMSEA between the no-constraint Model 1 and the constrained Model 2 was acceptable (|ΔRMSEA| = 0.004). Third, to test scalar invariance, the factor loadings and intercepts were set as equal between groups. Model 3 showed acceptable fit (RMSEA = 0.046, SRMR = 0.072, and CFI = 0.933), with no great difference in RMSEA between this and the less constrained Model 2 (|ΔRMSEA| = 0.004). The results indicate adequate invariance in the constructs, confirming the international validity of the two scales. As the three primary factors of the TEIP scale were highly correlated, the next step examined the second-order factor model. All three of the first-order factors had statistically significant factor loadings with the second-order factor in both groups. Based on previous studies (Malinen et al., 2013; Yada et al., 2018), the second-order factor was named General Teacher Self-Efficacy for inclusive practices (GTSE). The freely estimated Model 4 with second-order factor achieved an acceptable fit (RMSEA = 0.047; SRMR = 0.073; CFI = 0.926), and there was no great change in RMSEA between Model 3 and Model 4 (|ΔRMSEA| = 0.001). Next, factor loadings of the second-order factor were set as equal across countries. The metric invariance model of second-order factor (Model 5) achieved acceptable fit (RMSEA = 0.048; SRMR = 0.075; CFI = 0.925), supplemented by a change of 0.001 in RMSEA when compared with the less constrained Model 4. The results support metric invariance of second-order factors between Japan and Finland, indicating that the two scales used in this study measure the same constructs in both countries.

3.2. Comparing the effect of four sources of self-efficacy on TSE

In the second stage, Cholesky regression models were conducted separately in Japan and Finland to address the second research question. First, measurement models with all variables were analyzed. Standardized loadings of the first and second factors for the TEIP scale ranged from 0.56 to 0.98 for Japan and from 0.52 to 0.84 for Finland (all *p* < .001). The STSE scale trait factors
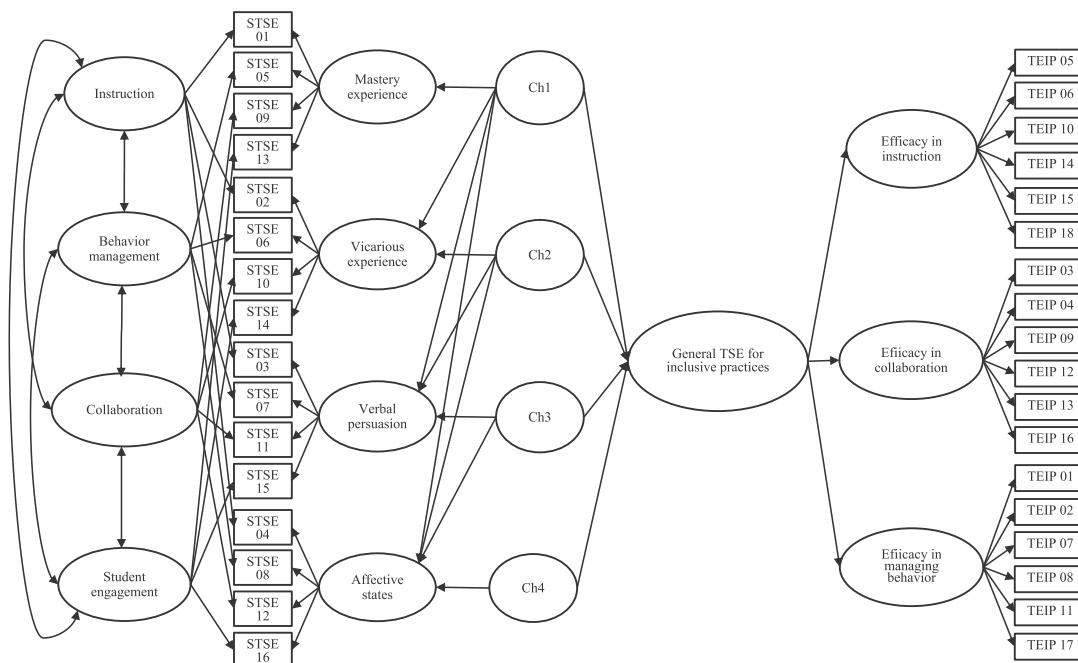

Fig. 2. Example of the Cholesky decomposition model (order 1 in Tables 4 and 5).

Table 2
Test of measurement invariance for the multi-group measurement model.

Model	Explanation	Overall Fit Indices						Comparative Fit Indices	Model Comparison
		χ^2	df	p	RMSEA	SRMR	CFI	|ΔRMSEA|	
1	Freely estimated	1880.095	936	<.001	0.038	0.041	0.957	–	–
2	Factor loadings equal	2166.251	983	<.001	0.042	0.066	0.946	0.004	1 vs. 2
3	Factor loadings and intercepts equal	2461.590	1006	<.001	0.046	0.072	0.933	0.004	2 vs. 3
4	Factor loadings and intercepts equal for first-order factors Freely estimated for second-order factor	2657.631	1038	<.001	0.047	0.073	0.926	0.001	3 vs. 4
5	Factor loadings and intercepts equal for first-order factors Factor loadings equal for second-order factor	2667.706	1040	<.001	0.048	0.075	0.925	0.001	4 vs. 5

showed statistically significant loadings ranging from 0.44 to 0.80 for Japan and from 0.63 to 0.84 for Finland (all $p < .001$). Table 3 shows correlations among the five latent factors in both countries. As correlations between the four factors of the STSE scales were medium to high, the Cholesky decomposition was used to avoid multicollinearity. Tables 4 and 5 below show the results of the Cholesky regression models for Japan (Table 4) and Finland (Table 5). The models provided an acceptable fit for both Japanese (RMSEA = 0.054; SRMR = 0.071; CFI = 0.929) and Finnish data (RMSEA = 0.038; SRMR = 0.043; CFI = 0.952).

The total R-squared values in Tables 4 and 5 indicate the extent to which the four sources of self-efficacy explain the variance in GTSE. The results show that the four sources of self-efficacy explained 54% of the variance in Finland but only 15% in Japan.

The first hierarchical regression models (Order 1 in Tables 4 and 5) investigated the unique contribution of "Affective States (AS)" on GTSE while controlling for the other three sources. "Mastery Experience (ME)" alone significantly predicted GTSE ($\beta = 0.36$, $p < .001$ for Japan and $\beta = 0.68$, $p < .001$ for Finland). Regarding the unique effect, AS did not account for additional variance in either Japan or Finland when the other three sources were controlled for.

The second hierarchical regression models (Order 2 in Tables 4 and 5) addressed the unique contribution of ME while controlling for the other three sources. The results indicate that "Vicarious Experience (VE)" alone predicted GTSE ($\beta = 0.23$, $p < .05$ for Japan and $\beta = 0.41$, $p < .001$ for Finland). In addition, ME accounted for unique variance in GTSE while the other three sources were controlled for ($\beta = 0.24$, $p < .01$ for Japan and $\beta = 0.35$, $p < .001$ for Finland), with a 6% increase in the explanation rate for Japan and a 12% increase for Finland.

The third hierarchical regression models (Order 3 in Tables 4 and 5) examined the unique contribution of VE while controlling for the other three sources. The results showed that "Verbal Persuasion (VP)" alone predicted GTSE in Finland ($\beta = 0.49$, $p < .001$) but not in Japan. There was no unique effect of VE on GTSE in either country.

The fourth hierarchical regression models (Order 4 in Tables 4 and 5) assessed the unique contribution of VP while controlling for the other three sources. AS alone predicted GTSE for both countries ($\beta = .24$, $p < .01$ for Japan and $\beta = 0.58$, $p < .001$ for Finland). Additionally, VP accounts for different degrees of unique

Table 3
Correlations of latent factors.

	1	2	3	4	5
1. Mastery experience (ME)	–	0.561***	0.530***	0.626***	0.360***
2. Vicarious experience (VE)	0.350***	–	0.837***	0.502***	0.227*
3. Verbal persuasion (VP)	0.369***	0.718***	–	0.553***	0.137
4. Affective states (AS)	0.720***	0.349***	0.460***	–	0.236**
5. GTSE	0.683***	0.409***	0.491***	0.593***	–

Notes: *$p < .05$, **$p < .01$, ***$p < .001$. Correlations from the Japanese data are in the upper diagonal; correlations from the Finnish data are in the lower diagonal.

variance in GTSE in Japan and Finland. For the Finnish sample, VP showed a unique positive contribution on GTSE ($\beta = .15$, $p < .001$) while the other three sources were controlled, yielding a 2% increase in explanation rate. On the other hand, the results for VP independent of the other three sources indicate a significant negative relationship between VP and GTSE ($\beta = -.14$, $p < .05$) in Japan, yielding a 2% increase in explanation rate. In other words, while VP alone was not associated with GTSE, higher VP scores predicted lower GTSE in Japan when ME, VE, and AS were taken into account. Lubin (1957) broadly explained Horst et al (1941) definition of suppressor variable as subtracting some variance from a predictor, usually having a positive correlation with the predictor and zero correlation with a dependent variable. As these conditions were fulfilled, the results can be understood as a suppression effect but may also have happened by chance according to MacKinnon, Krull, and Lockwood (2000). For that reason, the results must be interpreted with caution.

In summary, the results show that ME had the strongest independent relationship with TSE in both countries, supporting Hypothesis 1. As there was no unique contribution from AS and VE in either country, Hypothesis 2 was not supported. However, the results suggest a possible difference between the two countries in terms of how VP affects GTSE.

4. Discussion

The first research question sought to determine whether the two scales used in this study, the TEIP and the STSE, measure the same constructs in both Japan and Finland. The scalar invariance for the first-order factor model and the metric invariance for the second-order factor model were achieved using MGCFA. These results confirm that the construct validity of the two scales is invariant across the two countries. A further important finding regarding scale validity was that the MTMM analysis confirmed that the newly developed STSE scale performed well psychometrically. As mentioned in the literature review, few existing scales meet this standard or measure all four sources of TSE (Morris et al., 2017), and our findings confirm the utility of this new tool for measuring and analyzing the sources of TSE in future research.

The second research question sought to identify how the sources of self-efficacy affect TSE in both countries. This is the first study to use the Cholesky decomposition approach to explore the independent effects of these sources on TSE. The analysis revealed medium to high correlations between the source factors, indicating that the four sources overlap or mediate each other. This finding aligns with Bruce and Ross (2008) finding that TSE is affected by the sources in combination. Because the four sources are themselves highly correlated, the issue of multicollinearity arose when conducting a multiple regression analysis in the SEM. However, the approach adopted enabled us to address this issue and to identify the unique contribution of each source.

Hierarchical regression models using the Cholesky

Table 4
Hierarchical regression analysis predicting GTSE in Japan ($n = 261$).

SIP	β	Hierarchical Regression Analysis											
		Order 1	β	ΔR^2	Order 2	β	ΔR^2	Order 3	β	ΔR^2	Order 4	β	ΔR^2
Mastery experience (ME)	0.34***	ME	0.36***	0.13	VE	0.23*	0.05	VP	0.14	0.02	AS	0.24**	0.06
Vicarious experience (VE)	0.24	VE	0.03	0.00	VP	−0.10	0.01	AS	0.19*	0.04	ME	0.27***	0.07
Verbal persuasion (VP)	−0.27*	VP	−0.14	0.02	AS	0.18*	0.03	ME	0.28***	0.08	VE	0.03	0.00
Affective states (AS)	0.06	**AS**	**0.04**	**0.00**	**ME**	**0.24****	**0.06**	**VE**	**0.12**	**0.02**	**VP**	**−0.14***	**0.02**
Total R^2	0.15			0.15			0.15			0.15			0.15

Notes: *p < .05, **p < .01, ***p < .001. SIP = simultaneous inclusion of predictors in the regression model; $\Delta R2$ = incremental proportion of variance described in GTSE. The variables inserted lastly into the models and making a unique contribution are shown in bold.

Table 5
Hierarchical regression analysis predicting GTSE in Finland ($n = 1123$).

SIP	β	Hierarchical Analysis											
		Order 1	β	ΔR^2	Order 2	β	ΔR^2	Order 3	β	ΔR^2	Order 4	β	ΔR^2
Mastery experience (ME)	0.51***	ME	0.68***	0.47	VE	0.41***	0.17	VP	0.49***	0.24	AS	0.59***	0.35
Vicarious experience (VE)	0.02	VE	0.18***	0.03	VP	0.28***	0.08	AS	0.41***	0.17	ME	0.37***	0.14
Verbal persuasion (VP)	0.24***	VP	0.18***	0.03	AS	0.41***	0.17	ME	0.35***	0.13	VE	0.16***	0.03
Affective states (AS)	0.11	**AS**	**0.07**	**0.01**	**ME**	**0.35****	**0.12**	**VE**	**0.02**	**0.00**	**VP**	**0.16****	**0.02**
Total R^2	0.54			0.54			0.54			0.54			0.54

Notes: *p < .05., **p < .01., ***p < .001. SIP = simultaneous inclusion of predictors in the regression model; $\Delta R2$ = incremental proportion of variance described in GTSE. The variables inserted lastly into the models and making a unique contribution are shown in bold.

decomposition revealed that ME was an independent source and the most powerful in relation to TSE for inclusive practices in both Japan and Finland. This is consistent not only with Hypothesis 1 but also with Bandura (1997) and other previous studies (Bruce & Ross, 2008; Milner, 2002).

The second source that made a unique contribution to GTSE in both countries was VP, although the effect was negative in Japan. These results are in agreement with Milner (2002) findings, which showed that verbal feedback from students, parents, and colleagues was indispensable for TSE. This significant effect of VP in Finland appears to contradict the TALIS results, in which 91.9% of Finnish teachers reported that they had never had formal appraisal by other teachers, and fewer teachers than the OECD average reported having received feedback by the following methods: (a) classroom observation (46.2%); (b) student surveys (26.2%); (c) assessment of teacher's content knowledge (25.9%); (d) analysis of student test scores (27.6%); (e) self-assessment of teacher's work (20.8%); and (f) surveys or discussion with parents (37.4%) (OECD, 2014). However, the TALIS study is limited in that it asks only about the above types of feedback, which might take other forms. In Finland, for example, teachers receive feedback through "individual developmental dialogue" with school leaders (OECD, 2014). Correspondingly, as there are no nationally regulated frameworks for teacher evaluation in Finland, teachers may receive informal feedback from colleagues rather than formal appraisal (OECD, 2014). What we wish to underscore here is that while these measures reflect the perceived influence of verbal persuasion on TSE, this does not mean that more verbal persuasion would necessarily lead to higher TSE. Rather, as mentioned earlier, the effectiveness of verbal persuasion depends both on who delivers it and how it is delivered. Engelbrecht, Savolainen, Nel, Koskela and Okkolin (2017) contend that Finnish schools have a "well-developed learning support network," where teachers can receive daily (and mostly positive) feedback from colleagues, as well as from teachers specifically trained in special needs education. Further work is required to explore how such messages are framed and what kind of relationship exists between teachers and other staff in Finnish schools.

In contrast, the results suggest that VP had a negative effect on GTSE in Japan. This may be explained in part by the fact that Japanese teachers received feedback from principals (75.2%) and from the school management team (64.5%) more often than the OECD average (principals: 54.3%, school management team: 49.3%) (OECD, 2014). In a related vein, Tokyo Metropolitan School Personnel in Service Training Center (2007) conducted a survey of novice teachers and reported that only about 35% of those working in primary schools considered advice from principals and school management team to be helpful for problem solving and self development. As mentioned above, the role of verbal persuasion in enhancing TSE depends crucially on the relationship between group members and how the message is delivered (Morris et al., 2017). In light of Japan's hierarchical society (Nishimura et al., 2008) and its teacher evaluation system (MEXT, 2014), it seems probable that verbal persuasion delivered by a principal or by a member of the school management team is seen as a formal appraisal for the purpose of teacher evaluation rather than as positive feedback to improve classroom teaching, especially among younger teachers. This does not mean, however, that Japanese teachers receive no positive feedback at school. For example, there is evidence that about 80% of the novice teachers found advice from colleagues and mentors helpful when they encountered difficulties (Tokyo Metropolitan School Personnel in Service Training Center, 2007). This confirms the importance of how persuasive messages are framed; as some researchers have suggested, opportunities to receive positive and constructive feedback based on "collegiality" (Little, 1982) may be essential for Japanese teachers (Goto, 2014; Tsukiyama, 2006).

Although the correlation of VE and AS with GTSE was small for the Japanese data and medium to high for the Finnish data, VE and AS made no unique contribution to GTSE, and Hypothesis 2 was not supported. These results may indicate that the two sources (vicarious experience and psychological and affective states) do not independently or directly predict TSE for inclusive practices but instead mediate or moderate the other sources that affect TSE. In relation to the independent contribution of vicarious experience to self-efficacy, previous studies have reported inconsistent results. While some researchers have argued for a predictable relationship between vicarious experience and self-efficacy (Klassen, 2004b; Matsui, Matsui, & Ohnishi, 1990), others have found no such

relationship (Anderson & Betz, 2001; Gainor & Lent, 1998). One possible explanation for this inconsistency may be that the effect of vicarious experience on self-efficacy is highly dependent on contextual factors such as the characteristics and relationships of group members (Bandura, 1997; Usher & Pajares, 2008). In the present context, the result may reflect (a) the difficulty of finding a role model in their own school with similar ability and personal attributes or (b) the lesser impact of vicarious experience on TSE at this developmental stage, where teachers have already established their own professional identity. Another contextual explanation could be related to the findings in the previous studies that vicarious experience may be more influential when the task is novel and the achievement goal is uncertain (Bandura, 1997; Chen & Usher, 2013) and/or during transitional periods (e.g., when children are moving from primary to lower secondary school) (Eccles, Midgley, & Adler, 1984; Usher & Pajares, 2008). For this reason, it seems possible that vicarious experience have some impact on TSE for inclusive practices because the concept of inclusive education is relatively new for teachers in both countries, and they are in a period of transition from separate special education to inclusive education. On that basis, another possible explanation, echoing Morris et al. (2017), is that teachers have insufficient opportunities to observe their colleagues, so limiting the influence of vicarious experiences on TSE. This view finds support from the OECD (2014) TALIS study, which reported that only 5.1% of Finnish teachers and 29.8% of Japanese teachers indicated having participated in mentoring and peer observation in the previous 12 months. One means of increasing teachers' daily opportunities to observe and learn from their school colleagues is to implement co-teaching (Roth, Masciotra, & Boyd, 1999). Although this practice is increasing in Finland, the method is more frequently used by resource room and special class teachers (Saloviita & Takala, 2010). Among general education teachers, co-teaching still appears to be used less frequently (Saloviita & Takala, 2010). In contrast, the concept of "co-teaching" is not widely known in Japan, although the term "team teaching" is often used and implemented, and people sometimes use these terms interchangeably (Yamasaki, 2013). Further research should investigate how often teachers observe other teachers and how vicarious experience affects TSE for inclusive practices.

In relation to affective and psychological states, our results align with Poulou (2007), who showed that affective state is not itself a predictor of self-efficacy but rather mediates self-efficacy through cognitive processes. In the present study, this can perhaps be explained as a methodological problem; the items related to affective states required participants to indicate the extent to which "the feelings teaching has aroused" affected their beliefs about their teaching ability in each domain, which may seem too vague a question, especially as the influence of affective and psychological states is not episodic but ongoing (Morris et al., 2017). For that reason, future studies should ask more directly about specific states and how they affect particular aspects of TSE.

A final important finding is that the four sources explained only 15% of the variance of GTSE in the Japanese sample but explained 54% in the Finnish sample. This suggests that other sources of TSE for inclusive practices may exert a more powerful influence in Japan. There are some variables which could be other sources of TSE based on previous studies. For instance, Morris et al. (2017) demonstrated that teachers' content and pedagodical knowledge can improve their sense of self-efficacy, even though there is ongoing discussion whether the mastery of knowledge is an original source of TSE or derived from the identified four sources of self-efficacy. It has been suggested that the Japanese teachers reported considerable anxiety about implementing inclusive education because of the lack of knowledge and skills (Ueno & Nakamura, 2011). Thus, the mastery of knowledge regarding inclusive

education might add some variation to Japanese teachers' self-efficacy for inclusive practices. Another possible variable is a sense of collective efficacy in the school where teachers work. Goddard and Goddard (2001) found a significant positive relationship between TSE and collective efficacy and indicated that social influence shapes TSE considering Bandura (1997) social cognitive theory. As previously noted, group harmony and "we" consciousness are highly important in collectivist culture (Hofstede, 2001; Markus & Kitayama, 1991), it is most probable that collective efficacy has stronger impact on TSE in Japanese context. Furthermore, in an open-ended questionnaire-based survey of teachers in Shanghai, Cheung (2008) found that students' and parents' confidence or respect was one of the most commonly cited factors contributing to TSE. This may be also the case in Japan because, in general, shinyo ("trustworthiness") is central to Japanese social morality (Lebra, 1976), and sonkei ("respect for others") is positively associated with affirmation of self-other relationships (Markus & Kitayama, 1991). As the confidence or respect of others can be broadly regarded as verbal persuasion, further research is needed on sources of TSE in non-Western contexts.

5. Limitations and future research

The aims of the present study were to test the construct validity of two scales and to examine the unique contribution of each of the four sources of TSE for inclusive practices. The findings reported here shed new light on how to measure and analyze the sources of TSE. In addition, although the results did not support Hypothesis 2, we were able to confirm that mastery experience is the most essential source of TSE for inclusive practices in both Japan and Finland, and that verbal persuasion may work differently in these differing ethnic contexts. While the findings contribute in a number of ways to the existing literature, the study has some limitations. The first of these is the generalizability of these results; for instance, both datasets were collected using convenience sampling, especially the Japanese sample, which included teachers from only one region. Moreover, the observed negative effect of VP on GTSE in the Japanese data should be interpreted with caution, as there remains a possibility that this result was a matter of chance. Further studies involving more samples from the same population are needed to assess the generalizability of these results. Similarly, differences between the sample sizes and data collection periods in Japan and Finland may adversely affect the comparability of these data, and future research should be designed to gather a similar volume of data at the same time point.

A second limitation relates to the nature of the STSE scale. For example, the VE items in the present study asked participants to rate the extent to which "observations on other teachers having done well" affected their own abilities in the different teaching domains. However, according to Bandura (1997, pp. 93–95), "symbolic modeling" and "self-modeling" that utilizes recent technologies may be a source of vicarious information, as asking such questions may confine participants' reports to specific types of experience (Morris et al., 2017). In addition, the VE items did not ask whom they observed, what characteristics the model had and what kind of relationships the participant had with the model. As previously noted, those contextual factors are highly related to effect of vicarious experience (Bandura, 1997; Usher & Pajares, 2008). Thus, further studies, which take these variables into account, will need to be undertaken to find what characteristics are most relevant to teachers and how they capture the information about the characteristics in different countries. Similarly, the VP items used here did not specify from whom (e.g., colleagues, students, parents) comments were provided, and the AS items did not ask whether their feelings were positive or negative. Overall, despite

confirmation of its sound psychometrics, the STSE scale may need to be modified in order to more accurately measure TSE sources and their various facets.

A third limitation of this study was that the mediating and moderating effects of the four sources on TSE were not addressed. Although our findings support previous research indicating that the four sources affect TSE in combination rather than independently (Bandura, 1997; Bruce & Ross, 2008; Morris et al., 2017), we did not examine mediating and moderating effects because of the complexity of the SEM model. To develop a fuller picture of the sources of TSE, further investigation of their interaction would be worthwhile, perhaps using a longitudinal research design.

Finally, our findings revealed that other sources may influence TSE for inclusive practices, especially in the case of Japanese teachers. As other sources that might predict TSE remain under specified, mixed methods research based on sequential exploratory design (Creswell & Plano Clark, 2007) may provide a deeper and more detailed understanding.

6. Practical implications and conclusion

Notwithstanding the above limitations, the present findings have several practical implications. First of all, as the study confirms that mastery experience is the most powerful source of TSE for inclusive practices in both Japan and Finland, both governments should organize in-service and pre-service teacher training programs that will enable teachers to broaden their mastery experience in certain teaching domains. In particular, pre-service teacher education programs should provide opportunities to gain mastery experience through teaching practice so that novice teachers can enter this demanding job with confidence in their ability to implement inclusive education provisions. In addition, although no evidence was found that VE makes any independent contribution, this may be because teachers have limited opportunities to observe

relevant role models. TSE may therefore be enhanced by providing more opportunities for modeling others, as well as for symbolic modeling and self-modeling, in both pre-service and in-service training programs. Finally, our findings suggest that verbal persuasion may have either positive or negative effects on TSE for inclusive practices, depending on the school context. As Finland's school learning support networks seem to enable teachers to receive persuasive information in a positive way (Engelbrecht et al., 2017), it would be worthwhile to explore the nature of these learning networks and how they work in Finnish schools and to utilize these insights to improve school working environments in other countries.

In sum, the present study confirmed the construct validity of the two scales in both Japan and Finland as a prerequisite for meaningful comparison. The cross-cultural analysis revealed interesting similarities and differences in terms of how the four sources of self-efficacy contribute to TSE for inclusive practices based on cultural and historical background. The reciprocal relationship between self (internal personal factors and behaviors) and society (external environment) outlined in Bandura's social cognitive theory (1997) makes it necessary for self-efficacy researchers to take contextual factors into account. Cross-cultural studies therefore offer useful insights into both the sources of self-efficacy and the development of TSE for inclusive practices, which will influence teachers' behavior to implement inclusive education.

Acknowledgements

Appendix

The Sources of Teacher Self-Efficacy (STSE) scale

Evaluate how much the following factors have affected your view of your own abilities on four different aspects of work as a teacher.
Instructions: You can select any one of nine alternatives, which range between (1) "Not at all" and (9) "Very much". Option (5) "To some extent" represents the middle point between the two extremes.

1. Teaching learning contents (e.g. ability to plan learning assignments that are challenging enough for students, ability to assess students' understanding). How much have the following affected your view on these abilities:

		Not at all		Slightly		To some extent		Moderately		Very much
1.1.	My own experiences on how well I have succeeded/done	1	2	3	4	5	6	7	8	9
1.2.	My observations on other teachers having done well	1	2	3	4	5	6	7	8	9
1.3.	Comments on my work that I have received from other people	1	2	3	4	5	6	7	8	9
1.4.	The feelings teaching has aroused	1	2	3	4	5	6	7	8	9

2. Classroom management and behavior management of individual students (e.g. ability to calm and prevent disruptive behaviors, ability to get students to follow classroom rules). How much have the following affected your view on these abilities:

		Not at all		Slightly		To some extent		Moderately		Very much
2.1.	My own experiences on how well I have succeeded/done	1	2	3	4	5	6	7	8	9
2.2.	My observations on other teachers having done well	1	2	3	4	5	6	7	8	9
2.3.	Comments on my work that I have received from other people	1	2	3	4	5	6	7	8	9
2.4.	The feelings teaching has aroused	1	2	3	4	5	6	7	8	9

3. Collaboration (e.g. ability to collaborate with families of students, ability to with other professionals in the school, ability to work with professionals outside of school). How much have the following affected your view on these abilities:

		Not at all		Slightly		To some extent		Moderately		Very much
3.1.	My own experiences on how well I have succeeded/done	1	2	3	4	5	6	7	8	9
3.2.	My observations on other teachers having done well	1	2	3	4	5	6	7	8	9
3.3.	Comments on my work that I have received from other people	1	2	3	4	5	6	7	8	9
3.4.	The feelings teaching has aroused	1	2	3	4	5	6	7	8	9

4. Supporting students' school motivation (e.g. ability to motivate students who show little interest in school work, ability to support students beliefs in their own abilities). How much have the following affected your view on these abilities:

		Not at all		Slightly		To some extent		Moderately		Very much
4.1.	My own experiences on how well I have succeeded/done	1	2	3	4	5	6	7	8	9
4.2.	My observations on other teachers having done well	1	2	3	4	5	6	7	8	9
4.3.	Comments on my work that I have received from other people	1	2	3	4	5	6	7	8	9
4.4.	The feelings teaching has aroused	1	2	3	4	5	6	7	8	9

References

Anderson, S. L., & Betz, N. E. (2001). Sources of social self-efficacy expectations: Their measurement and relation to career development. *Journal of Vocational Behavior, 58*(1), 98—117. https://doi.org/10.1006/jvbe.2000.1753.

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. https://doi.org/10.1080/08856250210129056.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191—215. https://doi.org/10.1037/0033-295X.84.2.191.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: Freeman.

Björn, P. M., Aro, M. T., Koponen, T. K., Fuchs, L. S., & Fuchs, D. H. (2016). The many faces of special education within RTI frameworks in the United States and Finland. *Learning Disability Quarterly, 39*(1), 58—66. https://doi.org/10.1177/0731948715594787.

Borovoy, A. (2008). Japan's hidden youths: Mainstreaming the emotionally distressed in Japan. *Culture, Medicine and Psychiatry, 32*(4), 552—576. https://doi.org/10.1007/s11013-008-9106-2.

Britner, S. L., & Pajares, F. (2006). Sources of science self-efficacy beliefs of middle school students. *Journal of Research in Science Teaching, 43*, 485—499. https://dx.doi.org/10.1002/tea.20131.

Brouwers, A., & Tomic, W. (2001). The factorial validity of scores on the teacher interpersonal self-efficacy scale. *Educational and Psychological Measurement, 61*(3), 433—445. https://dx.doi.org/10.1177/00131640121971301.

Bruce, C. D., & Ross, J. A. (2008). A model for increasing reform implementation and teacher efficacy: Teacher peer coaching in grades 3 and 6 mathematics. *Canadian Journal of Education, 31*(2), 346—370.

Byrne, B. M. (2013). *Structural equation modeling with M plus: Basic concepts, applications, and programming.* London: Routledge.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin, 56*(2), 81—105. https://doi.org/10.1037/h0046016.

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464—504. https://doi.org/10.1080/10705510701301834.

Chen, F. F., Sousa, K. H., & West, S. G. (2005). Teacher's corner: Testing measurement invariance of second-order factor models. *Structural Equation Modeling: A Multidisciplinary Journal, 12*(3), 471—492. https://doi.org/10.1207/s15328007sem1203_7.

Chen, J. A., & Usher, E. L. (2013). Profiles of the sources of science self-efficacy. *Learning and Individual Differences, 24*, 11—21. https://doi.org/10.1016/j.lindif.2012.11.002.

Cheung, H. Y. (2008). Teacher efficacy: A comparative study of Hong Kong and Shanghai primary in-service teachers. *Australian Educational Researcher, 35*(1), 103—123. https://doi.org/10.1007/BF03216877.

Chiu, M. M., & Klassen, R. M. (2009). Calibration of reading self-concept and reading achievement among 15-year-olds: Cultural differences in 34 countries. *Learning and Individual Differences, 19*(3), 372—386. https://doi.org/10.1016/j.lindif.2008.10.004.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage Publications.

de Boer, A., Jan Pijl, S., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education, 15*(3), 331—353. https://doi.org/10.1080/13603110903030089.

de Jong, P. F. (1999). Hierarchical regression analysis in structural equation modeling. *Structural Equation Modeling, 6*(2), 198—211. https://doi.org/10.1080/10705519909540128.

Eccles, J. S., Midgley, C., & Adler, T. (1984). Grade-related changes in the school environment: Effects on achievement motivation. In J. Nicholls (Ed.), *Advances in motivation and achievement: The development of achievement motivation* (pp. 238—331). Greenwich, CT: JAI Press.

Engelbrecht, P., Savolainen, H., Nel, M., Koskela, T., & Okkolin, M. A. (2017). Making meaning of inclusive education: Classroom practices in Finnish and South African classrooms. *Compare: A Journal of Comparative and International Education, 47*(5), 684—702. https://doi.org/10.1080/03057925.2016.1266927.

FNBE [Finnish National Board of Education]. (2016). *National core curriculum for basic education 2014.* Helsinki, Finland: Finnish National Board of Education.

Forlin, C., Kawai, N., & Higuchi, S. (2015). Educational reform in Japan towards inclusion: Are we training teachers for success? *International Journal of Inclusive Education, 19*(3), 314—331. https://doi.org/10.1080/13603116.2014.930519.

Forlin, C., Sharma, U., & Loreman, T. (2014). Predictors of improved teaching efficacy following basic training for inclusion in Hong Kong. *International Journal of Inclusive Education, 18*(7), 718—730. https://dx.doi.org/10.1080/13603116.2013.819941.

Fujii, N. (2014). Inkuru-shibukyoikushisutemukochiku no hokosei ni kansuru kento: Kyoshokuin ni taisuru ki-wa-do no ninchidochosa wo toshite [Study into the directions in building the inclusive education system: Through teaching staff survey on keyword awareness]. In *Bulletin of Center for Educational Research and Practice, 36* pp. 89—98). Akita University.

Gainor, K. A., & Lent, R. W. (1998). Social cognitive expectations and racial identity attitudes in predicting the math choice intentions of black college students. *Journal of Counseling Psychology, 45*(4), 403—413. https://doi.org/10.1037/0022-0167.45.4.403.

Goddard, R., & Goddard, Y. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education, 17*(7), 807—818. https://doi.org/10.1016/S0742-051X(01)00032-4.

Goto, I. (2014). *Shogakkoshoninkyoyu no seicho hattatsu o sasaeru atarashii ikuseiron [New training theory to support the growth and development of novice elementary school teachers].* Tokyo: Gakujutsu Shuppankai.

Hakala, K., Björnsdóttir, K., Lappalainen, S., Jóhannesson, I.Á., & Teittinen, A. (2018). Nordic perspectives on disability studies in education: A review of research in Finland and Iceland. *Education Inquiry, 9*(1), 1—19. https://doi.org/10.1080/20004508.2017.1421390.

Hall, E. T. (1976). *Beyond culture.* New York, NY: Anchor Books/Doubleday.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81—112. https://doi.org/10.3102/003465430298487.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations.* Thousand Oaks, CA: Sage Publications.

Horst, P., Wallin, P., Guttman, L., Wallin, F. B., Clausen, J. A., Reed, R., et al. (1941). *The prediction of personal adjustment: A survey of logical problems and research techniques, with illustrative application to problems of vocational selection, school success, marriage, and crime.* New York, NY: Social Science Research Council.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1—55. https://doi.org/10.1080/10705519909540118.

Ichikawa, N. (2016). Yomikakishogai no aru kodomo ni taisuru shien: Gakko ni okeru "imasubeki" shien toha [Support to children with dyslexia: What is the effective support in school now?]. *Bulletin of Shiraume Gakuen University and College, 52,* 73—90.

Jahnukainen, M. (2011). Different strategies, different outcomes? The history and trends of the inclusive and special education in Alberta (Canada) and in Finland. *Scandinavian Journal of Educational Research, 55*(5), 489—502. https://doi.org/10.1080/00313831.2010.537689.

Jahnukainen, M. (2015). Inclusion, integration, or what? A comparative study of the school principals' perceptions of inclusive and special education in Finland and in Alberta, Canada. *Disability & Society, 30*(1), 59—72. https://doi.org/10.1080/09687599.2014.982788.

Jahnukainen, M., & Itkonen, T. (2016). Tiered intervention: History and trends in Finland and the United States. *European Journal of Special Needs Education, 31*(1), 140—150. https://doi.org/10.1080/08856257.2015.1108042.

Kagitçibasi, C. (1997). Individualism and collectivism. In J. W. Berry, M. H. Segall, & C. Kagitçibasi (Eds.), *Handbook of cross-cultural psychology, Volume 3: Social behavior and applications* (pp. 1—50). Needham Heights, MA: Allyn & Bacon.

Kivirauma, J., Klemelä, K., & Rinne, R. (2006). Segregation, integration, inclusion: The ideology and reality in Finland. *European Journal of Special Needs Education, 21*(1), 117—133. https://doi.org/10.1080/08856250600600729.

Klassen, R. M. (2004a). A cross-cultural investigation of the efficacy beliefs of South Asian immigrant and Anglo Canadian nonimmigrant early adolescents. *Journal of Educational Psychology, 96*(4), 731—742. https://doi.org/10.1037/0022-0663.96.4.731.

Klassen, R. M. (2004b). Optimism and realism: A review of self-efficacy from a cross-cultural perspective. *International Journal of Psychology, 39*(3), 205—230. https://doi.org/10.1080/00207590344000330.

Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y. F., et al. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology, 34*(1), 67—76. https://doi.org/10.1016/j.cedpsych.2008.08.001.

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*(1), 21—43. https://doi.org/10.1007/s10648-010-9141-8.

Lebra, T. S. (1976). *Japanese patterns of behaviour.* Honolulu, HI: University of Hawaii Press.

Little, J. W. (1982). Norms of collegiality and experimentation: Workplace conditions of school success. *American Educational Research Journal, 19*(3), 325—340. https://dx.doi.org/10.3102/00028312019003325.

Lubin, A. (1957). Some formulae for use with suppressor variables. *Educational and Psychological Measurement, 17*(2), 286—296. https://dx.doi.org/10.1177/001316445701700209.

MacCallum, R. C., Browne, M. W., & Cai, L. (2006). Testing differences between nested covariance structure models: Power analysis and null hypotheses. *Psychological Methods, 11*(1), 19—35. https://doi.org/10.1037/1082-989X.11.1.19.

MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science, 1*(4), 173—181. https://dx.doi.org/10.1023/A:1026595011371.

Malinen, O.-P. (2014). *Improving teachers' sense of professional efficacy: Empirical investigation on the sources of teacher efficacy.* Paper presented at the meeting of the 2nd Global Teacher Education Summit. China: Beijing Normal University.

Malinen, O.-P., Savolainen, H., & Xu, J. (2013). Dimensions of teacher self-efficacy for inclusive practices among mainland Chinese pre-service teachers. *Journal of International Special Needs Education, 16*(2), 82—93. https://doi.org/10.9782/2159-4341-16.2.82.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224—253. https://doi.org/10.1037/0033-295X.98.2.224.

Matsui, T., Matsui, K., & Ohnishi, R. (1990). Mechanisms underlying math self-efficacy learning of college students. *Journal of Vocational Behavior, 37*(2),

225–238. https://doi.org/10.1016/0001-8791(90)90042-Z.

Meijer, C. J. W., & Foster, S. F. (1988). The effect of teacher self-efficacy on referral chance. *The Journal of Special Education, 22*(3), 378–385. https://doi.org/10.1177/002246698802200309.

MEXT [Ministry of Education, Culture, Sports, Science and Technology Japan]. (2012). *Kyoseishakai no keisei ni muketa inkurushibukyoikushisutemukochiku no tameno tokubetsushienkyoiku no suishin (Hokoku) [Promoting special needs education to construct inclusive education system that formulates convivial society (Report)]*. Retrieved on 16 May, 2018 from: http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/044/attach/1321669.htm.

MEXT. (2014). *Kyoshokuinhyoka no genjo [The current situation of teacher evaluation.* Retrieved on 18 June, 2018 from: http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/052/siryo/__icsFiles/afieldfile/2016/01/05/1365651_10.pdf.

MEXT. (2017). *Gakkokyointokeichosa: Heisei 28 nendokekka no gaiyo [Statistics in school teachers: Outline of the survey results in 2016*. Retrieved on 12 March, 2018 from: http://www.mext.go.jp/b_menu/toukei/chousa01/kyouin/kekka/k_detail/1395309.htm.

Mills, N. (2011). Teaching assistants' self-efficacy in teaching literature: Sources, personal assessments, and consequences. *The Modern Language Journal, 95*(1), 61–80. https://doi.org/10.1111/j.1540-4781.2010.01145.x.

Milner, H. R. (2002). A case study of an experienced English teacher's self-efficacy and persistence through "crisis" situations: Theoretical and practical considerations. *High School Journal, 86*(1), 28–35.

Milner, H. R., & Hoy, A. W. (2003). A case study of an African American teacher's self-efficacy, stereotype threat, and persistence. *Teaching and Teacher Education, 19*(2), 263–276. https://doi.org/10.1016/S0742-051X(02)00099-9.

Ministry of Education of Finland. (2007). *Special education strategy. Reports of the Ministry of Education, Finland, no. 47. Helsinki*. Ministry of Education of Finland.

Mitchell, D. (2005). Introduction: Sixteen propositions on the contexts of inclusive education. In D. Mitchell (Ed.), *Contextualizing inclusive education: Evaluating old and new international perspectives* (pp. 1–21). London: Routledge.

Morris, D. B., Usher, E. L., & Chen, J. A. (2017). Reconceptualizing the sources of teaching self-efficacy: A critical review of emerging literature. *Educational Psychology Review, 29*(4), 795–833. https://doi.org/10.1007/s10648-016-9378-y.

Muthén, L. K., & Muthén, B. O. (2012). *Mplus version 7 [Statistical software]*. Los Angeles, CA: Muthén & Muthén.

Nishimura, S., Nevgi, A., & Tella, S. (2008). Communication style and cultural features in high/low context communication cultures: A case study of Finland, Japan and India. In A. Kallioniemi (Ed.), *Uudistuva ja kehittyvä ainedidaktiikka: Ainedidaktinen symposiumi 8.2.2008 Helsingissä* (pp. 783–796). Helsinki: Helsingin yliopisto. Retrieved on 10 July, 2018 from: http://www.helsinki.fi/~tella/nishimuranevgitella299.pdf.

OECD [The Organization for Economic Cooperation and Development]. (2013). *Key findings from the teaching and learning international survey (TALIS)*. Retrieved on 9 July, 2018 from: http://www.oecd.org/finland/TALIS-2013-country-note-Finland.pdf.

OECD. (2014). *TALIS 2013 results: An international perspective on teaching and learning*. Paris: OECD Publishing. https://doi.org/10.1787/9789264196261-en.

OECD. (2018). *Foreign population (indicator)*. Retrieved on 9 July, 2018 from: https://doi.org/10.1787/16a914e3-en.

Ogiso, H., & Tsuzuki, S. (2016). Tokubetsushienkyoikutaisei to inkurushibukyoikushisutemu ni kansuru ichikosatsu [Consideration on the special support education system and inclusive education system]. *Shogaishakyoiku fukushigakukenkyu, 12*, 155–163.

Pajares, F., Johnson, M. J., & Usher, E. L. (2007). Sources of writing self-efficacy beliefs of elementary, middle, and high school students. *Research in the Teaching of English, 42*, 104–120.

Palmer, D. (2011). Sources of efficacy information in an inservice program for elementary teachers. *Science Education, 95*(4), 577–600. https://doi.org/10.1002/sce.20434.

Pesonen, H., Itkonen, T., Jahnukainen, M., Kontu, E., Kokko, T., Ojala, T., et al. (2015). The implementation of new special education legislation in Finland. *Educational Policy, 29*(1), 162–178. https://doi.org/10.1177/0895904814556754.

Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology, 27*(2), 191–218. https://doi.org/10.1080/01443410601066693.

Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research, 101*(1), 50–60. https://doi.org/10.3200/JOER.101.1.50-60.

Roth, W. M., Masciotra, D., & Boyd, N. (1999). Becoming-in-the-classroom: A case study of teacher development through coteaching. *Teaching and Teacher Education, 15*(7), 771–784. https://dx.doi.org/10.1016/S0742-051X(99)00027-X.

Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implication for pre-service and in-service teacher education. *European Journal of Special Needs Education, 27*(1), 51–68. https://doi.org/10.1080/08856257.2011.613603.

Saloviita, T., & Takala, M. (2010). Frequency of co-teaching in different teacher categories. *European Journal of Special Needs Education, 25*(4), 389–396. https://dx.doi.org/10.1080/08856257.2010.513546.

Schunk, D. H. (1984). Sequential attributional feedback and children's achievement

behaviors. *Journal of Educational Psychology, 76*(6), 1159–1169. https://doi.org/10.1037/0022-0663.76.6.1159.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology, 48*(1), 23–47. https://dx.doi.org/10.1111/j.1464-0597.1999.tb00047.x.

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. https://dx.doi.org/10.1080/08856257.2017.1361139.

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. https://doi.org/10.1111/j.1471-3802.2011.01200.x.

Smith, P. B., Bond, M. H., & Kâğıtçıbaşı, Ç. (2006). *Understanding social psychology across cultures: Living and working in a changing world*. London: SAGE.

Soodak, L. C., & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *The Journal of Special Education, 27*(1), 66–81. https://doi.org/10.1177/002246699302700105.

Spielberger, C. (Ed.). (2004). *Encyclopedia of applied psychology*. San Diego, CA: Elsevier Academic Press.

Stevens, T., Olivárez, A., Jr., & Hamman, D. (2006). The role of cognition, motivation, and emotion in explaining the mathematics achievement gap between Hispanic and White students. *Hispanic Journal of Behavioral Sciences, 28*(2), 161–186. https://dx.doi.org/10.1177/0739986305286103.

Tokyo Metropolitan School Personnel in Service Training Center. (2007). Shonin-shakyoyuikusei ni kansuru shidoshiryo [Instruction guidelines for beginning teacher training]. Retrieved on 25 May, 2018 from: http://www.kyoiku-kensyu.metro.tokyo.jp/09seika/reports/files/bulletin/h18/h18_proj01_1.pdf.

Triandis, H. C. (2001). Individualism and collectivism: Past, present, and future. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 35–50). New York, NY: Oxford University Press.

Tschannen-Moran, M., & Hoy, A. W. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*(6), 944–956. https://doi.org/10.1016/j.tate.2006.05.003.

Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202–248. https://dx.doi.org/10.3102/00346543068002202.

Tsukiyama, T. (2006). Ima o ikiru seinenkyoshi o sasaerumono: Tomoni seicho suru yorokobi [Supporting novice teachers who are living in a present society]. *Hiroba, Quarterly Journal of Education Center of Kyoto, 147*. Retrieved on 10 July, 2018 from: http://www.kyoto-kyoiku.com/hiroba2/hiroba147/hiroba147tukiyama.htm.

Ueno, K., & Nakamura, K. (2011). Inkuru-jonkyoiku ni taisuru tsujogakkyukyoin no ishiki ni tsuite [A study of awareness of "Inclusion Education" among regular-class teachers in elementary schools]. *Journal of Health and Sports Science Juntendo University, 3*(2), 112–117.

UNESCO [The United Nations Educational, Scientific and Cultural Organization]. (1994). *The Salamanca statement and framework for action on special needs education*. Retrieved on 29 October, 2017 from: http://www.unesco.org/education/pdf/SALAMA_E.PDF.

United Nations. (2006). *Convention on the rights of persons with disabilities*. Retrieved on 29 October, 2017 from: http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf.

United Nations General Assembly. (2015). Transforming our world: The 2030 agenda for sustainable development. Retrieved on 25 May, 2017 from: http://www.un.org/ga/search/view_doc.asp?symbol=A/70/L.1.

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research, 78*(4), 751–796. https://doi.org/10.3102/0034654308321456.

Vieluf, S., Kunter, M., & van de Vijver, F. J. (2013). Teacher self-efficacy in cross-national perspective. *Teaching and Teacher Education, 35*, 92–103. https://dx.doi.org/10.1016/j.tate.2013.05.006.

Wheatley, K. F. (2005). The case for reconceptualizing teacher efficacy research. *Teaching and Teacher Education, 21*(7), 747–766. https://doi.org/10.1016/j.tate.2005.05.009.

Wyatt, M. (2014). Towards a re-conceptualization of teachers' self-efficacy beliefs: Tackling enduring problems with the quantitative research and moving on. *International Journal of Research and Method in Education, 37*(2), 166–189. https://doi.org/10.1080/1743727X.2012.742050.

Yada, A., Tolvanen, A., & Savolainen, H. (2018). Teachers' attitudes and self-efficacy on implementing inclusive education in Japan and Finland: A comparative study using multi-group structural equation modelling. *Teaching and Teacher Education, 75*, 343–355. https://dx.doi.org/10.1016/j.tate.2018.07.011.

Yada, A., & Savolainen, H. (2017). Japanese in-service teachers' attitudes towards inclusive education and self-efficacy for inclusive practices. *Teaching and Teacher Education, 64*, 222–229. https://doi.org/10.1016/j.tate.2017.02.005.

Yamasaki, T. (2013). Kyoshi no jissentekishidoryoku no keisei ni okeru koteichingu no kanosei [The possibility of co-teaching for developing teachers' instructional skills in practices]. *Journal of Elementary Education and Curriculum, 1*, 21–31.