Perceived Teacher Self-Efficacy Relating to Student Diversity in Mainstream classrooms

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ABSTRACT

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The global inclusive education movement advocates that, children with special needs should be accommodated for in mainstream schools. Many classroom teachers however do not feel adequately equipped to cater to these diverse needs. This study investigated the influence of inclusive education on the self-efficacy of mainstream classroom teachers. It also tested whether the number of years of teaching experience has influence on how well a teacher collaborates with others, manages behavior, and engages students. The data for this quantitative research was gathered in 2013 using questionnaires which were sent to classroom teachers, in 68 schools in Eastern Finland. Two scales were combined to measure teacher self-efficacy in collaboration, behavior management and student engagement. Student diversity is defined as pupils falling into the three tiers of the support system, as well as those with attention deficiency and behavior issues. To find the relation between the variance of student diversity and the self-efficacy variables, Spearman's and Pearson's correlations were used. In exploring the relation of teaching experience with the self-efficacy variables ANOVA was applied. Results show that there is a significant negative correlation between the number of students with attention deficiency/behavior problems and teachers' perceived self-efficacy in behavior management. The number of students with intensified or special support however, does not appear to be associated with any of the self-efficacy variables or amount of teaching experience. It could be suggested as a practical implication that teachers' behavior management skills can be improved with specific training.

Keywords: Teacher self-efficacy, student diversity, mainstream classrooms, inclusive education, Finland

Contents

1   INTRODUCTION

Including children with diverse educational needs into mainstream classrooms is now one of the fundamental issues of education policy around the world (UNESCO, 2009). Over the years this movement towards inclusion has gained significant momentum globally ever since its formal debut at the World Conference on Special Needs Education of 1994 in Spain. The Salamanca Statement proclaims that children with special needs must be given access to mainstream schools where their individual educational needs are met within a context of a child-centered pedagogy (UNESCO, 1994). The human rights aspect of equal learning opportunities, within a non-discriminatory environment, has been the driving force behind inclusive education (Barton & Armstrong, 2007). In its pursuit to sustainable development around the globe, UNESCO is committed to the Education for All- agenda that seeks ways to enable each child to access, participate and succeed in their local mainstream school, in accordance with Article 24 of the UN Convention of Rights of Persons with disabilities, (United Nations, 2006). There is a continuous process where physical and psychological barriers to inclusion are being examined, challenged, and removed progressively (Ainscow, 2020; Ainscow et al., 2006; Kefallinou et al., 2020).

Throughout the past century a distinct shift in the ideology and attitudes towards inclusive education and the way people with a disability are viewed in our society, has occurred (Gabel, 2005). This redefining of the paradigm becomes apparent for example, through the revision of the International Classification of Functioning Disability and Health (ICF) by the World Health Organization (WHO, 2012) allowing greater latitude for the holistic approach of the bio-psycho-social model at the dawn of the 21st century, in an era where the medical model that views health purely in terms of biological factors had been the primary framework (Stamm, 2009). This brought a shift in perspective where the focus no longer is on the individual who has a 'deficit' and needs to be 'fixed' but on how society at large can remove both physical and

psychological barriers with the objective of increasing accessibility and equal participation of all pupils including those with neurodevelopmental disorders, such as autism and ADHD (Bölte et al., 2021).

An integral part of this change is marked by adapting the terminology, where once terms such as 'handicapped' or 'retarded' were used, now accommodating terms such as 'people with a disability' or 'special needs' are more acceptable (Foreman, 2005). Merely renaming the phenomenon or introducing new special educational needs (SEN) terminology and legislation, is not enough to bring about the fundamental changes in educational institutes to accommodate students with disabilities (Van Mieghem et al., 2020). There are some studies that indicate that the teacher training of general educators has not sufficiently prepared them to teach pupils with special educational needs in mainstream classes (Paju et al., 2016). There has also been a lot of ambiguity concerning the term inclusive education and what it means in practice. The issue is significantly more intricate than simply placing children with special needs in mainstream classrooms (Mulhern, 2003). Many educators advocate that the depth of inclusion also go beyond mere integration, in which the child with special needs is expected to adapt to the rest of the classroom or society (Thomazet, 2009). Barton (1998) states that "inclusive education is not an end in itself, it is a means to an end, that of establishing an inclusive society" (Barton, 1998 p. 84). Real implementation of inclusion leads to a changed society.

The challenge to true inclusion is finding the necessary resources (expertise, materials, time, and space) to adequately support each child's individual needs, while creating a sense of belonging among the learners in each classroom (Sprowls, 2020). Since there are various socio-economic and cultural factors that differ from area to area around the world, it is difficult to create a clear working definition for inclusive education that can be applied globally (Makoelle, 2016). In this study, a definition used by Schwab (2019, p. 4) is adopted where "inclusive education refers to the inclusion of learners with special educational

needs (SEN) within mainstream classrooms to create equal opportunities for learning and participation of all students".

1.1 Student Diversity in Mainstream Classrooms in Finland

Long before any of the international conferences concerning special needs education had taken place, many of these inclusive principles were being practiced on a national level within the Finnish education system. The comprehensive school reform in the 1970s, has been a key factor in making education accessible to all (Kivirauma et al., 2006; Risku, 2014). Quality has been assured through the meticulous selection of aspiring teachers and training these candidates up to a master's degree level (Nummenmaa et al., 2006). Flexible availability of special education provision in mainstream schools has given many students easy access to educational support, without extra labels, thus diminishing the differences between high and low performing students (Savolainen, 2009).

The creation of Finnish education policies is not a top-down political process. Over the years Finland decentralized education management, which allowed local educators to have a voice in the creation and implementation of policies regarding their own district. Educators are trusted and valued because of their professionalism and ability to make practical policies that are well adapted to student learning and assessment (Sahlberg, 2007). For policies to be effective, they need to be developed in communication with all the parties that will be involved or affected by its implementation and cannot merely be a government mandate. Because of the rapidly changing situations that schools, and our society at large need to continuously respond to, the policies must have a capacity building nature allowing for flexible adjustments to systems and empowering those who are on the front-line of the implementation. It is crucial that the teacher will continue to have a position with a lot of autonomy that allows them to organize and execute teaching and support methods (Sahlberg, 2007).

During the past five decades deliberate strides have been taken nationwide towards a more inclusive education system. An important step was the introduction of the Basic Education Act (Basic Education Act 1998/2010) in 1998. This law has given all children, regardless of whether they have a disability, the right to enroll in their local school (Graham & Jahnukainen, 2011). Before 1998 these children with disabilities would have fallen under the social welfare system, which would have generally directed them towards a nursing home or private institution to be cared for. Now that these children were also going to school, the new Basic Education Act of 1998 required each of these pupils to be equipped with a personal learning plan that sets specific goals for their development based on their abilities (Saloviita, 2020). In the 1960s and 1970s, the placement for children with severe disabilities was a special school that was specifically geared towards their disabilities. The educators were trained in that specific specialty, for example sign language, and were able to adjust the curriculum as well as the learning environment to meet the particular needs of the pupils. However, the policy of segregating the children with disabilities by placing them in separate institutions drew much criticism (Kivirauma et al., 2006).

The process of reducing the quantity of segregated schools in Finland and placing children with special needs in mainstream schools, required an expansion of support measures within these comprehensive schools. Over the past decades children with a large variety of challenges have been entering mainstream schools; their difficulties may lie in the areas of language, communication, cognition, social interaction, cultural identity, physical or mental health. The Finnish system of student placement remains very pragmatic with a set-up that favors the least restrictive environment possible. This means there is a continuum of different placement alternatives. Special schools or institutions are still an option, but whenever possible, learners with disabilities are educated in an environment that is nearest to the regular classroom with other pupils (Jahnukainen, 2011).

Various problem areas can manifest in ways that may affect pupils' academic achievement and/or social behavior. The interventions in these targeted areas should not be compartmentalized, because they are largely interconnected to the entire learning experience and development of these individuals. The Finnish education system has responded well to the increasing support needs by a steadfast adherence to preventive principles and timely intervention (Vainikainen et al., 2015). Although a child with a comorbid diagnosis may require multiple specialists, an open dialogue and understanding of the interrelatedness of these developmental areas is essential for the child and their family to be served in a holistic way (Honkasilta et al., 2014).

A new special education strategy, on how to include children with disabilities into mainstream schools, was launched by the Finnish Ministry of Education in 2007 and continued to be developed in the three years that followed. During this period an in-service training was provided to many classroom teachers so that they would be equipped for the 2011 implementation of the 3-tiered support system (Lakkala et al., 2016). This change in the Basic Education Act of 2010 enabled an increasing number of students with special needs to receive support whilst attending mainstream schools, either in a separate special classroom or integrated to a great extent with the other pupils in mainstream classrooms (Jahnukainen, 2011). There has also been an expansion of available resources and expertise that support children with SEN within mainstream schools. Classrooms have become more heterogeneous than ever before and accommodating for this diversity has become the norm (Ahtiainen et al., 2021). Over the years there has been a gradual growth in the number of children receiving special support and intensified support from about 10% up to 30% of all the children in mainstream schools (Suomen virallinen tilasto, 2019).

Before 2011 the support offered to pupils fell into two categories: general and special support. The three-tiered support system introduced a new category named intensified support which was placed between the two already existing categories. The first tier of general support increased the involvement and

responsibility of the teacher in meeting the diverse needs within the mainstream classroom (Jahnukainen & Itkonen, 2016). It previously existed as more of a presumption that any individual in the classroom could receive low-threshold support, rather than being an integral and articulated part of the current three-tier support model (Jahnukainen & Itkonen, 2021). In the newly introduced second tier of intensified support, the classroom teacher writes a pedagogical assessment and creates a learning plan in which the support can be provided in the area that is needed most (Sundqvist et al., 2019; Mihajlovic, 2020). In practice it can take the form of remedial teaching by the classroom teacher or the special educator. The involvement of the special educator allows for co-teaching or a temporary set-up of individual or small group learning (Honkasilta et al., 2014). The third tier of special support is mainly still reserved for a small percentage of learners with severe needs caused by a disability, illness, or other functional difficulty. The documentation process of this third tier is standardized to include a pedagogical statement, formal decision, and individual education plan. Its' practice has become more regulated in all municipalities (Thuneberg et al., 2014).

1.2 Teachers in Mainstream Classrooms

After signaling the needs of pupils, a teacher may call upon the necessary expertise to find ways to accommodate for these needs so that learners are included on all levels. The three-tiered support system impacted the Finnish education system in that it is primarily the classroom teacher's responsibility to facilitate support within the mainstream education setting (Sundqvist et al., 2019). In this process classroom teachers strongly rely on the continuous flexible presence of special education teachers (SETs) that are allocated to the entire school providing low threshold support and interventions where needed. Research indicates that the expertise of SETs has played a vital part in the three-tiered support system, especially in dealing with children needing intensified and special support (Sundqvist et al., 2019). At best, this setup allows for

ongoing preventative as well as rehabilitative measures. To be successful, however, it requires a pre-emptive and multi-professional collaboration of all parties involved: the pupil, care giver(s), teacher, education specialists and school welfare professionals (Vainikainen et al., 2015).

There is an increasing number of students in mainstream classrooms that do not necessarily fall into the second or third tier of support but deal with attention deficiency and behavior problems (Honkasilta et al., 2014). Many teachers however do not have sufficient training in the areas of positive proactive behavioral intervention and inclusive pedagogy, because this has not been an integral part of their teacher training program (Adams, 2021; Gagnon, 2021; Sundqvist et al., 2019).

Several studies assert that both children with and without disabilities benefit from learning in the same classroom, especially on a social emotional level (Ruijs et al., 2010; Van Mieghem et al., 2020). However, there are also studies that claim that the inclusive approach did not cater to the needs of all learners and greatly burdened educators, when the support system to handle student diversity was not set up correctly or lacked the necessary expertise (Castro-Villarreal et al., 2014; Fuchs & Fuchs, 2017).

The inclusive education policies have caused teachers to face many new challenges. The three-tiered support system underlines the responsibility of each teacher to educate diverse groups of pupils. Versatile pedagogical methods can be realized effectively through teacher collaboration (Ahtiainen et al., 2021). The inclusive teaching skills comprise the ability to differentiate the curriculum, employ various techniques and resources, create a classroom environment that fosters empathy and respect, and much more. A growing number of teachers is becoming overwhelmed by the increasing responsibilities and functions in addition to their primary task of teaching. The intensified bureaucratic burden and the fear of insufficient support for pupils with special needs, are the main concerns regarding the three-tiered support system (Sundqvist et al., 2019). A different perspective is given by Pesonen and co-

authors (2015) in which the respondents to their research also acknowledge an increase in bureaucratic burden, but at the same time see improved collaboration among special educators and classroom teachers, which is perceived as a positive change.

There are many reasons why teachers can become dissatisfied in their work. Education systems that undergo frequent reforms with an emphasis on implementation and organizational design often trigger frustration and resistance among teachers rather than a desire to improve schools (Sahlberg, 2018). They become discouraged by issues such as behavior management, experience frustration due to the power dynamics of the system, and often feel very isolated in their work. A frequently felt sentiment among teachers is that students with emotional and behavioral difficulties (EBD) form a huge challenge to successful inclusive education, as these children often consume a disproportionate amount of a teacher's time and effort (Dyson et al., 2004). The effective management of inclusion is a demanding task that requires the presence of well-trained teachers and competent teacher assistants. It goes without saying that if such high-skilled people are poorly represented, a school is likely to experience difficulties (Dyson et al., 2004).

Finnish teachers participating in an international 2013 OECD Teaching and Learning International Survey (TALIS) study, expressed concern about the amount of time spent on school discipline situations (Taajamo et al., 2014). Research indicates that a teacher's job satisfaction can be threatened by pupils' negative behavior and a poor school climate (Malinen & Savolainen, 2016; Taajamo et al., 2016). A teacher can easily become overwhelmed by the changing demands placed on their profession. They need to implement inclusive education and deal with student diversity and discipline problems within a school context that might not be capable of handling reform. Teachers could easily lose motivation, experience reduced productivity, and have doubts about their abilities as a teacher. If unchecked, a downward spiral starts that could lead to cynicism or burnout, ultimately resulting in teacher attrition

(Lauermann & Köning, 2016). However, there are also many teachers who despite being faced with similar challenges find effective and sustainable solutions that take into consideration their own well-being as well as that of their pupils. Finland has a very low attrition rate compared to other countries. Earlier research shows that "teachers' resilience is a vital factor associated with their motivation, persistence, and retention in the teaching profession" (Yada et al., 2021, p. 1).

This successful bouncing back after setbacks allows teachers to remain confident about their professional abilities. These teachers grow as they persevere through challenging situations and maintain their motivation. Their resilience helps them not only to survive but to thrive professionally (Beltman et al., 2011). Teacher self-efficacy is a crucial factor connected to resilience that enables teachers to exert themselves in ways that enhance student outcomes in areas of academic performance as well as motivation. It enables teachers to retain an internal state that is resilient to burnout while staying positively attuned towards SEN children. (Yada et al., 2021).

1.3 The Sources of Teacher' Self-Efficacy

In order to understand how self-efficacy works, it is useful to take a closer look at how this term is defined and what its historical context is. The concept of self-efficacy (SE) was first established by Albert Bandura, an influential social cognitive psychologist. He defines perceived self-efficacy as "the belief in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997, p. 2). Klassen and co-authors (2011) applied Bandura's theory to the domain of education and define self-efficacy as teachers' confidence in "their individual and collective capability to influence students' learning" (Klassen et al., 2011, p. 21).

Much attention is being given to the SE of teachers in this competitive educational era because the nature of SE has been found to be cyclic. This means that a high level of teacher self-efficacy (TSE) often results in increased

efforts on behalf of the teacher which in turn leads to better performances among the students (Tschannen-Moran et al., 1998). This academic capital is something schools want to cultivate, and policy makers choose to invest in. Maintaining a high level of TSE however, turns out to be a complex issue, since the nature of SE is always context-specific, which means that the efficacious feeling a teacher has, is related to a certain subject, in a specific setting, with a particular set of students, and does not necessarily transfer to other circumstances (Klassen et al., 2011). For example, a math teacher's SE is very specific to the domain of mathematics and the required teaching style. This person's level of SE does not carry over to other domains like teaching music or a foreign language, since these domains require a different set of skills. In a similar way, the advancement of inclusive education requires new skillsets that classroom teachers do not feel adequately trained in (Paju et al., 2016).

According to the 2010 change in the Basic Education Act, mainstream classroom teachers are expected to provide quality education that is tailored to every child's individual learning needs and abilities, as directed by the three-tiered support system. Research by Lakkala and co-authors (2016) about teachers' perception of the implementation of inclusive education, brought forward their concerns about adequate training, staff teamwork, smooth collaboration at various levels, sufficient resources, pedagogical skills, and their own professional confidence.

Research by Fackler and Malmberg (2016) examining 14 OECD countries noted that the achievement of students was strongly connected to TSE. It also revealed that teaching experience and knowledge can enhance SE. A positive correlation was found between TSE and attitudes regarding inclusive education (Savolainen et al., 2012). These observations show that it is worthwhile and possible to positively impact TSE. In order for this to be successful it is necessary to first become aware of the components that comprise and influence TSE and in what ways this multi-dimensional construct unfolds itself.

It has been found that there are several sources that influence a person´s self-efficacy belief. The first and most powerful source of self-efficacy belief is **mastery experience** (Bandura, 1997). This is a person's own perception how successful he or she executes a certain task in a specific context. Many studies show that past perceptions of personal success or failure strongly determine future efficacious feelings- or lack thereof, in similar situations (Tschannen-Moran & Hoy, 2007; Usher & Pajares, 2008). Also, the persistence in overcoming obstacles is the key to developing competence and building resilience (Bandura, 1997; Tschannen-Moran & Hoy, 2007).

The second source of self-efficacy belief is **vicarious experience** which is based on observing others perform an activity that still needs to be mastered. To what extent self-efficacy is affected, depends on the degree of affiliation to the person being observed. A close association to the person performing the task (for example, same gender, age and training) can make it easier for the observer to feel that similar success is within their own reach (Usher & Pajares, 2008; Tschannen-Moran & Hoy, 2011).

The third source of TSE is **verbal persuasion** which is the feedback and encouragement a person receives from others. This is most effective when the feedback is positive and accurately depicts the agent´s accomplishments (Schunk, 1984). Unrealistic premature praise is not helpful and quickly disconfirmed by disappointing results. When trust has been established, critical comments will not damage TSE when the recipient perceives it as constructive feedback. The person giving the feedback should know the people they are evaluating well enough to correctly assess differing degrees of emotion or fluctuations in performance (Jug et al., 2019).

The fourth source of TSE is **psychological and affective states** in which a person judges their capabilities based on the inclinations, sensations, and emotions they feel in that moment (Bandura, 1997). The interpretation of these states is crucial whether it is seen as a debilitating or energizing factor. For

example, nervousness, the shaking of hands and voice, can make a person insecure. However, sometimes the stress of the moment also gives the necessary adrenaline to perform better, as seen in many athletic situations (Moritz et al., 2000).

There is a fifth source that can influence self-efficacy, that was not originally listed by Bandura, namely **imaginal experiences**. It is the ability to create a mental image about a future situation in which one visualizes the scene of success to be achieved (Usher & Pajares, 2008). When used in a constructive way, a person can become empowered by mentally preparing for a favorable result. This technique can be used when preparing for a job interview for example, where the process and positive outcome for a certain scenario is (role)played in advance (Maddux, 1995).

1.4 Teacher Self-Efficacy as a Multidimensional Construct

The way a teacher displays self-efficacy can be observed in several ways. Teacher self-efficacy is often measured as a multidimensional construct (E.g., Malinen et al., 2013). These dimensions are the domains an inclusive education teacher regularly needs to deal with, like instruction, collaboration, student engagement, and behavior management (Malinen & Savolainen, 2016). In the last decade, researchers have studied TSE in relation to the willingness of teachers to implement inclusive practices. It has been suggested that teachers with high TSE are confident in their abilities to reach positive outcomes with their pupils and are therefore generally more willing to diversify their teaching strategies and make an extra effort to ensure that their pupils are reaching their full potential (Savolainen et al., 2012). This research focuses on three domains a teacher is expected to be competent in, that are vital to dealing successfully with the challenges of inclusive education. The three skill areas are behavior management, student engagement and collaboration. The measure of proficiency in these domains can have great impact on a teacher's perceived self-efficacy.

Behavior management (BM) is a crucial teaching skill through which student-teacher rapport is established and maintained in a way that is conducive to learning. Although BM is such a core issue, it often has a marginal place in the training program for student teachers (Adams et al., 2021). It requires more than just a set of organizational techniques and a list of classroom rules. Effective interpersonal skills expressed uniquely through the personality of a teacher, can be developed over time. Malinen and Savolainen (2016) note that teachers in Finland admit to being critical about their capability of dealing with troublesome behavior, wherein teachers believe that managing negative student behavior stems from a teachers' personality and cannot be learned. There are however, evidence based strategies and interventions in BM which propose that BM is an ascertainable skill and that even small alterations in a teacher's approach and response to disruptive behavior can lead to better outcomes (Mitchell, 2014; Malinen & Savolainen, 2016). When teachers have high self-efficacy in behavior management, they are confident about their ability to organize the teaching in a way that enables them to constructively influence and oversee what is going on in a specific classroom setting (Tschannen-Moran et al., 1998). They respond in a consistent way and appear more comfortable and confident which often generates a positive result from their students in contrast to those teachers with low TSE who are less consistent in their disciplining methods and assume that their pupils are purposefully acting out of line (Rimm-Kaufman & Sawyer, 2004; Bandura, 1997).

Student engagement is a "multidimensional concept that is typically used to refer to students' degree of involvement, connectedness and commitment to school as well as their motivation to learn" (Rangvid, 2018, p. 267). A teacher who wants to create a high level of student engagement is tasked with the challenge to capture the attention of students and invite them to participate in learning activities. When students see the relevance of why they are learning, feel connected to what they are learning and whom they are learning with, they generally are more invested in their learning process on a cognitive, emotional, and social level (English, 2022). This active involvement is essential because

pupils are inclined to have greater success academically and socially through increased engagement in scholastic instruction (Harbour et al., 2015). This involvement in, and commitment to their own learning is vital to advancing academically. It becomes apparent in ways like paying attention in class, co-operating in group activities, doing the required assignments at home. Student engagement is not just appropriate comportment in the classroom or attendance but about being connected to the learning process (Rangvid, 2018).

Collaboration and co-operation have become a vital part of implementing inclusive education. There are numerous entities that classroom teachers are required to effectively interact with in order to support children with special needs. The wide range of available expertise is designed to support and complement a classroom teacher's educational knowledge and skill in instructing all pupils (Sundqvist & Hannås, 2021). Teachers are not only expected to consult with their teacher colleagues, but they also join forces with other professionals such as special education teachers, speech therapists, psychologists, neurologists, etc. (Thuneberg et al., 2014). Pedagogical evaluations of students with special needs are conducted in multiprofessional collaboration, where at times psychological and medical statements provide additional insights (Vainikainen et al., 2015). Mainstream classroom teachers play a vital role in this process of collaboration. At the core of this lies the interaction and trust a teacher has developed with pupils and their caretakers. An open dialogue between these parties that has the best interest of the child in mind is essential (Timonen-Kallio et al., 2017).

1.5 Research Questions

This study focuses on how teachers in Finnish mainstream classrooms perceive their self-efficacy when it comes to tailoring to the needs of children falling under the second and third tier of the support system, including children with attention deficiency and behavioral issues. This study also examines whether the amount of teaching experience makes any difference in how competent a teacher feels in managing behavior, engaging their students, and collaborating with parents, teachers, and other professionals.

1. Is the variance in student diversity in Finnish mainstream classrooms related to the level of teachers´ perceived self-efficacy?

2. Is the amount of teaching experience that a teacher has associated with their level of perceived self-efficacy (concerning behavior management, collaboration, and student engagement in an inclusive setting)?

2   RESEARCH METHODS

The present study makes use of the quantitative data from the *ProKoulu* research project, which was a program carried out in collaboration with the University of Jyväskylä, the University of Eastern Finland and Niilo Mäki Institute in 2013-2016. It was funded by the Ministry of Education and Culture in Finland. The goal of the *ProKoulu* research project was to prevent and decrease behavioral issues among pupils in comprehensive schools by implementing an intervention plan on a school level (Yada et al., 2019). The 68 basic education schools that were involved in this three-year trajectory, were chosen by convenience sampling. The data was collected by means of a battery of questionnaires that were sent twice a year to both staff and students alike. All staff members responded electronically to these questionnaires.

2.1 Participants

The present study employs data collected from the classroom teachers at the schools in the first year of *ProKoulu* project, 2013-2014. It gives insight into the starting situation when the intervention plan had not yet had significant effects on the schools. The respondents included Finnish school principals, classroom teachers, special education teachers and language teachers. For the purpose of this study only the classroom teachers have been selected, (N = 409 of which 78% females; mean age 44 years, std. 8.95, for the self-efficacy variables the number of participants is slightly lower, N = 398). More than half of these teachers (225) had more than 15 years of work experience. Each of them had undergone teacher training in Finland and holds a master's degree in Education.

2.2 Data Collection

In the *ProKoulu* project, two types of questionnaire scales were fused together to assess teacher self-efficacy in different domains of their work. The first scale is called the Teacher Self-efficacy for Inclusive Practices (TEIP) scale (Sharma et

al., 2012). It is used to measure self-efficacy in two domains, collaboration and managing behavior. The second scale is the Teacher Sense of Efficacy Scale (TSES) (Tschannen-Moran & Woolfolk Hoy, 2001) and is intended to measure student engagement. Both the TEIP and TSES questionnaires have proven to be reliable instruments in measuring the different dimensions of teacher efficacy (Sharma et al., 2012; Tschannen-Moran & Woolfolk Hoy, 2001). The questionnaire used in the *ProKoulu* study, that contains a combination of the TEIP and TSES measurement scales, consists of 15 items. Participants were asked to respond using a Likert-type scale ranging from 1 (Strongly disagree) to 9 (Strongly agree). These 15 items addressed three different domain specific dimensions of perceived self-efficacy.

For the first six items, teachers were able to indicate how they perceived their own level of self-efficacy in the dimension of **behavior management**. It contained statements like: I am proactive in reducing and eliminating disruptive student behavior in the classroom. The Cronbach´s Alpha of this sub-scale is .83.

The next six items covered teacher self-efficacy in the area of **collaboration.** It contained items concerning how well a teacher is able to work together with their colleagues, the families/caretakers of their students, and other professionals such as speech therapists and special education teachers. The Cronbach's Alpha of this sub-scale is .84. Items 7, 13-15 addressed self-efficacy in **student engagement**. It had statements like: I am able to motivate students who show very little motivation in their school work. The Cronbach's Alpha of this sub-scale is .84. The overall TEIP Cronbach's Alpha reliability was high (α = 0.89).

Some background information was collected concerning teachers´ work experience and the support needs of the students in their classroom. The teachers indicated how many years of teaching experience they have by choosing the most suitable category. The options were: less than a year, 1-5

years, 6-10 years, 11-15 years, and more than 15 years. Each classroom teacher specified how many learners in their class were receiving extra assistance according to the three-tiered support system, most of the pupils receiving special or intensified support, have a personal learning plan in place. A separate item on the questionnaire asked teachers to indicate how many pupils in their classroom have issues with attention deficiency and behavior problems. This response was based on the teachers own observations/experience. Student diversity refers to pupils in all three of the support categories, including pupils that have been identified as having attention deficiency and behavior problems.

2.3 Data Analysis

The data was analyzed with IBM SPSS statistics version 24. Spearman's and Pearson's correlations were used to analyze the relation between the variance in student diversity and the levels of perceived teacher self-efficacy in behavior management, collaboration and student engagement. Pearson's correlation was used to analyze the normally distributed factors: the three self-efficacy factors and the factor concerning children with attention deficiency and behavior problems. Spearman's correlation was used to analyze the abnormal distribution in the remaining factors: children with special and intensified support and work experience years. For exploring teaching experience in relation to the perceived levels of teacher self-efficacy in behavior management, collaboration and student engagement, a One-Way Analysis of variance (1-ANOVA) was used.

2.4 Ethical Issues

The *ProKoulu* research team requested and was granted ethical approval from the Ethical Board of the University of Eastern Finland, concerning the implementation of the intervention plan. The project follows good scientific practice as defined by the Finnish guidelines on Responsible Conduct of Research (Finnish National Board on Research Integrity, 2012). A detailed cover letter was sent to all teachers and parents of children about the purpose of the

project and the confidentiality of the material collection. All children who responded to the questionnaire had parental permission and the children also expressed their willingness to participate. Written consent was also received from all participating teachers.

The collected data has been anonymized in a way that no individual participant can be identified, in accordance with the General Data Protection Regulation. In this regard all names have been replaced by a numerical sequence. The electronic data files are kept safe behind locked doors under supervision of the project's leading professors. Only after signing a confidentiality contract, selected students are given access to a small part of this data that concerns the area of their research. As a researcher one is bound to a code of confidentiality and integrity. Having no affiliation to the project or any form nor a conflict of interest, allows the researcher to conduct the study and present the findings in a transparent and reliable way (Hirsjärvi et al., 2009).

3   RESULTS

An overview of the scope of study variables that have been analyzed is provided in Table 1 and is described in more detail in this paragraph. The classroom teachers (N=409) that participated in this study had more than 17 years of teaching experience on average (Table 1). Most teachers reported having 1-2 students in their classroom receiving intensified support. Some classroom teachers however, had up to nine students in this first tier of the support system. Ordinarily the number of students receiving special support per classroom was slightly lower (0-1), with a few exceptions of up to 11 students falling under this second tier of the support system. Students with attention deficiency/behavior problems appeared to be the most represented category with an average of about 2-3 pupils per classroom.

In these 68 schools there were a total of 618 students receiving intensified support, 246 receiving special support, and 1171 identified as having attention deficiency/behavior problems reported by classroom teachers. Lines four to six in table 1 show the perceived self-efficacy of the responding classroom teachers. It is worth noting these teachers report higher levels of perceived self-efficacy in the areas of collaboration and behavior management than of perceived self-efficacy in student engagement (Table 1).

TABLE 1. Descriptives of the study variables.

Study variables	Mean	SD	Min	Max
1. Students with intensified support (N=409)	1.51	1.57	0	9
2. Students with special support (N=408)	.60	1.40	0	11
3. Students with attention def. / behavior prob. (N=406)	2.88	2.02	1	11
4. Self-efficacy in behavior management (N=398)	7.22	.91	1	9
5. Self-efficacy in collaboration (N=398)	7.03	.97	1	9
6. Self-efficacy in student engagement (N=398)	6.65	.97	1	9
7. Years of teaching experience (N=409)	17.65	8.90	0	38

3.1 Variance in Student Diversity Related to Levels of Perceived TSE

Table 2 shows that there is a significant negative correlation ($r = -.21$, $p < .001$) between the number of students with attention deficiency / behavior problems and teachers´ perceived self-efficacy in behavior management. This indicates that the higher the number of students in a classroom that struggle with attention deficiency and behavioral issues, the lower the level of perceived teacher self-efficacy in behavior management. The number of students with intensified or special support however, does not appear to be associated with any of the self-efficacy variables or amount of teaching experience. This indicates that the levels of teacher self-efficacy are not affected by the number of students in the second and third tier of the support system. A significant correlation can be seen between teacher self-efficacy in behavior management and self-efficacy in collaboration and student engagement. Teachers that reported higher levels of self-efficacy in behavior management also reported high levels of self-efficacy in collaboration and student engagement.

The non-overlapping confidence intervals show that the mean level of teachers' efficacy in managing behavior (95% CE 7.13-7.31) is slightly higher than the self-efficacy level in collaboration (95% CE 6.93-7.12). The level of student engagement is lower than both of the confidence intervals above (95% CE 6.55-6.74).

Table 2 is a correlation matrix that shows the correlation coefficients between the seven variables that are also listed in table 1. These seven variables are positioned along the x and y axis in table 2. Spearman's correlation is used to relate students with intensified and special support to teachers´ years of experience. Pearson's correlation is used to relate students with attention deficiency to teachers' self-efficacy in managing behavior, collaboration, and student engagement

TABLE 2. Correlations between study variables.

Study variables	1	2	3	4	5	6	7
1. Students with intensified support	1						
2. Students with special support	.08	1					
3. Students with attention def. /behavior prob.	.24***	.21***	1				
4. Self-efficacy in behavior management	-.04	-.03	-.21***a	1			
5. Self-efficacy in collaboration	.04	.02	-.03a	.40***a	1		
6. Self-efficacy in student engagement	.02	-.02	-.05a	.54***a	.72***a	1	
7.Teachers´ years of experience	-.10	-.07	.02	.16**	.02	.06	1

* p < .05   ** p < .01   *** p < .001

a = Pearson's correlation, otherwise Spearman

3.2 Teaching Experience Associated with Perceived TSE Constructs

Table 3 shows the results of a one-way ANOVA analysis in respect to the relationship between teachers' work experience and the TSE domains. It also shows that work experience is related to teacher self-efficacy in behavior management; in that teacher's with more than 10 years of work experience reported higher levels of self-efficacy in behavior management than teachers with only one to five years of experience. There was no significant difference between the other categories of work experience in relation to behavior management. Teachers with more than one year of teaching experience reported higher levels of self-efficacy in collaboration than those who are just starting their teaching career. However, the number of respondents in the first category (having up to one year of teaching experience), was only five, so it could be that a larger number would show a different result. The amount of work experience that a teacher has, was not associated with his/her perceived level of self-efficacy in student engagement.

Table 3. One Way ANOVA of the relationship of work experience categories with the self -efficacy variables, including Means (M) and standard deviations (SD). N=398

Work experience	Self-efficacy in behavior management		Self-efficacy in collaboration		Self-efficacy in student engagement	
	M	SD	M	SD	M	SD
1. 0-1 years (N=5)	6.60	.89	5.47	2.08	5.95	.89
2. 1-5 years (N=50)	6.78	.77	6.85	.80	6.43	.78
3. 6-10 years (N=57)	7.25	.97	7.30	.86	6.75	1.02
4. 11-15 years (N=61)	7.30	.88	7.13	.89	6.73	.82
5. 15+ years (N=225)	7.22	.91	7.01	.99	6.66	1.02
$F_{(4,393)}$	4.24		5.18		1.62	
p-value	.00		.00		0.17	
Effect size	.041		.050		.016	
Pairwise comparisons	2<4,5		1<2,3,4,5		-	

4   DISCUSSION

The aim of this study was to find out if the variance in student diversity in Finnish mainstream classrooms is related to the level of teachers´ perceived self-efficacy. The second goal was to discover if the amount of teaching experience that a teacher has is associated with his/her level of perceived self-efficacy (concerning behavior management, collaboration and student engagement) in an inclusive setting. The main findings are discussed below and how they relate to the already existing research data within the field of education.

4.1 Results and Conclusions

The main findings of this study show that when a mainstream classroom in Finland contains many pupils with attention deficiency and behavior problems, this generally also means that teachers' perceived self-efficacy in behavior management is reported to be lower than that of their colleagues with less of this specific population. Striking however is that the number of students in the second and third tier of the support system, is not related to the levels of perceived TSE in the areas of collaboration, behavior management and student engagement. Having students with special needs in the classroom, does not appear to diminish the level of TSE, rather it is the presence of the students with attention deficiency and behavior issues that negatively correlates with TSE in behavior management. Interestingly enough, teachers with high levels of teacher self-efficacy in behavior management, will most likely experience high levels of TSE across the board, also in the areas of collaboration and student engagement. The years of teaching experience does have some influence on TSE, generally the level of TSE goes up with the amount of teaching experience in the areas of behavior management, student engagement and collaboration reaching its' peak by around 10-15 years of experience, however there is a slight decline that follows towards the end of a teaching career.

It is possible that the negative correlation of self-efficacy in behavior management with the number of students with attention deficiency and behavior problems, could be derived from the fact that Finnish teachers have not received much training in positive behavior interventions since this has not been an integral part of their training program (Honkasilta et al., 2014). In fact, a recent study by Närhi and co-authors (2022) examined the content of multiple teacher training programs in Finland and found that there are very few courses that address behavior management and positive behavior interventions in any way. This may result in Finnish teachers focusing on unwanted behavior by using punitive methods such as reprimanding and detention, which have not proven to be an effective response to conduct issues (Saloviita, 2018).

There are several reasons why behavior management has not been an integral part of teacher training programs, even though it is generally seen as an essential skill in creating an environment conducive to learning (Stevenson et al., 2020). There has been an existing belief among teachers that behavior management is considered an inborn skill, which not all individuals are equipped with. Those to whom managing a classroom does not come naturally, often feel inferior to their colleagues that excel in this area (Minor et al., 2002). It is argued that since teaching happens largely through the personality of the teacher (Kim et al., 2019), and everyone has their own unique way of approaching a class, it is therefore difficult to lay down any universal guidelines, because what is effective for one teacher may not work for the next (Perera et al., 2018). This viewpoint has been challenged however with the notion that behavior management is a skill that can indeed be learned and improved over time. There are training programs in various countries that have found ways to teach a wide range of skills pertaining to behavior management (Moore et al., 2017; Gagnon et al., 2021). The incorporation of both theory and practice of behavior management is becoming an essential part of teacher training syllabi (Flower et al., 2017; Reddy et al., 2013).

Studies conducted among novice and experienced teachers also show that there is a clear increase in competence and level of TSE in the area of behavior management as teachers consistently practice these skills in numerous classroom situations over the years (Wolff et al., 2017). Schwarzer and Hallum (2008) indicate that young adults with low TSE at the start of their teaching career, are more likely to eventually burn out. Kim and Bruić (2020) closely examined the direction of the prediction of TSE relating to burnout and found that burnout is the predicting factor of TSE rather than the other way around. Aspects that may contribute to low TSE are low self-concept, the way a person views themselves and perfectionism, the high demands or expectations a person has of themselves. This perception and judgement of oneself, greatly effects the interpretation and evaluation of ones´ actions (Neff, 2003). A person may in fact be very competent in their job, but if they practice harsh judgement of themselves, they might still feel like they are not achieving high enough and cast doubt on their ability to achieve a desired outcome (Fabriz et al., 2021).

Some novice teachers equate their success in a certain area such as behavior management to the level of disruptive behavior, thus they interpret displays of their pupils' disrespectful behavior in the classroom as a failure on their part as a teacher to manage this behavior (Wolff et al., 2021). This can become debilitating and classroom situations might often feel like a power struggle, the teacher against the entire class (Kayıkçı, 2009). Teachers with more years of experience however, are seasoned in identifying behavior patterns accurately and are capable of responding promptly in ways that prevent disruptions. They continuously evaluate and interpret cues of ongoing actions and interactions within the classroom and draw the pupils' focus towards the significance of learning (Wolff et al., 2021). These teachers find ways to empower the pupils to grow in taking responsibility of their own learning process. They practice self-compassion and frequent balanced reflection, staying connected to those around them for support, continually finding ways to be resilient and stay motivated as a teacher (Neff, 2003). Ultimately the classroom teacher has the greatest responsibility and a position of autonomy when it comes to managing

their classroom (Haapaniemi et al., 2021). The development of teaching skills over the years aligns with the findings of this study that confirm that the level of TSE in student engagement, behavior management and collaboration grows over time up to about 15 years of experience.

The discovery that the number of children in the second and third tier of the support system was not related to the level of teacher self-efficacy seemed contrary to the general perception of the effects of inclusive education. As often the message from classroom teachers seems to be that the inclusive education agenda has burdened them a lot (Saloviita & Pakarinen, 2021). However, the studies highlighting the negative impact of inclusive education focused more on teacher wellbeing and burnout within an inclusive setting rather than TSE relating to student diversity (McKay, 2016; Puertas Molero et. al., 2019). The attitudes towards inclusive education have also been studied in various countries and found that their mindset greatly effects how a teacher is able to approach and accommodate children with special needs (Engelbrecht & Savolainen, 2014, 2018; Moberg et al., 2020). Savolainen and co-authors (2020) have found that there is a correlation between attitudes and teacher self-efficacy in that self-efficacy is the driving factor that will in turn influence the attitude.

The fact that Finnish classroom teachers' levels of TSE were high in all these areas is understandable because teachers continuously practice these skills when dealing with classroom situations and children in the support system. In fact, the presence of children in the classroom needing intensified and special support greatly increases the involvement of teachers in many ways. Specifically, student engagement and collaboration with caretakers and other professionals is directly impacted (Mora-Ruano et al., 2019). The comprehensive school setup in Finland enables most classroom teachers to have access to support on a school wide level from colleagues, the school principal and other professionals (Eteläpelto, 2015). Behavior management comes into play in each classroom situation as the teacher's objective is to create coherence among the diversity of its' pupils.

Since research has shown that a high level of TSE is often associated with the effective accommodation and teaching of children with special needs in mainstream classrooms, this can be seen as vital asset of inclusive education (Sharma et al., 2012). In order to be able to improve and develop TSE it is important to gain a deeper understanding of its sources, drivers, and dimensions. As discussed in the introduction (1.3) there are several sources that have influence on the level of self-efficacy a person experiences, these are: mastery experiences, verbal persuasion, vicarious experiences, psychological and effective states, and imaginal experiences. Since mastery experience is the strongest predictor of TSE, this should be in the forefront of the teacher training program (Wilson et al., 2018).

The findings of this study may be able to advocate for inclusive education although it is important to note that one cannot postulate that a similar result can be expected in other countries with vastly different socio-economic factors, considering that Finland has already taken many steps on the journey towards more inclusivity.

4.2 Limitations

As part of the data collection, the classroom teachers responded to a questionnaire in which they were asked to indicate how many children in their classroom are in the second and third tier of the support system. This number can be derived easily from pupils' files, since these children typically haves some form of pedagogical assessment and personalized learning plan in place. Another question however, inquired after the number of children in the classroom that struggle with attention deficiency and behavior problems. The response to this question is mainly based on the subjective experience and observations of the classroom teacher, not so much on a specific assessment such as an ADHD test. A co-teacher of the same class may have reported a different number based on their own understanding and interpretation of the children's behavior in the classroom.

It is possible that there are multiple instances where a child has been counted into a special- or intensive support category as well as among those that have attention deficiency and behavior problems. Because this distinction of categories does not clearly emerge from the data, this possibility of belonging to more than one category may have some influence on the outcome of the analysis. On the other hand, this dataset contains responses from approximately 400 different classroom teachers and therefore has some credibility due to its' vast numbers.

During the analysis it became apparent that categories relating to the years of experience a teacher has, could have been divided differently. There were only five teachers in the first category 0-1 year of experience, and more than half of the classroom teachers were in the last category of, more than 15 years of experience, which made it difficult to get a balanced view of the data. Had there been more years of teaching categories after 15 years, it would have become more apparent where the decline in TSE starts to take place towards the end of a teaching career. Research shows that a general tendency is that TSE increases in the beginning and mid-phase of the career and decreases in the final career years (Klassen & Chiu, 2010).

This study does not include what type of pedagogy the teachers were employing at the time of the data collection, nor what effect it was having on the behavior of the children. It is possible that some teachers were already implementing inclusive practices while others were not. It is also difficult to estimate if the prospect of participating in a school wide positive behavior program made the teachers feel apprehensive or excited and whether this is reflected in how they perceive and rate their teacher self-efficacy at the beginning of the *ProKoulu* project.

4.3 Future Research

In this correlation study, no conclusive statements can be made on the causality of the relation between the following two factors; it may be the high number of

students with disruptive behavior that causes teachers to have a lower perception of their behavior management skills, or possibly vice versa where a teacher's low sense of self-efficacy in behavior management may have resulted in a higher number of students with behavior issues. Afterall the number of students perceived as having behavior problems, was a subjective value offered by classroom teachers. It could also be possible that these two factors alternate depending on the situation or other factors, which ultimately determine their causality. Further research in this area could also reveal the causation in the correlation between the perceived self-efficacy in behavior management, collaboration, and student engagement.

Since the very nature of self-efficacy is the belief to be able to influence outcomes by one's own action in a specific situation, this can be looked at through an even narrower lens which applies not only to a certain class, but also to individual students. This means that the self-efficacy a teacher experiences regarding a pupil with behavior issues, will probably be lower than the TSE relating to other pupils (Schwab, 2019). So, a teacher's overall perception of their self-efficacy relating to managing a certain class may be brought down by a few individuals with behavior problems. In future studies it would be beneficial to take this dyadic aspect into account and measure teacher self-efficacy not only on a classroom level but also in how it relates to individual learners.

In order for the implementation of inclusive practices to advance, it is essential to discover what positive behavior models classroom teachers should adopt in order to improve their self-efficacy in behavior management. Since having a high level of TSE in behavior management often means that the level of TSE in student engagement and collaboration is also high, it is crucial to discover in what ways these levels of TSE can be raised. Further examining the sources of self-efficacy and finding ways to integrate these aspects into the teacher training program can be a key to raising the level of TSE effectively.

Since teachers play a vital part in creating a more inclusive society, it is important that they receive the necessary training and support throughout their careers that enable them to embody what it means to successfully embrace diversity by creating a sense of belonging among all children. Their mission is that future generations will grow up to be valued and respected members of our society, that replicate what they have been modeled; in that they too, accept and honor diversity.

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