Faculty of Educational Sciences
University of Helsinki

CHARACTER STRENGTH INTERVENTIONS

Introducing, developing, and studying character strength teaching in Finnish education

Kaisa Vuorinen

DOCTORAL DISSERTATION

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Custos
Adjunct Professor Lotta Uusitalo, University of Helsinki

Supervised by
Adjunct Professor Lotta Uusitalo, University of Helsinki
Professor Kristiina Kumpulainen, University of Helsinki

Official Opponent
PhD, Senior lecturer Shiri Lavy, University of Haifa, Israel

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ABSTRACT

This study arose from the need for new knowledge and materials to apply positive education and character strength teaching in Finland. One of the promises in the Finnish National Core Curriculum (2014, p. 14) is that *every student has the right to grow into his or her full potential as a human being and as a member of society*. However, one of the main challenges in any educational organization is how to nurture students' capacity to fulfill their potential. The goal of positive education is to make every learner aware of their own strengths, also the capabilities that are not typically visible in traditional schoolwork.

This thesis examines how usage of students' personal strengths is related to their happiness and how character strengths can be taught to students and teachers to benefit their social skills and well-being. As part of the thesis, two new character strength intervention programs with a lot of practical material were developed for both students and teachers. The theory base in this thesis comes from positive psychology (Seligman & Csíkszentmihályi, 2000), the paradigm that focuses on the positive aspects of life, and its educational applications.

This thesis consists of three original studies. First the link between the usage of personal strengths and general happiness was examined with a sample of Finnish 10-16-year-old students (n=418). Second, the usage of personal strengths, social skills and well-being in students aged 10-13 (n=175, of which 17 had special needs) was promoted via a controlled 16-week character strength intervention that was developed for the purpose. And finally, in Study 3, it was researched how character strengths, particularly compassion, can be explicitly taught in a six-week controlled intervention for early childhood head teachers (n=95).

The first main finding was that the students' usage of their personal strengths is related to their general happiness, both directly and indirectly via school-related happiness and school engagement. A total of 53 percent of students' overall happiness could be explained by the structural equation model specified for the purpose. The result shows the importance of being able to use one's personal

strengths in schoolwork and it reveals one of the potential factors capable of fostering positive school experiences and happiness.

The second key finding came from the intervention study that evidenced that all boys in the whole intervention group improved in anti-aggressive behavior and in consistency of interest with statistical significance. The girls in the mainstream intervention group showed a statistically significant increase in empathy and perseverance of effort. The students with special needs seemed to benefit from explicit character strengths teaching, however with no statistical significance.

In addition, improved teacher-student and student-student relationships were documented by the teachers. The teachers who implemented the intervention expressed great satisfaction in their interviews. They praised the improved social cohesion among their students and a positive change in their pedagogical working habits as teachers.

The third main finding in the thesis was that the early childhood head teachers' participation in the character strengths intervention brought a significant increase in their identification and usage of personal strengths. Additionally, the teachers reported advanced skills in creating a more compassionate, supportive organizational culture in early childhood education and care (ECEC) settings.

To conclude, adopting a strength-based approach in schools and in ECEC settings and equipping students and teachers with character strengths knowledge seems to promote their well-being. However, running interventions and testing new pedagogies is a challenging task. These challenges are discussed in this thesis. The thesis adds to both the theoretical and practical development of character strengths teaching and teacher education. Given the importance of teaching well-being-related skills to students with special needs, one suggestion of this thesis is to consider the role of positive education in greater depth in inclusive classrooms. In addition, knowing the salience of ECEC to young children's well-being and learning, a strength-based approach should be promoted early on.

In the last chapter of the thesis, implications for future studies and practices are suggested. This thesis has relevance for researchers in the field of positive education, special education, inclusive education, and basic education. It also includes ideas for guidelines for teacher education, policy makers and school principals, teachers, and other stakeholders to promote strengths education in school and in ECEC settings.

Keywords: positive education, character strengths, well-being, happiness, intervention study, children with special educational needs

Helsingin yliopisto
Kasvatustieteellinen tiedekunta

Kaisa Vuorinen

Luonteenvahvuusinterventiot
Luonteenvahvuusopetuksen esittely, kehittäminen ja tutkiminen suomalaisessa kasvatuskentässä.

TIIVISTELMÄ

Tämä tutkimus syntyi tarpeesta saada uutta tietoa ja käytännönmateriaalia positiivisesta kasvatuksesta ja luonteenvahvuuksien opettamisesta Suomessa. Perusopetuksen opetussuunnitelman perusteiden arvopohjan mukaan jokaisella oppilaalla on oikeus kasvaa täyteen mittaansa ihmisenä ja yhteiskunnan jäsenenä. (OPH, 2014, s. 15). Yksi suurimmista kasvatusorganisaatioiden haasteista on kuitenkin onnistua edistämään jokaisen oppilaan mahdollisuuksia tavoittaa koko potentiaalinsa. Positiivisen kasvatuksen tavoitteena on auttaa jokaista oppijaa tulemaan tietoiseksi omista vahvuuksistaan, myös niistä kyvyistä, jotka eivät perinteisessä koulutyössä tavallisesti pääse esiin.

Tässä väitöstutkimuksessa selvitetään, miten oppilaiden henkilökohtaisten vahvuuksien käyttö on yhteydessä heidän onnellisuuteensa ja miten luonteenvahvuuksia voidaan opettaa oppilaille ja opettajille heidän sosiaalisten suhteiden ja hyvinvointinsa edistämiseksi. Osana väitöskirjaa oppilaille ja opettajille kehitettiin kaksi uutta, runsaasti käytännönmateriaaleja sisältävää luonteenvahvuusinterventiota. Väitöstutkimuksen teoriapohja kumpuaa positiivisen psykologian paradigmasta (Seligman & Csíkszentmihályi, 2000), joka keskittyy elämän positiivisiin seikkoihin ja niiden kasvatuksellisiin sovelluksiin.

Väitöskirjassa on kolme alkuperäistä tutkimusta. Ensimmäisessä tutkimuksessa selvitettiin 10–16-vuotiaiden oppilaiden (n = 418) henkilökohtaisten vahvuuksien ja yleisen onnellisuuden välinen yhteys. Toisessa tutkimuksessa edistettiin 10–13-vuotiaiden oppilaiden (n = 175, joista 17:llä oli tehostetun tai erityisen tuen tarve) henkilökohtaisten vahvuuksien käyttöä, sosiaalisia taitoja ja hyvinvointia 16 viikkoa kestäneen tarkoitusta varten kehitetyn kontrolloidun luonteenvahvuusintervention avulla. Kolmannessa tutkimuksessa selvitettiin, miten luonteenvahvuuksia, erityisesti myötätuntoa, voidaan opettaa kuuden viikon kontrolloidulla interventiolla varhaiskasvatuksen johtajaopettajille (n= 95).

Väitöstutkimuksen ensimmäinen päätulos oli oppilaiden henkilökohtaisten vahvuuksien käytön yhteys heidän yleiseen onnellisuuteensa, sekä suoraan että

kouluonnellisuuden ja kouluinnon välittäminä. Tarkoitusta varten muodostettu rakenneyhtälömalli selitti kaikkiaan 53 prosenttia oppilaiden yleisestä onnellisuudesta. Tulos osoittaa omien vahvuuksien käytön tärkeyden koulutyössä ja yhden tekijän, jolla positiivisia koulukokemuksia ja onnellisuutta voidaan lisätä.

Toinen päätulos saatiin oppilaille kehitetystä interventiotutkimuksesta. Sen mukaan kaikkien interventioon osallistuneiden poikien aggressivisuus väheni ja kiinnostuksen pysyvyys kasvoi tilastollisesti merkitsevästi. Yleisopetuksen tytöillä, jotka osallistuivat interventioon, empatia ja peräänantamattomuus olivat kasvaneet tilastollisesti merkitsevästi. Lisäksi näytti siltä, että oppilaat, joilla oli tehostetun tai erityisen tuen tarpeita hyötyivät luonteenvahvuusopetuksesta, kuitenkin ilman tilastollista merkitsevyyttä.

Kolmas päätulos oli varhaiskasvatuksen johtajaopettajien merkitsevästi kasvanut kyky tunnistaa ja käyttää henkilökohtaisia vahvuuksiaan luonteenvahvuusintervention jälkeen. Lisäksi opettajat kertoivat taitojensa kehittyneen myötätuntoisemman, kannustavan organisaatiokulttuurin tukemisessa varhaiskasvatusyksikössään.

Kaikkiaan näyttää siltä, että vahvuusperustaisen lähtökohdan omaksuminen varhaiskasvatuksessa ja kouluissa ja opettajien ja oppilaiden luonteenvahvuuksia koskevan tietämyksen lisääminen edistää heidän hyvinvointiaan. Intervention ja uuden pedagogiikan testaaminen on kuitenkin haastava tehtävä. Näitä haasteita ja tutkimuksen rajoitteita pohditaan väitöskirjassa.

Tämä väitöskirja lisää sekä teoreettista tietoa että käytännön osaamista luonteenvahvuuksien opettamisesta ja opettajankoulutuksesta. Hyvinvointitaitojen opettamisen tärkeydestä johtuen, yksi väitöstutkimuksen tuottama ehdotus on positiivisen kasvatuksen lisääminen inklusiivisissa luokkahuoneissa. Lisäksi koska varhaiskasvatuksella on merkittävä rooli pienten lasten hyvinvoinnin ja oppimisen tukemisessa, vahvuusperustaista pedagogiikkaa tulisi harjoittaa jo päiväkodeissa.

Väitöskirjan viimeisessä luvussa ehdotetaan tulevaisuuden tutkimuksen ja käytännöntoimien suuntaviivoja. Väitöstyön anti osuu positiivisen kasvatuksen, erityispedagogiikan, inklusiivisen kasvatuksen ja perusopetuksen kentille. Väitöskirja antaa tietoa opettajankoulutukseen, koulutuspolitiikkaan, rehtoreille, opettajille ja muille toimijoille luonteenvahvuuskasvatuksen edistämiseksi kouluissa ja varhaiskasvatuksessa.

Avainsanat: positiivinen kasvatus, luonteenvahvuudet, hyvinvointi, onnellisuus, interventiotutkimus, erityistä tukea saavat lapset

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Many people can point to a teacher or school experience that changed their lives positively. I became interested in positive education and character strengths teaching when I was a recently graduated special needs teacher. I realized that I had not received much training on teaching from "what is right with you?" and on students' strengths. I needed knowledge on how to support my students' socio-emotional development and identify and cultivate their positive potential. Luckily, I met Lotta Uusitalo in 2014 at the University of Helsinki. Lotta had an idea to conduct a study into character strengths teaching. I remember Lotta giving me a book entitled *Strengths Gym* and saying, "why don't you replicate this intervention in Finland?" Today, eight years later, after training thousands of teachers and educators globally, this has convinced me that educators and students truly benefit from this approach and the more positive and human-centered approach in teaching.

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On my way to Lapland by train, 8 April, 2022

Kaisa Vuorinen

CONTENTS

LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications:

1. Vuorinen, K., Hietajärvi, L., & Uusitalo, L. (2021a). Students' usage of strengths and general happiness are connected via school-related factors. *Scandinavian Journal of Educational Research*, *65*(5), 851-863. https://doi.org/10.1080/00313831.2020.1755361

2. Vuorinen, K., Erikivi, A., & Uusitalo-Malmivaara, L. (2019). A character strength intervention in 11 inclusive Finnish classrooms to promote social participation of students with special educational needs. *Journal of Research in Special Educational Needs*, *19*(1), 45-57. https://doi.org/10.1111/1471-3802.12423

3. Vuorinen, K., Pessi, A. B., & Uusitalo, L. (2021b). Nourishing Compassion in Finnish Kindergarten Head Teachers: How Character Strength Training Influences Teachers' Other-Oriented Behavior. *Early Childhood Education Journal*, *49*(2), 163-176. https://doi.org/10.1007/s10643-020-01058-0

1 INTRODUCTION

This thesis addresses the challenge of developing intervention programs to teach character strengths to students and teachers in the Finnish educational context to enhance their social skills and well-being. My main interests that prompted this study were: how can character strengths be taught through developing intervention programs? Furthermore, how can teachers support students in recognizing and using strengths?

Teaching is a demanding profession, and the twenty-first century is pushing teachers toward an even more complex teaching profession. According to the OECD (2020a), there is an urgent need to place *student well-being at the center of curriculum design and redesign* (OECD, 2020a, p. 3). The importance of socio-emotional skills and student well-being has increasingly come to the forefront, since many young people do not cope well (Kern & Taylor, 2021; Salmela-Aro et al., 2021). The COVID-19 pandemic has further emphasized the urgency to implement a holistic approach to education (OECD, 2020b; UNESCO, 2021) and the vital role schools have in teaching well-being-related skills (Waters et al., 2021). There is a widespread consensus of the need to promote education that develops responsible, compassionate individuals with *transversal* competencies, also referred to as 21st-century competencies, including character strengths and a wide variety of socio-emotional skills (FNAE, 2014, p.33; OECD, 2021a). Parallel demands have come from the United Nations (2015) in achieving the United Nation's SDGs, UNESCO (2021), World Health Organization (2021), The World Economic Forum (2020; see Lavy, 2020, for a review).

Accordingly, education is in the middle of a shift in focus, away from the initial emphasis on the pursuit of only academic success (OECD, 2019c). Given the time students spend in educational settings, schools are at the frontline having the potential and responsibility to promote well-being to students of all backgrounds (Seligman et al., 2009; UNESCO, 2021). This shift in education challenges teachers to promote in parallel students' academic, artistic and practical subject skills *and* factors nurturing well-being. When building child and student well-being, context is a crucial factor (Huebner et al., 2014; Upadyaya & Salmela-Aro, 2013). In school, the classroom is undeniably one of the most important contexts (Huebner et al., 2014) and its atmosphere is likely to strongly influence student well-being (Waters, 2021). So it is in early childhood and care (ECEC) settings (Ranta, 2020a). Teachers are the most important in-school factor impacting student outcomes (Hattie, 2009; Roorda et al., 2011). Teachers need new competencies to create classrooms where students can flourish (Talvio & Lonka, 2019). Hattie (2009) stresses the nature of the teacher-student relationships and the quality of teaching, emphasizing trust,

caring, and safety as the core of successful learning. At the same time, teachers regularly manage tough social situations and stressful teaching conditions, such as student misbehavior, various modes of ill-being, difficulties with students' families, and truancy, resulting in stress and negative emotions in teachers (Saloviita & Pakarinen, 2021; Yoon, 2002).

This study was conducted in Finland, where teachers have reported much of the above. For example, weaknesses in how teacher education prepares its graduates to control *disruptive behavior in the classroom or manage the needs of more challenging students* has been mentioned (OECD, 2014; Lavonen, 2018, p. 8). It appears that there is a strong demand for teacher education to update its approach to give more knowledge and new angles on how to manage diverse learning groups with children and youth with various needs.

1.1 Historical background for positive education

Child-centered pedagogical movements that focuses on children's needs and interests emerged during the first half of the 20th century, including Freinet pedagogy (first introduced in 1924, Schlemminger, 1999), Froebelian pedagogy (Froebel, 1989), Montessori pedagogy (Lillard et al., 2017), Steiner pedagogy (in 1919, Nielsen, 2003), and Reggio Emilia pedagogy (Mansikka, 2019). In 1938 (p. 10), John Dewey concluded that *the purpose of education is to allow each individual to come into full possession of his or her personal power.* However, the dominating pedagogy was more or less behavioristic and based on controlling students with rewards or punishments (Dolly, 1975). During the 1960s, humanistic psychology was born as a response to behaviorism (Moss, 2001). In the heart of humanistic psychology was the idea that there is potential in every human being and people can make good decisions when their basic needs are met. Furthermore, the humanistic psychologists viewed students as inherently good (Rogers, 1957) and they stated that education should encourage students to believe in their capacities (Kirschenbaum, 1982).

For humanistic psychologists, the good life comes from *self-actualization* (e.g., Maslow, 1954) and focuses on human virtues. The premise of humanistic psychology was that for a person to grow, an environment with genuineness, acceptance, and empathy is needed. Maslow wrote about the importance of psychology to focus on human potential instead of solely on the negative, such as shortcomings. Maslow was probably the first to introduce the term "positive psychology" (in his book *Motivation and Personality,* 1954). Alongside Maslow, one of the best-known humanistic psychologists was Rogers who elevated the importance of unconditional positive regard when developing self-concept (1959). Consequently, as early as in the 1960s, teachers who fostered positive and warm

relationships with their students created classroom environments more conducive to learning and meeting students' developmental needs (Rogers, 1959).

Positive psychology is an umbrella term for the study of human flourishing including *positive emotions, positive relationships, engagement, meaning in life, and accomplishments* (*PERMA* theory, Seligman, 2011) to promote individual and group potential to experience wellbeing (Seligman & Csíkszentmihályi, 2000). Studies of virtues and character strengths and enabling institutions, such as schools, make the backbone of research in positive *education*, one of the strongest branches in the field of positive psychology. The paradigm started to spread from the beginning of the 21st century, mainly due to the work of Martin Seligman and his colleagues. They emphasized that focusing only on ill-being had not guaranteed well-being but intentional attention needed to be paid to factors that contribute to a fulfilling, optimal life (Seligman & Csíkszentmihályi, 2000).

Building character is anchored in the Greek philosophers' work on human potential and the pursuit of what is good and virtuous. Aristotle's theories of human development have been a long-standing influence and inspiration to character strength teaching. Education should help students discover and build positive personal character strengths and virtues, to lead a flourishing life (see e.g., Aristotle, 2009; Jubilee Centre, 2017, Coppley & Niemiec, 2021).

Positive education values a good atmosphere and flourishing in the classroom (see e.g., Kern & Wehmeyer, 2021a, White & Kern, 2018). Positive education studies pedagogical efforts that increase students' engagement, resilience, character strengths, optimism, well-being and sense of meaning (Seligman et al., 2009). In the literature, the concepts of positive education and positive pedagogy are often intertwined (Waters, 2021). For example, in early childhood education, Ranta (2020b) suggests using the term "pedagogy" when referring to *teachers*. Correspondingly, the term "education" can be understood more broadly, that is, when referring to nursing staff and people with a bachelor's degree in social services working in the field of early childhood education and care (Ranta, 2020b, see also Kumpulainen et al., 2014).

Today, positive education has become an increasingly popular topic and is not an isolated movement, but it overlaps and shares similarities with several underlying constructs of social and emotional learning (SEL), positive youth development (PYD) and character education, among many others. According to Slemp and his colleagues (2017), *the vision, scope, and boundaries of positive education are yet to be fully defined, but it both intersects with and complements social and emotional learning* (2017, p. 103). SEL typically aims to improve five main sets of personal competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision making (for reviews, see; CASEL, The Collaborative for Academic, Social, and Emotional Learning, see Axelrod, 2010; Durlak et al., 2011). SEL represents an essential point-of-reference for the field of

positive education. In particular, *self-awareness* is an area of personal competence in which developing character strength knowledge and character strength usage are of high importance. The current study addresses social and emotional learning competencies using the lens of character strengths drawn from the VIA (Values in Action) Classification of Strengths and Virtues (Peterson & Seligman, 2004). The VIA classification is the most extensively researched model of character strengths currently available (see VIA Character Institute, 2021).

1.2 Teachers' and students' social skills and well-being

Today, the call to understand the role of teachers' pedagogical and social-emotional skills in well-being is timely. Numerous studies prove that a positive school environment is shaped by the social and emotional skills of those who teach and learn there (see e.g., Schonert-Reichl, 2017; Talvio, 2014, Waters, 2021; Zins et al., 2004). Teachers' social skills are an essential source for the well-being for teachers themselves, for their students, and the whole school community (Jennings & Greenberg, 2009; Talvio & Lonka, 2019; Lavy & Naama-Ghanayim, 2020; OECD, 2021a). Feeling cared for and being compassionately supported by others builds interpersonal resources that improve well-being, build resilience and buffer against stressors in the intense school life (Dutton et al., 2014; Eldor & Shoshani, 2016; Louis et al., 2016). In addition, when teachers can master the socio-emotional challenges in their daily work, teaching is rewarding, enjoyable, and successful (Schonert-Reichl, 2017). According to Grayson and Alvarez (2008), teachers who can develop and maintain positive relationships with their students are engaged at work and feel better. This is in line with the previous research suggesting that positive relationships with students is an important source for teachers' own occupational well-being (Milatz et al., 2015) and motivation for teaching (Hargreaves, 2000).

Prior research has found strong relationships between teacher pedagogy and student well-being (Van Petegem et al., 2007; Waters, 2021) and academic achievement (Roorda et al., 2011). This includes the quality of teacher-student relationships (Huebner et al., 2014; Kunnari & Lipponen, 2010), organizational and instructional practices (Baker et al., 2003), positive classroom atmosphere (Waters, 2021), teacher responsiveness to student needs (Hattie, 2009), the peer relationships enabled in class by teachers (Audley-Piotrowski et al., 2015), and teachers' social interaction skills (Talvio, 2014). The need for teachers to create a warm, tight connection with every student is explained through modern learning psychology that emphasizes the role of well-being for positive learning outcomes in students' (Hamre & Pianta, 2005; Hughes, 2011; Jennings & Greenberg, 2009; Lerkkanen et al., 2016) and positive classroom climates (Klassen et al., 2012; Talvio

& Lonka, 2019). Students who reported having positive relations with their teachers also viewed themselves as being more optimistic, curious, and achievement-focused compared to students whose relationships with their teachers were weak (OECD, 2021b). Contemporary perspectives of learning recognize the importance of emotions in learning. Warm and caring relationships between teachers and students are essential sources of positive emotions, such as joy, enjoyment, reward and gratitude (Klassen et al., 2012; Milatz et al., 2015). Furthermore, the child-centered teaching approach and the focus on teaching the "whole" child has had important implications for promoting student well-being through teacher pedagogy (Waters, 2021, UNESCO, 2021).

Equipping both teachers and students with social and emotional skills is important. Developing students' social and emotional skills through education is widely recognized (OECD, 2021a; UNESCO, 2021). For example, in Finland, the national core curriculum for basic education states that *during their years in primary education, the pupils are given opportunities to develop their emotional and social skills. The pupils grow to appreciate the importance of human relationships and caring for others* (FNAE, 2014, p. 21-22). No doubt, schools are one of the most critical contexts to develop and train social skills (OECD, 2021a). It has been suggested that having a comprehensive set of social skills plays a significant role in educational settings with multiple peers (Durlak et al., 2011; Hamre & Pianta, 2005; Seligman et al., 2009; Suldo, 2016). Well-working relationships, especially with peers, are connected with optimal learning outcomes, long-term school adjustment, and social and psychological well-being in all classrooms (Durlak et al., 2011; Spivak & Durlak, 2015). To sum up, through mutual experience of being cared for, respected, and having a sense of connectedness in interactions in the classroom, both students' and teachers' well-being may be fostered (Hargreaves, 2000; Huebner et al., 2014; Waters, 2021).

2 RESEARCH ON CHARACTER STRENGTHS

This thesis focuses on students' and teachers' well-being in the context of positive education. The central assumption is that character strengths are positively valued personality traits that enable pathways to human flourishing (Peterson & Seligman, 2004). A more conceptual and operational definition of character strengths was recently provided by Niemiec (2018), suggesting that character strengths are positive personality traits that reflect our fundamental identity, produce positive outcomes for ourselves and others, and contribute to the collective good (Niemiec, 2018). It is essential to distinguish between the very different categories of "strengths" in individuals: strengths in character, strengths of talent, strengths of interest, and strengths of skill (Niemiec & Pearce, 2020) or emotional and behavioral strengths (Lappalainen et al., 2009). To add clarity, the definition of strength adopted for the framework in the current thesis is that strengths are morally valued positive personal traits, routes to the great virtues (Peterson & Seligman, 2004).

Interest in human character was reviewed in the advent of positive psychology. In their seminal work *Character Strengths and Virtues, A handbook and classification*, Peterson and Seligman (2004) reformulated the Aristotelian theory of good character, one that strives towards virtuous living through exercising human capacities, that is, character strengths. Research has shown the significance of a good character as a building block for a versatile, satisfying, and happy life. Further, the character is a multidimensional part of our personality that other people tend to appreciate, admire, and that reflect our core identity. Character strengths represent a family of positive personality traits that are relatively stable across time and context (Peterson & Seligman, 2004, p. 23). Character strengths are shown in feelings, thoughts, and actions and they build the foundation of lifelong healthy development (Park, 2009). Character strengths are morally valued in their own right and can be manifested in the range of an individual's behavior. Thus, character strengths produce positive outcomes for the benefit of individuals and also societies.

Character strengths correspond with many of the transversal competencies, socio-emotional skills and the 21st-century competencies. An often used abbreviation for 21st-century competencies are the "4 Cs", *Creativity, Critical thinking, Collaboration,* and *Communication*. The 4 Cs or their close correspondents can be found in the set of the 24 VIA character strengths (Lavy, 2020; see Table 1).

2.1 Classification of character strengths

According to Peterson and Seligman (2004, p. 4), the pathway to a good character is accomplished through exercising character strengths. Character is not a ready or final result, but rather is dynamic and changeable over the life span. Likewise, as written by Peterson and Seligman (2004, p. 31), their classification of the 24 VIA character strengths is not an end product. Rather, it was intended to be a *starting point of an empirically based model describing the hierarchical structure of positive functioning* open to modification (McGrath, 2018, p. 4). As research emerges, specific virtues and strengths might be added, deleted, or combined. The VIA character strength conceptualization serves as the basis for character strength studies in the current thesis. The VIA (classification of 24-character strengths by Peterson and Seligman (2004) is based on six virtues: *wisdom, courage, humanity, justice, temperance,* and *transcendence* (Table 1).

Table 1. VIA Classification of character strengths (Peterson & Seligman, 2004, p. 29)

Virtue	Character strength
I Wisdom and Knowledge Cognitive strengths entail the acquisition and use of knowledge, thus enabling the realization of other virtues.	1 Creativity 2 Curiosity 3 Judgement 4 Love of Learning 5 Perspective
II Courage Emotional strengths involve the exercise of will to accomplish goals in the face of opposition, external or internal.	6 Bravery (valor) 7 Perseverance 8 Honesty 9 Zest
III Humanity Interpersonal strengths that involve tending to and befriending others, and are related to both one-to-one and broader relationships.	10 Love 11 Kindness 12 Social Intelligence
IV Justice Civic strengths that underlie healthy community life, and actualize especially in the relationship between an individual and the community.	13 Teamwork 14 Fairness 15 Leadership
V Temperance Strengths that protect against excess, such as hate, arrogance, short-term pleasure, and other extreme feelings.	16 Forgiveness 17 Humility 18 Prudence 19 Self-regulation
VI Transcendence Strengths that emphasize the connection to the larger universe beyond humanity (transcendence).	20 Appreciation of Beauty 21 Gratitude 22 Hope 23 Humor 24 Spirituality

The above-shown categorization of the character strengths is the most applied in the field of positive psychology. One of the essential criteria for character strengths is that their use is positive and teachable, they cannot be used up, and their use does not oppress others (Peterson & Seligman 2004, 53–107; see also Niemiec & McGrath, 2019). All character strengths fulfill the following 10 criteria:

1. A strength contributes to various fulfilments that constitute a good life, for the self and for others.
2. Each character strength is morally valued in its own right.
3. The display of strength by one person does not diminish anyone else.
4. It is not always easy to find the antonym of a character strength.
5. Strength must manifest itself.
6. The strength is arguably uni-dimensional, and it cannot be decomposed into parts that would be contained in other strengths.
7. Character strengths exist based on consensually recognized paragons of virtue.
8. Character prodigies exist. This criterion only applies to some strengths.
9. Lack of strengths also exists.
10. The development of character strengths can be supported in different ways.

In addition to the classification of virtues and character strengths (Peterson & Seligman, 2004), the categorization is followed by situational themes that specific character strengths are expressed in. According to Peterson and Seligman (2004, p. 14), *situational themes are the specific habits that lead people to manifest given character strengths in given situations,* be it school- or work-related. For example, when students are learning to wait for their turn (a situational theme) they are practicing self-regulation (Niemiec, 2018).

In sum, the 24 VIA character strengths are ubiquitous in their nature, as they try to describe what is best in human beings, in general. They are meant to provide a common, science-based language (Peterson & Seligman, 2004) at researching what works well, is strong and worth fostering in every person and in communities (Seligman & Csíkszentmihályi, 2000). In the current thesis, the VIA character strength categorization gives the basis for the studies. Thus, the idea that each character strength represents a certain virtue was adopted. Nevertheless, it was taken into account that the VIA strength set is not a stable construct but rather a starting point for character strength research. For example, in the current thesis and in all our research since 2015, we have defined compassion (not an original VIA character strength) as a character strength in its own right, not just a constituent part of kindness (Uusitalo-Malmivaara & Vuorinen 2016a,b; 2017; 2020a).

Studies of character strengths and their usage in various contexts has expanded. During the past 20 years more than 700 studies have been published based on the VIA Classification of character strengths (Peterson & Seligman, 2004; VIA Institute on Character, 2021). Furthermore, eight million people representing countries across the globe have now taken the VIA Survey (Coppley & Niemiec, 2021). Valued outcomes of character strengths usage have been studied and documented in various fields, such as positive work and organizational psychology, clinical psychology and education (Littman-Ovadia et al., 2021). In addition, character strengths-based interventions have generated considerable interest (Lavy, 2020).

2.2 Character strengths and well-being

An increasing number of studies have attested to character strengths in a range of facets of *subjective well-being*, a concept that is often replaced by *happiness* (Diener, 1984; Lyubomirsky & Lepper, 1999). Happiness is a concept with various interpretations and subcategories, the most common being hedonic and eudaimonic happiness (see e.g., Kashdan et al., 2008). The hedonic tradition defines happiness as feeling good, which involves pleasure attainment (Ryan & Deci, 2001). The eudaimonic approach is about functioning well in life and focusing on meaning and self-realization. While using one's character strengths, one seems to be at their best, achieve personal growth and optimal functioning, experience greater subjective well-being (Proctor et al., 2011a), experience flow and flourishing (for reviews, see Niemiec, 2013; Lavy, 2020). Curiosity, zest, love, gratitude, and hope, also called as "strengths of the heart" (Park et al., 2004, Peterson et al. 2007), are the strengths most significantly related to subjective well-being (see e.g., Hausler et al., 2017). Sometimes, they are called the "happiness strengths" (Hausler et al., 2017; Park et al., 2004; Park & Peterson, 2006).

Every human being possesses character strengths to various degrees. It is assumed that three-to-seven-character strengths are the most typical of the individual. These are called *signature strengths* (Peterson & Seligman, 2004, p.18). According to Peterson and Seligman (2004, p. 18), one critical criterion of a signature strength is intrinsic motivation to use the strength. In addition, individuals feel the excitement, authenticity, and a sense of ownership while using a signature strength. After using the signature strength, a person is invigorated rather than exhausted. Randomized, controlled studies (using five signature strengths versus five other character strengths or versus a placebo control condition, i.e., writing early memories), have supported that playing to one's signature strengths in new ways can contribute significantly to well-being (Proyer et al., 2015; see Schutte & Malouff, 2019, for a meta-analysis). The signature strength intervention

affected the satisfaction with life in general and the satisfaction with one's health. In addition, the signature strengths intervention was related to seeing *better general living conditions in various life domains*, including the leisure and social domains and life in general (Proyer et al., 2015).

In the early years of character strength studies, the research focused predominantly on character strengths *ownership*. However, since then, additional focus has been applied on *using* character strengths in specific contexts (Harzer & Ruch, 2012; 2013; Littman-Ovadia et al., 2017). It is hypothesized that the positive experiences, such as engagement and job satisfaction, are based on the extent to which the particular situational circumstances allow for character strengths usage on a daily basis. Furthermore, according to Proyer et al. (2015), using character strengths is related to adults adapting to the demands of different situations resulting in improved happiness. Niemiec (2018) states that *character strengths use functions both as an enabling and as a protective factor*. First, character usage prevents problems, for example, in decreases in depressive symptoms (Gander et al., 2013) and in building resilience to bounce back from difficulties in life (Niemiec, 2018). Furthermore, character strengths use is related to enhancing life satisfaction (Proyer et al., 2013), flourishing (Wagner et al., 2021), work-related outcomes (Littman-Ovadia et al., 2017) and social connectedness (Weziak-Bialowolska et al., 2021).

Moreover, it has been suggested that general character strengths use is related to positive work experiences and work-as-a-calling reports (Harzer & Ruch, 2012), coping at work (Harzer & Ruch, 2015) and psycho-emotional work-related outcomes, such as job satisfaction (Littman et al., 2016) and productivity at work (Lavy & Littman-Ovadia, 2017). Furthermore, according to Hone et al. (2015), the workers who used their strengths in character a lot were 18 times more likely to be flourishing than those who used their strengths least (Hone et al., 2015). In addition, early childhood educators succeed in resolving a wide range of workplace challenges by applying their character strengths (Haslip & Donaldson, 2021).

Importantly, as personal character strengths are seen as malleable, they can be explicitly taught to promote well-being. For example, Freidlin and Littman-Ovadia (2020) point out that the usage of character strengths to increase prosocial behavior at work has largely been neglected. As empirical research provides evidence that character strengths and prosocial behavior are related, the researchers suggest implementing programs targeted at character strengths development at work to foster positive prosocial behavior in individuals (Freidlin & Littman-Ovadia, 2020).

Similarly, introducing character strengths for youths and engaging them in exercises to build character strengths is related to increased levels of life satisfaction and well-being (Proctor et al., 2011b). Furthermore, children's and adolescents' school-related well-being seem to be affected by their character strengths (Weber et

al., 2016; Wagner, 2019; Wagner & Ruch, 2021). The following section will discuss the importance of the teaching of character strengths usage to students well-being.

2.3 Character strengths in education

The strengths-based approach in education comes from the idea that every student has potential and something strong to build on. Strengths in students can be addressed from the behavioral and emotional point of view (Lappalainen & Sointu, 2013; Sointu et al., 2017a,b) or from strengths in character (Park & Peterson, 2006). Many kinds of strengths can be nourished to improve student well-being and to empower students to accomplish personal goals with greater motivation (Epstein, 2000; Linkins et al., 2015; Lopez & Luis, 2009; Seligman et al., 2009). The importance of a many-sided strengths-based approach is recognized in Finnish studies (Lappalainen et al., 2009; Leskisenoja & Uusiautti, 2017, 2019; Ranta et al., 2020; Uusitalo-Malmivaara, 2014b). Also, in the Finnish national core curricula for basic education (FNAE, 2014) and for early childhood education and care (FNAE, 2016), strength-centeredness is mentioned.

Character strengths are not set in stone, but they can be further strengthened. This describes the shift from a deficit-centered pedagogy to a more positive approach emphasizing students' abilities (see e.g., Seligman et al., 2009; Sointu, 2014; Sointu et al., 2017b). Several studies have found positive outcomes for programs designed to develop students' character strengths. Explicit teaching of character strengths, such as kindness, hope, and enthusiasm, often makes the backbone of positive education interventions. These essential character strengths are significantly related to well-being (Toner et al., 2012). Among high school students, other-oriented character strengths (e.g., kindness, teamwork) predicted fewer depression symptoms while transcendence strengths (e.g., spirituality) predicted greater life satisfaction (Gillham et al., 2011). The *Strengths Gym* program developed by Proctor et al. (2011b), showed that students who participated in character strength interventions experienced increased life satisfaction compared to the controls (Proctor et al., 2011b). A study by Quinlan and her colleagues (2015), examined the effects of a six-session, character strengths program for 9-12-year-old students compared with non-randomized controls. After three months, the character strengths group scored significantly higher on class cohesion, relatedness, and need satisfaction. The students in the character strengths intervention group also scored lower on class friction and higher on positive emotion, classroom engagement, and strengths use (Quinlan et al., 2015). According to Oppenheimer and her colleagues (2014), eighth-grader students who participated in an intervention program involving five one-hour character strengths classroom activities had their well-being increased compared to those in a comparison group. In Finland, Leskisenoja (2016) conducted

a one-year-long positive education intervention in which finding strengths was one of the themes. In her study, positive school-related feelings, motivation, and thriving in the sixth-grade class were detected. In addition, the character strengths of perseverance and love of learning have been found to be impacting educational outcomes (e.g. Wagner & Ruch, 2015; Weber et al., 2016). Although teaching about character strengths in ECEC settings has gained growing interest globally, the research remains scarce. Shoshani and Slone (2017) studied the effects of a one-year-long positive education intervention for 3–6.5-year-old preschool children. The children in the intervention group showed significant increases in subjective well-being, empathy, prosocial behavior, and positive approaches to learning, with no significant changes in the control group (Shoshani & Slone, 2017).

There are far more intervention programs targeted at developing children's socio-emotional skills than their character strengths. Spivak and Durlak (2016) highlight that the interventions targeted at developing socio-emotional skills in children in the school context emphasize four key aspects *a) caring relationships with adults and peers, b) adults modeling and reinforcing prosocial characteristics, c) training in empathy and perspective-taking, and d) active learning approaches such as cooperative learning*. To some extent, these aspects overlap with character strength teaching (for example, in fostering kindness and other prosocial skills). However, character strengths entail more than just socio-emotional skills, that is, a broader range of personal traits and capabilities (Peterson & Seligman, 2004).

As character strengths can be learnt (Peterson & Seligman, 2004), they hold unique potential to be target variables when schools aim to foster individual and collective levels of well-being (Coppley & Niemiec, 2021; Lavy, 2020; Wagner, 2019). In particular, character strengths such as perseverance, self-regulation, curiosity, and love of learning, are important in terms of educational outcomes. These strengths are related to positive learning results (OECD, 2021b; Wagner & Ruch, 2015, 2021), positive classroom behavior (Wagner & Ruch, 2015) and in building competencies needed in the future (Lavy, 2020). Taken together, previous studies demonstrate consistent relation with positive experiences and school achievement with particular character strengths.

Although teachers deliver most character strength interventions, only a little attention has been directed to teachers' role in character strength intervention outcomes. Teachers are in a central position to meet the goals of positive education, and more precisely, strengths interventions (See e.g., White, 2021, pp. 166-199). The teacher's way of modeling character strengths in their pedagogy is critical to children's character and social-emotional education (Berkowitz & Bier, 2007). Gradišek (2012) suggests that teachers who identify and use their character strengths can support students to celebrate and develop similar strengths. Similarly, the importance for early childhood educators to recognize their character strengths to foster the development of character strengths among young children is emphasized

in the literature (Haslip & Donaldson, 2021; Lottman et al., 2017). According to Quinlan et al. (2018), the effectiveness of a character strengths intervention is mediated by teacher behavior and attitude towards character strengths and on strengths spotting. A recent study reported that changes in teacher strengths-spotting (the identification and subsequent explanation of character strengths identified in others) explained the outcomes of classroom engagement, positive affect, and needs satisfaction (Quinlan et al., 2018). Haslip and Donaldson (2021) found that children in early childhood education learn character strengths through observing teachers modeling character strengths usage in their work.

In addition to helping teachers promote students' character strengths usage, teachers need personal character strengths programs to support their own strengths usage to experience the benefit of the strengths approach (Lavy, 2020). Interventions for teachers typically focus on strengths knowledge starting from identifying teachers' own strengths, encouraging the strengths usage in new ways, and fostering a strengths mindset (Haslip & Donaldson, 2021; Lottman et al., 2017; Shoshani et al., 2016). Yet, little research has been conducted to examine the role of character strengths and teacher well-being. In addition, there has been little empirical research on the use of character strengths by early childhood educators (Lottman et al., 2017). In studies of pre- and in-service teachers, character strengths of hope, zest, and gratitude were found to be related to the teachers' life-satisfaction (Chan, 2009; Gradisek, 2012). In addition, research shows that character strengths are related with personal teaching efficacy in special education teachers (Lim & Kim, 2014). Harzer (2011) found out that the character strengths of curiosity, love of learning, love, fairness, and leadership were among the five highest strengths in teachers she studied. Furthermore, according to Harzer (2016), high levels of zest and hope are related to lower emotional exhaustion levels in teachers. It seems the character strength of hope is an excellent source of teachers' positive school experience (Weber, 2018). However, future research on teachers' character strength usage is needed both in ECEC settings and in schools (see e.g., Quinlan et al., 2012; Weber, 2018, p. 21).

Although positive experiences of character strength interventions start to accumulate, new knowledge and culturally fit adaptations are needed. Also, in some cases, research seems to lag behind the practice (Lavy, 2020). Research about character strength interventions in Finnish early childhood education and schools is scarce. The current thesis introduces two novel interventions to fill the gap in literature.

3 RESEARCH AIMS AND METHODS

3.1 Aims of the thesis

The overall aim of this thesis was to develop two character strength interventions (Studies 2 and 3) in the Finnish educational context to examine how character strengths can be taught to students and teachers. Furthermore, how participation in the interventions is related to participants' well-being and social skills was studied. To that end, the thesis begins by studying the connections between students' strengths usage and general happiness via school-related factors. This thesis consists of three peer-reviewed journal articles (see also Table 2).

The main aims of the thesis can be summarized in three research questions:

1. How is students' character strengths usage related to their well-being via school-related factors? (Study 1).
2. How can usage of character strengths be taught to students and teachers with novel intervention programs? (Studies 2 and 3)
3. How does participation in a character strength intervention promote well-being and social skills
   a. in students? (Study 2)
   b. in teachers? (Study 3)

Table 2. Overview of the research questions, design, instruments, participants, data analysis and purpose of the analyses

STUDY 1

Research questions	How is students' usage of strengths directly related to school engagement and school-related happiness? How is students' usage of strengths directly related to general happiness? How is students' usage of strengths indirectly related to general happiness through school engagement and school-related happiness?
Instruments	Strengths Use Scale (SUS, Govindji & Linley, 2007) Subjective Happiness Scale (SHS, Lyubomirsky and Lepper (1999) School Children's Happiness Inventory (SCHI, Ivens, 2007) School Engagement Inventory (EDA, Salmela-Aro & Upadaya, 2012)
Participants	Convenience sample of 418 students (212, females, mean age 11.7) from grades 4 to 9 in nine comprehensive schools in Southern Finland.
Data analyses	Structural equation modeling (SEM): Confirmatory factor approach (CFA) and a parallel mediation model. Estimator: Maximum likelihood with standard errors robust for non-normality (MLR) Model fit evaluated with chi-square value, root mean square error of approximation (RMSEA), standardized root mean residual (SRMR), comparative fit index (CFI), the Tucker-Lewis index (TLI) Reliability: Cronbach's alphas
Purpose of the analyses	Test how SCHI and EDA mediate the relationship of SUS and SHS.
Study type	Cross-sectional

STUDY 2

Research questions	Does attendance in character strength intervention developed for the purpose affect the participants' social skills? Is the participants' ability to identify character strengths improved after the intervention? Does attendance in character strengths intervention affect the participants' well-being? How does character strength intervention fit the Finnish basic education from the perspective of the teachers?
Instruments	Multi-Assessment of Social Competence, (MASC,Kaukiainen, Junttila, Kinnunen & Vauras, 2005) Grit-S (Duckworth and Quinn, 2009) Mindset (Dweck, 2006) Subjective Happiness Scale (SHS, Lyubomirsky and Lepper (1999) School Children's Happiness Inventory (SCHI, from Ivens, 2007) School Engagement Inventory (EDA, Salmela-Aro & Upadaya, 2012) Semi-structured interview
Participants	Convenience sampling from 4th to 6th grade students (of which 17 had special needs), age 10–13 years (n = 175, 93 females, mean age 10.7) from 11 inclusive comprehensive schools in southern Finland. Matching control group (n = 78) 7 teachers were interviewed
Data analyses	General Linear Model (two-way repeated-measures ANOVA) with Greenhouse–Geisser corrections Reliability: Cronbach's alphas Discourse analysis of the interviews
Purpose of the analyses	Comparisons between the student intervention and control group over time. Evaluating within group changes. Extracting teachers' own experiences of the intervention. Studying the functionality of the intervention program.
Study type	Convergent parallel mixed-methods

STUDY 3

Research questions	Does attendance in early childhood compassion training (intervention developed for the purpose) affect the participants' sense of compassion? Is the participants' ability to identify character strengths improved after the training? Is the participants' ability to use character strengths improved after the training? Does attendance in training affect the participants' ability to create a supportive work climate? Are the participants more able to find meaning in work after the training? What other-oriented kind acts do the participants do in their daily work?
Instruments	Santa Clara Brief Compassion Scale (Hwang et al. 2008) Strengths Knowledge Scale developed by Govindji and Linley (2007) Supportive organization climate, (Paakkanen et al. 2020) Work and Meaning Inventory (Steger et al. 2012) Written open-ended questions
Participants	Convenience sampling from early childhood education (ECE) head teachers in Finnish kindergartens (*n* = 95). Matching control group (*n* = 30) A subgroup (33 out of 95) early childhood education ECE head teachers wrote narratives.
Data analyses	General Linear Model (two-way repeated-measures ANOVA) with Greenhouse–Geisser corrections Reliability: Cronbach's alphas Inductive content analysis
Purpose of the analyses	Comparisons between the teacher intervention and control group over time. Evaluating within group changes. Evaluating teachers' own experiences of other-directed acts. Studying the functionality of the intervention program.
Study type	Convergent parallel mixed-methods

3.2 Overall research methodology

The studies in this thesis stem from both quantitative and qualitative methodological traditions. Study 1 was purely a quantitative study following the structural equation modeling framework (Jöreskog, 1970). In Studies 2 and 3, a mixed-method approach was applied to gain a more comprehensive and nuanced view of the intervention outcomes and to document all parties' experiences. This indicates concurrent use of quantitative and qualitative data with the data analyses performed synchronously. A mixed-method approach is characterized by a central premise that quantitative and qualitative methods better understand the research problems than either approach alone (Creswell et al., 2011, p. 5). In addition, as supported by a substantial amount of evidence (Creswell & Clark, 2007; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2010), using quantitative and qualitative methods allows one to address research questions at different levels to expand and strengthen a study's conclusions. The current research can be defined as a real-world and practice-oriented quasi-experimental field study (Creswell & Plano Clark, 2007). The phenomenological underpinnings in positive psychology are grounded in the positivistic paradigm (Seligman & Csíkszentmihályi, 2000). Thus, both *positivism* and *relativism* (*constructivism*) were applied as methodological approaches to elucidate the multifaceted understanding of humans and their actions (Husén, 1997; Raatikainen, 2004).

Positive psychology is biased toward naturalism, meaning that identifying what well-being is and how to build it can be reduced to simple cause and effect relationships resulting in numerous positive psychology interventions (Kern & Wehmeyer, 2021a, p.3). Regarding knowledge formation, the use of more existential and phenomenological positions is related to a more "humanistic" fashion associated with valuing qualitative methodologies in research (Franco et al., 2008). However, as Hefferon et al. (2017) argue, it seems important to integrate several underlying philosophical foundations while conducting research on positive psychology, also referred to as *methodological and epistemological pluralism* (Friedman, 2008, p. 113). In particular, when researching complex phenomena of well-being (Schneider, 2014, p. 92).

The philosophical assumptions of my thesis studies in answering the research questions were as follows. As for the ontological assumptions in this thesis, the philosophical roots of positive psychology are anchored in the Aristotelian tradition of good character (Jørgensen & Nafstad, 2004). In the current thesis, the core aim was to nurture positive human functioning and well-being by teaching strengths in character. In this approach, the basic assumption of human beings entails the idea of the individual with a positive character, strengths, and virtues. In addition, one of the most significant impetus in positive psychology is that instead of repairing the bad and focusing on pathology and dysfunctions, the human

being is understood as having inherent potential for developing positive character strengths (Seligman & Csíkszentmihályi, 2000). These philosophical assumptions and beliefs about human beings informed the choices that guided the development of the interventions created in this research.

I took the following epistemological position in this research to best understand the phenomena at hand and to match my research questions with proper methodological inquiries (Hefferon et al., 2017). I incorporated both quantitative and qualitative approaches to better understand the participants' experiences representing multiple realities. In Study 1, I used Structural Equation Modeling (SEM) which is described as a theory-based technique to explore the relationship between strengths usage and general happiness in students. In Studies 2 and 3, I assessed the effects of the two character strength interventions through statistical design. Additionally, I used qualitative methodologies in Studies 2 and 3, since I desired to obtain more subjective data and evidence from the participants in the interventions. While conducting the interventions (particularly in Study 2), I collaborated a lot with the participants in the field where they work and learnt to become an "insider."

3.2.1 Methodological framework in Study 1

In Study 1, a structural equation model (SEM) analysis with parallel mediation design was applied (see Kenny, 2008) to investigate the relationship between students' usage of strengths and general happiness. The school-related happiness and school engagement were set as mediating variables in the model. The methodological framework of structural equation modeling (Bollen & Hoyle, 2012) used in this study assumes that the variation in the observed indicators (survey answers in this case) are reflecting underlying latent phenomena to different degrees.

The results of the SEM analysis served as a starting point for developing and conducting the two empirical intervention studies for students and early childhood head teachers (Study 2 and 3).

3.2.2 Methodological framework in Studies 2 and 3

A quasi-experimental research design was applied in Studies 2 and 3, with pre-post self-report quantitative measurements for the intervention groups and matching control groups. The quasi-experimental design is an empirical interventional study used to estimate the causal impact of an intervention on a target population without random assignment. It uses non-experimental variation in the main independent variable of interest. It compares the changes that occur within two groups of dependent variables (the outcome) by measuring that variable at two

time periods, before and after introducing an independent variable (character strength intervention) (Allen, 2017). The quasi-experimental design is practical in the school context, because actual experiments cannot be used for practical reasons. As for the feasibility, the participants were assigned to groups based on non-random criteria using convenience samples.

In Study 2, after the 16-week intervention, semi-structured interviews were carried out and discourse analysis (Hepburn & Potter, 2007) was applied to explore the data to get a comprehensive picture of teachers' experiences. In Study 3, the design can be described as an emergent mixed methods design (Morse & Niehaus, 2009) since, after the first two rounds of intervention, it became clear that finer-grained information on intervention outcomes was needed. The quantitative measures seemed to capture only a slice of the other-oriented acts in the ECEC settings. Therefore, qualitative data were collected from one (the third) intervention group after the two-month intervention. The participants answered open-ended questions, and inductive content analysis was applied to their written texts. Content analysis was chosen because the accounts were short (ca. one page/respondent) and recognizing words and categorizing them seemed to work better than applying the discursive analysis (Jørgensen & Phillips, 2002, p. 122), which was exploited in Study 2.

3.2.3 Study context: Finnish education

All sub-studies in the current thesis were conducted in Finland. The Finnish education system is internationally recognized and teachers are highly educated (Lavonen, 2018). The teaching profession is widely appreciated with great public respect and the positive impact of good teachers on the learning and well-being of students is widely recognized (Simola, 2005). In Finland, a child's learning path starts from early childhood education in which teachers with at least a bachelor's degree are responsible for pedagogical decision making. Every child in Finland has a subjective right to attend early childhood education. At the age of six, a compulsory year of pre-primary education precedes the actual school start (Ministry of Education and Culture, 2021)

The Finnish teacher education applies modern theories and innovative pedagogical methods known to help student learning and well-being (see e.g., Lonka et al., 2018). Starting from the first PISA (The Programme for International Student Assessment) results in 2001, Finland has proven successful in international academic learning comparisons. The top performance came first as a surprise to many (see e.g., Uljens & Ylimäki, 2017) since the Finnish comprehensive school starting in the early 1970s focused more on equal rights to learning than high academic achievements.

The great majority of Finnish children and youth seem happy. In 2018, The PISA results showed that out of all 15-year-old students in Finland, 78% (OECD average: 67%) reported being satisfied with their lives, and 91% of students reported sometimes or always feeling happy (OECD, 2019a,b; PISA, 2018). However, various challenges have been acknowledged recently in Finnish education (see e.g., Lavonen, 2018), and the proportion of students having several problems is growing. According to the Finnish National Institute for Health and Welfare (2021), more than 20% of young people experience depressive symptoms. As shown by Salmela-Aro and Upadyaya (2020), in high school, 47% of students experienced stress, and 19% as burned out. Furthermore, many of them undergo multiple well-being problems in schools (Bask & Salmela-Aro, 2013). The number of students linked to special education indicates challenges in schoolwork (Statistics Finland, 2021). Challenges may stem from students' learning or behavioral problems or of the inability of the school system to serve all kinds of students in general education. Whether the reason is one or all of them, special (or intensified) support often is accompanied by decrease in well-being. Special education does not seem to succeed in improving student well-being. Finnish students with special education needs report feelings of loneliness and unhappiness more often than their mainstream peers (Uusitalo-Malmivaara et al., 2012).

The most recent reform of Finnish educational legislation concerning special education took place in 2011 when a national strategy was adopted (Ministry of Education and Culture, 2007). The main reason for this reform was that the number of special education referrals had been growing for years, reaching as high as 8% of all comprehensive school (grades 1-9) students in 2006, half of whom were taught in segregated classes or special schools. A three-tiered support system, *support in learning and school attendance*, was introduced that would provide support (general, intensified or special) for those in need of it. The support should be based on students' educational strengths and needs. In addition, inclusive education and the right of all students to attend the nearest school among their age-mates was strongly recommended (Ministry of Education and Culture, 2014).

In 2020, the number of students receiving special support had grown back to 9.0 per cent. In addition, about 12% of students received intensified support. There are surely many explanations behind the high numbers. However, the new strategy seems enigmatic. Not only are the borders between general, intensified and special support blurred (see e.g., Nykänen, 2021) but also the ability to serve and appreciate heterogeneity in learners seems inadequate. According to Sointu and his colleagues (2012), the traditional deficit-centered perspective, emphasizing the shortcomings, pathology, and deficits of the students, has been a standard approach in Finland. This negativity-bias may have led to a state where students' strengths have been neglected and, thus, the challenges have given reason to special education referrals.

Positive education in Finland

In Finland, studies on positive education have increased significantly in recent years (see e.g., Leskisenoja, 2016; Ranta et al., 2020; Uusitalo-Malmivaara, 2014a). Finnish municipalities have developed supportive systems that build on strengths and can be called "positive education". In 2018, a project called #Paraskoulu ("Best School", see FNAE, 2018) was launched. The goal of the #Paraskoulu project was to strengthen well-being-related factors in school. For example, in one of its sub-projects (TUVET/KTVA, 2019-2020), students' behavioral and emotional strengths were systematically examined from the perspective of the students themselves, teachers, and guardians enabling the study of students' strengths from various perspectives in various environments. In 2019-2020, #Uuttakoulua ("New School", 2019-2021), a large project embracing 16 Finnish municipalities had comprehensive school students' character strengths as one of its aims (#Uuttakoulua, 2021).

In her doctoral thesis, Äärelä (2012) highlighted the importance of teachers who can support students from the positive point of view and through encouragement to learn and do schoolwork despite the difficulties the students were facing. Furthermore, Äärelä and her colleagues (2014; 2016) have studied the importance of *caring teacherhood* (see also, Määttä & Uusiautti, 2012) from the perspective of young prisoners. They concluded that being and learning at school should be based on acceptance, support, and encouragement considering everyone's personal abilities and skills (Äärelä et al., 2016*)*.

Ranta (2020a) studied positive pedagogy in Finnish early childhood education and care (ECEC) centers and pre-school in his doctoral thesis. The goal of his research was to investigate the activities of ECE teachers in ECEC centers by focusing on the contents of the guidance documents (see the Finnish National Agency for Education, 2016) that are consistent with the elements of positive pedagogy. The results indicate that ECE teachers' implementation of positive pedagogy in ECEC and Pre-school settings was influenced by the teacher's age, teacher's work experience, the group structure, and the teacher's educational background (Ranta, 2020).

Ethical considerations

Teaching about strengths in character is a core theme in positive education. Character strength knowledge and usage seem to have multiple benefits in educational contexts. However, it is essential to discuss what ethical issues character strength teaching might bring in schools. Character strengths are defined in terms of virtues and are *morally valued in their own right, even in the absence of obvious beneficial outcomes* (Peterson & Seligman, 2004, p.19). This criterion assumes a crucial role in distinguishing character from personality (Stahlmann & Ruch, 2020). Consequently, teaching strengths or skills in character does not compromise *the immunity of a student's personality*. Knowing and using one's

personal character strengths helps in becoming the best version of oneself without being changed to anyone else, nor being compared to anyone else (Seligman, 2011). To conclude, the goal of teaching character strengths is to support a person's well-being and learning capabilities but not to change or improve their personality.

The current plurality of theories, models, methods, and perspectives relevant to positive education poses several ethical questions, such as the ones concerning equity: *Are knowledge and resources available that empower all individuals and educational communities worldwide to create and shape people and environments that flourish*? And, most importantly, *is there ethical, high-quality research that translates research into practice, safeguarding the science from illegitimate uses* (Kern & Wehmeyer, 2021b, p. 770). Moreover, schools typically have a defined set of values that ought to be at the heart of all that is done, guiding the educational practices (Allen et al., 2018). Teaching about character strengths is not value-free either. However, according to Lavy and Benish-Weisman (2021), there has been a limited amount of theoretical writing and empirical research *on the expected links of character strengths with specific values.* It is important to consider the extent to which character strengths *reflect the lived values of members of the school community* (Kern & Taylor, 2021, p. 130). Accordingly, character strength teaching should align with and stem from these values. In the current Finnish study, character strength interventions were developed together with the teachers considering their pedagogical priorities and the school value base they were committed to.

3.3 Participants and data collection

In Study 1, the sample comprised 418 comprehensive school students (50.72% females, *M*age = 11.7, 4th to 9th grade). In Study 2, 253 students (56.13% females, *M*age = 10.7, 4th to 6th grade) and 11 teachers from comprehensive schools participated. In 2015 I contacted nine principals in a large city in southern Finland to recruit participants for both Studies 1 and 2. In Study 3, 125 early childhood education (ECE) head teachers (99.19% females, *M*age non-specified) participated as part of their yearly in-service training (Table 2). All datasets were collected in Southern Finland between 2015 and 2016. Student participants in Studies 2 and 3 completed the questionnaires during their regular school hours under teacher supervision via an online questionnaire. In Study 2, the teachers were interviewed shortly after the intervention. In Study 3, teachers completed the on-line questionnaires during the intervention in a lecture hall provided by the municipality. A subgroup of participants (n = 33) in Study 3 replied to open-ended written questions after the final session in the intervention lecture hall.

Permission to undertake all three studies was granted by the authorities in Southern Finland. The administrative committees of the schools, the students' guardians and the students themselves gave their permission to participate in Studies 1 and 2. Additionally, the interviewed teachers in Study 2 consented to participate. In Study 3, informed consent was received from the ECE head teachers. Participation in all studies was voluntary. The research protocols of all three studies followed the rules of ethical research outlined by the Finnish National Board of Research Integration (Research Integrity in Finland, 2009). The general instructions for secure processing of personal data were followed (General Data Protection Regulation, 2016).

3.4 Quantitative measures

General happiness. Students' general happiness was assessed in Studies 1 and 2 with the Subjective Happiness Scale (SHS) from Lyubomirsky and Lepper (1999). SHS is a 4-item test with a 7-point Likert scale response format (e.g., *In general, I consider myself: not a very happy person—a very happy person*). In the current study, the fourth, reversed item was not included due to a low alpha found in previous studies. The reversed items seem to be problematic for younger respondents leading to consistent misunderstandings (Uusitalo-Malmivaara, 2012; Uusitalo-Malmivaara & Lehto, 2013).

School Engagement. To measure the school engagement of students in Studies 1 and 2, Salmela-Aro & Upadaya's (2012) School Engagement Inventory was used. The instrument consists of three subscales, energy, dedication and absorption (EDA). Each of the subscales includes three items, i.e., *When I study, I feel I'm bursting with energy* (energy subscale), *I am enthusiastic about my studying* (dedication subscale), and *Time flies when I'm studying* (absorption subscale). However, EDA is generally specified as a unidimensional measurement model (Salmela-Aro & Upadaya, 2012) indicating a general study-related positive state of mind. EDA items are rated on a scale ranging from 0 (= never) to 6 (= every day).

School-related happiness. The school-related happiness was measured using the School Children's Happiness Inventory (SCHI, from Ivens, 2007). This instrument was used in Studies 1 and 2. SCHI is a context-related questionnaire of 30 items (e.g., *I felt relaxed; I felt confident*). Each response to each SCHI item is scored from 1 to 4, with 4 indicating a high level of happiness. In the self-report questionnaire in Study 1 we used the shortened 13-item Finnish version with positive statements only (Uusitalo-Malmivaara, 2012; 2014b). It was shortened to delete overlapping statements and to keep the overall number of items suitable for younger children. In Study 2, a 25-item version of SCHI was used, similar to that used in previous Finnish studies (Uusitalo-Malmivaara et al., 2012).

Strengths use. The usage of strengths in students and in adults was measured with the Strengths Use Scale (SUS, Govindji & Linley, 2007). The originally 14-item self-report scale with a 5-point Likert scale (I totally agree—I do not agree at all) was designed to measure individual strengths usage in various settings, e.g. *I use my strengths to get what I want out of life*. A shortened 5-item version suitable for a school context was applied in Studies 1-2. Some items of the scale tapped into an adult's perspective of life (e.g., I use my strengths to get what I want out of life) and were deleted for that reason. The shortened version of the scale was translated into Finnish. The items proved the frequency of strengths use, e.g., I can use my strengths every day at school, and knowledge of strengths use, e.g., Using my strengths is something I am familiar with. Reported test–retest reliability was (r = 0.85) as well as good criterion validity with well-being (Wood et al., 2011).

Social competence. In Study 2, the Multi-Assessment of Social Competence (MASC) was used to measure social skills in children (Kaukiainen et al., 2005). Here, only two subsets, empathy, and aggressive behavior, were used out of the total of four subsets. The empathy subset consists of eight items measuring prosocial behavior, for example *I show respect to other students*. The aggression subset consists of seven items, for example *I easily get annoyed*. The scale ranges from 1 to 4 (never, seldom, often, very often).

Grit. In Study 2, Grit was measured using Grit-S (Duckworth & Quinn, 2009) scale, which is an eight-item scale with two parts, Consistency of interest, for example *I often set a goal but later choose to pursue a different one*, and Perseverance of effort, for example, *I am diligent*. The scale ranges from 1 (very much like me) to 5 (not like me at all).

Mindset. In Study 2, mindset was measured with Dweck's (2006) eight-item Mindset scale, which measures beliefs about intelligence. For example, *Your intelligence is something very basic about you that you can't change very much*, and, *No matter what kind of a person you are, you can always change substantially*. The scale ranges from 1 (strongly agree) to 4 (strongly disagree).

Compassion. In Study 3, to measure the sense of compassion in ECE teachers, Santa Clara Brief Compassion Scale (Hwang et al., 2008) was used. The instrument consists of five items e.g., *One of the activities that provides me with the most meaning for my life is helping others in the world when they need help*. The items are rated on a seven-point Likert scale (1 = don't agree at all, 7 = completely agree). The scale was developed as a one-factor measure from the 21-item Compassionate Love Scale (Hwang et al. 2008).

Character strength identification. In Study 3, Character strength identification was measured with a 5-item scale (Likert 1–7). The scale was modified from the original 8-item Strengths Knowledge Scale developed by Govindji and Linley (2007). For the purposes of the current study, the items were adjusted to tap

into the strength awareness in an organization, e.g., *I can see the importance of character strengths in work*.

Strength usage. In Study 3, strength usage was measured using Govindji's and Linley's (2007) 14-item scale (Likert 1–7). An example of the items is *I can use my strengths every day at work.*

Supportive organization climate. In Study 3, a 10-item scale (Likert 1–7) was used to measure organizational climate. Originally, the scale was developed for the CoPassion project (see, Paakkanen et al., 2020) to measure managers' emotional skills related to the process of compassion. The items in the scale tapped the ECE head teachers' ability to relate to other workers, e.g., *I feel I treat my colleagues fairly.*

Work and Meaning. In Study 3, a well-validated 10-item scale (Likert 1–5) inventory (Steger et al., 2012) was used to measure meaning-making at work and how the work is benefitting greater good, e.g., *My work helps me make sense of the world around me*.

The detailed psychometric properties of all scales used in the three sub-studies can be found in the original articles.

3.5 Intervention procedures

3.5.1 Study 2, Intervention in 11 inclusive Finnish classrooms

In Study 2, implementation of the intervention was conducted following the implementation protocol described by Fixsen and his colleagues (2009). Selection and training of the participants, ongoing coaching, and evaluation of the process were carefully planned. I recruited 15 teachers interested in character strength teaching via emailing school principals with an overview of the intervention. From the pool of the interested teachers, 11 teachers were selected to participate in the intervention. An agreement with selected teachers to commit to the success of character strength intervention including time consumption, implementation practices, lesson plans, and pre-post-measurements, was concluded.

The intervention lessons were piloted (unpublished data) before the actual intervention. Promising results from pilot schools were encouraged to develop the lesson contents further before intervention in Study 2 took place (Table 3). The character strengths intervention developed for Study 2 has its roots in the Strengths Gym program developed by Proctor and her colleagues (2011b). Strengths Gym is a program designed to enable students and teachers to learn about, recognize, build upon, and use their character strengths. To ensure a better fit for the intervention in Finnish inclusive school settings, the original Strengths Gym program was modified. The intervention was tripartite. First, students were

taught what character strengths mean and how to become more aware of strengths in themselves and others. Second, happiness was taught. This was accomplished by teaching positive emotions, gratitude, and how to help each other. Third, the idea of a growth mindset and how it fosters learning skills were introduced.

I trained the teachers to create a shared understanding of the theoretical background and the pedagogical principles in the intervention (see also, Linkins et al., 2015). The trained teachers conducted the pervasive intervention in their classrooms. Every week a 45-minute intervention lesson was held, and in addition, the teachers were encouraged to embed the principles of the intervention program in the basic curriculum. Furthermore, an online learning environment with lesson plans, homework assignments, and the opportunity to learn from each other was built to guide the teachers through the intervention. Every week, the teachers shared pictures and written documents of the progress in their classrooms. To maximize the intervention fit, they had their say on details of the intervention implementation. Throughout the implementation process, the teachers got online support from me, and I also monitored the advancement of the intervention and kept up the red thread of the intervention.

Table 3. The outline of the character strength intervention in Study 2

Week	Lesson	Lesson plan
1	**Introduction to character strengths**	VIA survey, introduction to strength vocabulary. Viacharacter.org.
2	**My personal character strengths**	Exploring and reflecting the VIA-IS-inventory results. "My top five strengths" posters. Finding ways to use and develop character strengths. Group activity: Strengths wall. Creating a shared language for strength spotting. Homework: My signature strengths introduction.
3	**Other people matter**	Exploring signature strengths in others. A strength card activity We are different, but everyone is unique. Group activity: Strengths lenses. Positive feedback. Homework: Strength spotting at home, A family tree of strengths.
4	**Self-control**	Exploring ways to develop and use self-control Reflecting where self-control is needed and what happens when we run out of it. Marshmallow test (Mischel, 2014), video and activity. Homework: Spot and write successful self-control usage
5	**Growth mindset**	Understanding the theory of fixed and growth mindset (Dweck, 2006). Introducing the Self-talk bird (Boniwell, 2013). Self-talk cartoon activity. Group activity: What went well tree. Homework: What went well diary.
6	**Grit**	Understanding the Grit formula, passion for long-term goals (Duckworth, 2016). Iceberg exercise, practicing long-term goal setting. Group activity: Gritty puppy video, reflecting on the importance of grit in learning and in life, in general. Homework: Grit goal setting at home and in hobbies.
7	**Resilience**	How to foster resilience, tools and activities. Exploring stories on resilience. Bounce back activity: Elastic band. Homework: Reflecting on your resilience and how it is strengthened.
8	**Gratitude**	Exploring how gratitude is linked to happiness and well-being. Expressing gratitude, Gratitude letter. Gratitude activity: a joint Gratitude wall. Homework: Gratitude photo journal.

Week	Lesson	Lesson plan
9	**Love**	What is love and how to integrate it in our everyday lives. Understanding the micro moments of love and positive resonance (Fredrickson, 2013). Group activity: Smile circle.
10	**Positive emotions**	Understanding emotions and finding out the healthy balance on positive and negative emotions. Introducing the broaden-and-build theory of positive emotions (Fredrickson, 2001). Homework: Labeling different emotions.
11	**Curiosity**	Finding out the connection between curiosity and learning. Group activity: The Curiosity game. Homework: Designing the best way to stimulate curiosity in others.
12	**Kindness**	Understanding the connection between kindness, empathy and compassion. Kindness is contagious. Links to well-being. Group activity: Secret friend, strengths spotting in others. Homework: Random act of kindness week.
13	**Hope**	Introducing the essential skills for creating a hopeful mindset. Exploring thoughts and acts of hope. Group activity: Hope lenses, letter to the future me. Homework: My dream day.
14	**Social intelligence**	Understanding the skills needed in social encounters. Mindmap: The qualities of a good friend. Group activity: Active listening to others with empathy. Homework: Recognise your emotions – be aware of yourself in social situations.
15	**Zest**	The importance of finding true passions and its effects on well-being. Understanding intrinsic motivation. Group activity: Zest agents (Be aware, zest is contagious!). Homework: My favorite childhood activities.
16	**Compassion**	Exploring the importance of compassion to all people. Group activity: Sharing stories about compassion. Reflecting on the need for compassion: The story of a bullied boy. Homework: Compassion spotting in the media

3.5.2 Study 3, Intervention for 95 early childhood education head teachers

Study 3 was part of a large, multidisciplinary project called CoPassion (see copassion.fi). The aim was to examine whether compassion could be increased in organizations through a new in-depth training program. The CoPassion project team contacted the educational authorities responsible for organizing and supervising early childhood education and care in a Southern Finland city. The authorities approved the study design and the protocol based on the rules of ethical research outlined by the Finnish National Board on Research Integrity (2019). The educational authorities recruited the early childhood education (ECE) head teachers via an email list and organized the schedule and the venue for the compassion training. Participation in the intervention was mandatory and considered to be part of the head teachers' yearly in-service training.

First, 32 ECE head teachers participated in the intervention program in Spring 2015. Then, a second set of 30 head teachers were trained in Fall 2015. Finally, the third group of 33 head teachers were enrolled in the program in Spring 2016. The contents of the program were the same each time. Based on their current workload, the participants could choose which intervention they attended. The study was completed in December 2016.

The interventions consisted of six 3-hour meetings and two types of home assignment spread over two months. All meetings were held during the teachers' workdays in a lecture room provided by the municipality. I did run the interventions. Although participation in the intervention was mandatory, implementing the intervention contents in individual ECEC settings and working with the home assignments was voluntary. Of all the participants, 86% were present at least five times. The absences were random.

The pedagogical (or andragogical) approach used in Study 3 followed the framework described by Dunst (2015). The participants were introduced to new angles to guide and supervise their ECEC practices. They were invited to combine the fresh ideas into their already existing proficiency and to form their own way of implementing new strategies in their workplaces. After the implementation, feedback was provided by the coaching specialist and the colleagues. Thus, new theory, pre-existing pedagogical philosophy, and on-going practice in the ECEC setting created the medium that was evaluated and reflected during the lessons. Then, a new round of implementation was started.

The outline of the intervention curriculum is described in detail in Table 4. The meetings started with an introductory lecture about the daily topic followed by interactive assignments and practical examples in ECEC settings. The interactive assignments were often prompted by challenging work life examples that the participants sought to solve together. The contents of every lesson were repeated

during later lessons in a spiral manner to ensure a deepening understanding of the themes. Both printed and online material were used to support the training.

After every meeting, home assignments based on the theme at hand were given out. They consisted of writing exercises on oneself, in response to questions like: *What do I value in myself? What are my character strengths? How could I improve my leadership skills in order to create a more compassionate work climate?* The other set of the home assignments comprised practical tasks that were conducted in the ECEC setting, such as giving personal feedback to staff members, paying more attention to a fair division of labor, and encouraging new initiatives. The head teachers applied their fresh knowledge in their workplaces and furthered their knowledge by completing exercises like writing gratitude letters and diaries about their usage of strengths. After all three interventions, feedback to the intervention curriculum and practicalities were collected.

Table 4. The outline of the compassion intervention in Study 3

Week	Aim of the meeting	Content and home assignments
1	**Introduction to positive psychology**	Understanding the science of positive psychology Group activity: What went well exercise (cherishing positive moments) Homework: Take the VIA survey, see viacharacter.org/research
2	**What are the character strengths**	Exploring the theory of character strengths Group activity: Finding ways to use and develop personal strengths Homework: My signature strengths put to new use
3	**The power of compassion**	Understanding the connection between kindness, empathy and compassion Group activity: How to foster a compassionate mindset. What are the concrete tools and activities? Homework: Sharpen your eye to pay more attention to others. Show your willingness to alleviate the pain in others as well as your ability to co-joy
4	**How to use compassion and other character strengths in the workplace**	Exploring ways to develop and use compassion and other character strengths in daily practices at the workplace Group activity: Exploring signature strengths in others Homework: Strength spotting and co-celebration of strength usage with the workers and children in the kindergarten
5	**Supportive leadership**	Exploring ways to nurture leaders' emotional and interpersonal skills • Group activity: How to learn to give more positive feedback Homework: Practice of activities of supportive and caring leadership
6	**Meaning in the organization**	Exploring pathways to a more meaningful organizational culture Group activity: reflecting what is meaningful and the core purpose of the work in a kindergarten Homework: Acts of recognition and kindness in the kindergarten to make each worker understand their contribution in the mission and success of the organization

3.6 Data analyses

IBM Statistical Package for Social Sciences (SPSS) was used as the primary analysis software in Study 2 and 3. For statistical analyses in Study 1, SPSS version 24 was used as a data management and preliminary analysis tool. All other analyses were conducted using R statistical software (R Team, 2020). See Table 3 for an overview of the data analyses utilized in each of the original studies.

3.6.1 General analysis strategies

Outliers, missing data, attrition and data structure

In Study 1, the distribution of missing values was tested with Little's MCAR test, which tests against the hypothesis that the data are missing completely at random. In the model, the missing values were handled with full information maximum likelihood (FIML).

In Study 1, the complex nature of the data, that is, students nested in classrooms, were handled by controlling the data structure to gain standard errors that take the hierarchical structure of the data into account (see Muthén & Satorra, 1995).

In Studies 2-3, the attrition rates between the intervention and comparison groups were not substantially different. Furthermore, there were no missing values in the questionnaire due to the design of the form that did not allow one to proceed without addressing all the items. In addition, in Study 2 from the original pool of students (n = 269), 13 and 3 students from the intervention and control group, respectively, failed to fill both tests due to absences from school during measurement days. These 16 students were random.

Estimation

In Study 1, the fit of the models were evaluated using Chi-square, root mean square error of approximation (*RMSEA*) with an approximate acceptable cut-off value of less than .08, standardized root mean residual (*SRMR*) with an approximate cut-off of less than .08, and, incremental indices such as the comparative fit index (*CFI*) and the Tucker-Lewis index (*TLI*) with approximate acceptable cut-off values of greater than .90 (Hu & Bentler, 1998).

In Studies 2 and 3 the models were estimated as general linear models.

Evaluating measurement validity and reliability

In Study 1, the structural validity of the measurement model was evaluated with confirmatory factor analysis (CFA) (Jöreskog, 1969), in which all items were allowed to load on their corresponding factor only (Byrne, 2013). Residual covariance between different two similarly worded items was permitted.

The internal consistencies of the measurements were in all studies evaluated with Cronbach's alphas. In Study 1, the internal consistencies of the measures were examined in more detail by computing bootstrapped confidence intervals and point estimates of Cronbach's alpha.

3.6.2 Structural equation modelling: mediation analysis

In Study 1, in order to answer our research questions, we specified a parallel mediation structural equation model (Muthén & Curran, 1997) in which the usage of strengths was specified as an exogenous latent variable, school engagement and school-related happiness as mediating latent variables and general happiness as the ultimate endogenous latent variable. All structural equation modelling analyses were conducted using the R package Lavaan (Rosseel, 2012), which uses the delta method for estimating the standard errors for the indirect effects (Mayer et al., 2014).

3.6.3 General linear models: intervention effect

In Studies 2 and 3, we used general linear models to test the group and time interaction to evaluate the intervention effect. First, after estimating the missing values, a two-way repeated measures ANOVA was performed to examine both the statistical differences in the post-test scores between groups and the statistical differences between the scores of the pre and the post tests. Time and group (intervention/control) were entered as independent variables for each of the scales. Pearson correlations were calculated to determine the relationships between the measurement scales and Greenhouse-Geisser correction was applied when the assumption of sphericity was violated.

3.6.4 Discourse analysis

In Study 2, seven teachers were interviewed shortly after the intervention. The selection of interviewees was based solely on teachers' schedules. The interviews sought to understand what accounts teachers formed about the effects of the intervention they had run. The interviews were planned by two of the authors and conducted by a graduate student in linguistics. Teachers were asked to recall their experiences relatively freely to catch their impressions of the intervention at a profound level. "What changes in your students' social behavior did you notice during the intervention?" and "how did the intervention affect you and your ethos as a teacher?" are examples of the interview questions. The recorded interviews lasted from 70 to 144 minutes each and when transcribed, filled 173 pages. An independent graduate student in special education coded and analyzed the data.

Discourse analysis (Hepburn & Potter, 2007) was applied to explore the data to get a comprehensive picture of teacher experiences. First, the interviews were read through several times, and individual accounts were marked by coloring them by hand. Specific elements in utterances such as expressions of enthusiasm or frustration were coded individually in all separate accounts. Then, accounts were combined with larger discourses answering specific questions, such as how character strength teaching has influenced friendships? Discourses were partly overlapping and not all accounts fit in the discourses. However, most of them could be reduced to core entities. The findings were discussed and agreed on by all authors of the study.

3.6.5 Content analysis

In Study 3, participants (n=33) replied to open-ended questions after finishing the intervention aimed at promoting compassionate behavior. They were asked to write about their other-directed acts and strivings with the following prompts: "How does your daily work help other people?" and "what small acts of kindness could you do more often?". To analyze the data, two researchers independently read the accounts. Memos were written during the initial reading and the coding process to ensure the reliability of the analyzing process. The 99 pieces of text were studied using inductive content analysis (Elo & Kyngäs, 2008). The codes were based on the data, and every time a new topic emerged, a new code was created. The coding phase included multiple readings of the data. Statements that included many kinds of codes were divided into several categories. Then the data analysis proceeded in three phases. First, the 99 text pieces were reduced to codes. Initially, in vivo coding was applied (see Manning, 2017). To let the respondents' actual voices be heard, words extracted directly from the text pieces were used as a starting point (e.g., the word *presence* existed in many accounts). Then axial coding followed, and sub-categories and generic categories were formed. Then, the main categories were named according to the content of the subcategories and generic categories (Elo & Kyngäs, 2008).

4 RESULTS

4.1 Students' character strengths usage and its relation to their well-being via school-related factors (Study 1)

The purpose of the first original article (Vuorinen et al., 2021a) was to study the relations between students' (n = 418) usage of strengths and general happiness having schoolwork engagement and school-related happiness as mediating factors. A structural equation model was specified for the purpose having gender and age as covariates. The model fit the data well ($\chi 2$ (449) = 871.75(1.15), p < .001, *RMSEA* = .047 (.043–.052), *CFI* = .935, *TLI* = .929, *SRMR* = .047). The overall variance of general happiness explained by the model was 53% (Figure 1). The usage of strengths, school engagement and school-related happiness were all positively related to general happiness. The usage of strengths was positively related to both schoolwork engagement and school-related happiness. Furthermore, the usage of strengths was directly related to general happiness, and an indirect relationship from usage of strengths to general happiness via schoolwork engagement and school-related happiness was detected.

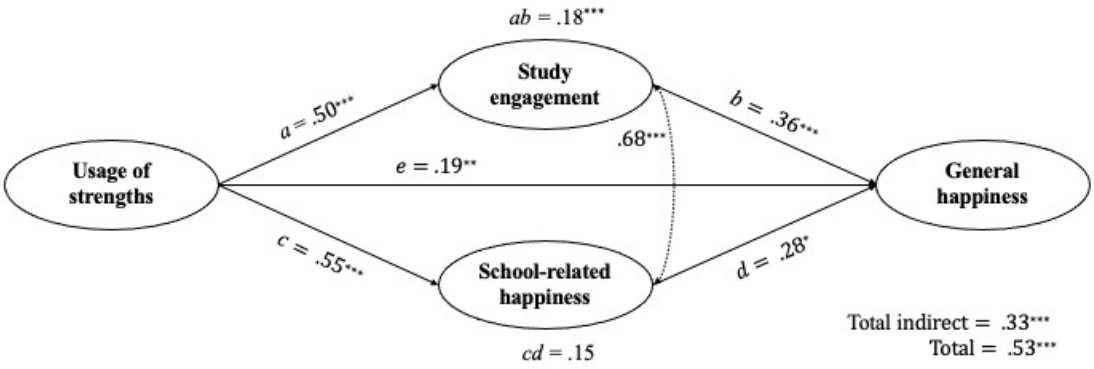

Figure 1. Model with usage of strengths as exogenous latent variable and school engagement, school-related happiness as mediating and general happiness as endogenous latent variable with gender and age as covariates. Observed latent variable indicators omitted for clarity.

4.2 A character strength intervention in 11 inclusive Finnish classrooms (Study 2)

The purpose of the second original article (Vuorinen et al., 2019) was to investigate the effects of a novel 16-week character strength intervention on students' well-being and social skills. Participants were 175 10-13-year-old students including 17 students with special educational needs (SEN). A control group of 78 students filled in the pre- and post-tests.

Results of the quantitative data.

An interaction effect between time and group was found in two of the scales. In the Grit Consistency of interest subscale, the intervention group with SEN scored above the other groups, $F(2, 250) = 5.202$, $p<.01$, $\eta^2_p = 0.040$. Also, in schoolwork engagement, the intervention group with SEN seemed to advance more than the other two groups, $F(2, 241) = 4.192$, $p<.05$, $\eta^2_p=0.034$. However no statistical differences could be found after controlling for the gender. In addition, among the boys, there was a statistically significant increase in anti-aggression from pre-test to post-test $F(1, 108)=6.291$, $p<.05$, $\eta^2_p=0.055$. The increase was highest in boys in the intervention SEN group, however with no statistical significance from pre- to post-test, $F(1, 9) = 3.578$, $p=0.091$, $\eta^2_p= 0.284$.

To summarize the significant results, the intervention group of students with SEN showed increased consistency of interest and improvement in engagement in schoolwork after the intervention. When boys and girls were studied separately, all boys seemed to make progress in the consistency of interest. In addition, all boys showed improved anti-aggressive behavior after the intervention. The girls in the mainstream intervention group showed increased empathy $F(1, 84) = 5.450$, $p = 0.022$, $\eta^2_p = 0.061$ and perseverance of effort $F(1, 85) = 7.499$, $p = 0.008$, $\eta^2_p = 0.081$. after the intervention.

Results of the qualitative data

Teacher interviews shed light on the intervention fit in the inclusive classrooms and revealed insights into the student development that could not be detected with the quantitative measures. The qualitative results showed that the intervention best served the group of students with special educational needs.

The teacher interviews revealed six dominant discourses: *praise, well-being, good interaction, the significance of encounters, the need for additional education* and *the discourse of doubt and challenges*. To sum up, the teacher interviews showed growth in intentional usage of the character strengths taught in the intervention, both in schoolwork and peer relationships. Overall, the teachers' interviews revealed satisfaction with the intervention.

All in all, the results of the intervention were mixed. The quantitative changes were moderate, whereas the qualitative discourse revealed several positive outcomes in students' development from pre-test to post-test.

4.3 Nourishing Compassion in Finnish Kindergarten Head Teachers (Study 3)

The purpose of the third original article (Vuorinen et al., 2021b) was to investigate the outcomes of a novel character strength intervention program developed for early childhood education (ECE) head teachers (n=95) in Finnish early childhood education and care (ECEC) settings. The emphasis was on teaching compassion and related other-oriented behaviors.

Results of the quantitative data

The intervention group made statistically significant progress between the pre- and the post-measurement (n=30) In *Sense of Compassion*, $F(1,71) = 12.22$, $p < 0.01$, *Strength identification*, $F(1,71) = 46.02$, $p < 0.001$, *Usage of strengths* $F(1,71) = 37{,}37$, $p < 0.001$, and *Meaning of work,* $F(1,71) = 6.92$, $p < 0.05$. A statistically significant interaction effect of time*group was found in *Strength identification,* $F(1,98) = 6.85$, $p < 0.05$, $\eta^2_p = 0.07$, *Usage of strengths* $F(1,98) = 4.25$, $p < 0.05$, $\eta^2_p = 0.04$ and *Supportive Organization Climate* $F(1,98) = 4.12$, $p < 0.05$, $\eta^2_p = 0.04$, suggesting a positive effect from the intervention program.

Results of the qualitative data

After the intervention, a subgroup of participants answered qualitative questions which prompted them to write about their other-oriented acts. Content analysis of the qualitative statements revealed three main themes, *Caring professionalism, Warm presence,* and *Positive feedback*, evidencing strivings toward an emotionally and professionally supportive early childhood education and care organization. The qualitative data showed that most of the participants seemed satisfied with the intervention. They felt that the intervention made them more aware of the importance of acting in a compassionate way. They mentioned being able to give positive feedback more frequently. In addition, as also indicated in the quantitative results, they had gained knowledge on how to identify and use their strengths to nurture overall well-being and meaning in work.

To conclude, the character strengths intervention to the ECE teachers led to a modest improvement in quantitative outcomes compared to the controls. Results from the qualitative data revealed that the ECE teachers appreciated the intervention. It seemed that even with a short intervention, it was possible to encourage a more compassionate and other-oriented mindset.

5 DISCUSSION

5.1 Main results and general discussion

The overall aim of this study was to develop new intervention programs to teach character strengths explicitly in Finnish educational settings. In the order of the research questions, the most important findings were as follows:

1. As shown in the quantitative measures, students' character strengths usage was linked to their general happiness, engagement in schoolwork and school-related happiness. The mediation analyses examined the indirect effect of students' usage of strengths on general happiness through school-related factors. Engagement in schoolwork was driven by the usage of strengths. School-related happiness was driven by the usage of strengths. Overall, usage of strengths, engagement in schoolwork and school-related happiness explained up to 53% of the variance in students' general happiness.

2. As shown in the quantitative measures, the teachers learned to identify and use character strengths in Study 3. The teachers' intervention group made progress over the control group in both identification and usage of strengths. According to the qualitative measures, the interventions improved the participants' overall understanding of their personal strengths. In Study 2, the students with special needs seemed to benefit from the intervention. The qualitative data showed that they became more aware of their character strengths in terms of intentional usage of the strengths in social interaction. Second, after the intervention, their social skills, as measured with anti-aggressive behavior, were the most improved. In Study 2, after participating in the character strength intervention, teachers described growth in professional development, getting new perspectives in their pedagogy and a change in their teaching philosophy accompanied with a fresh way to observe every student. New materials and lesson plans (see Table 3) developed for the study seemed inspiring and easy to use, making teaching enjoyable. The digital platform benefitted the teachers in both delivering the intervention contents and learning from each other during the intervention process. As shown in the quantitative measures, the teachers learned to identify and use character strengths in Study 3. The teachers' intervention group made progress over the control group in both identification and usage of strengths. According to the qualitative measures, the interventions improved the participants' overall understanding of their personal strengths. Thus, there is reason to believe the novel character strength interventions worked at least satisfactorily.

3. The qualitative analyses in Study 2 showed that the intervention improved students' and teachers' class spirit, flourishing, love of learning, sharing positive emotions and having a better teacher-student relationship. However, all students' well-being, measured quantitatively at the end of the intervention, showed no changes from pretest to post-test (Study 2). In Study 3, the teachers in the intervention group made progress over the control group in finding meaning of work, promoting a supportive organizational climate and having a sense of compassion. As the character strength of compassion was the main theme of the intervention in Study 3, it can be concluded that the intervention was successful and contributed to the participants' well-being.

To summarize, the findings of the present study provide evidence for the power of theory-based character strength interventions aiming at promoting well-being-related factors and other positive outcomes by facilitating strengths identification, strengths use and development on an individual level (Peterson & Seligman, 2004; Ghielen et al., 2018).

The role that strengths *use* plays in a strengths intervention has been extensively studied by Govindji and Linley (2007, see also Seligman et al., 2005). According to Govindji and Linley (2007), strength *knowledge* did not predict subjective well-being, but the usage of strengths did. Later studies have confirmed that strengths use predicts subjective well-being (Proctor et al. 2011a) similarly to the findings in the current thesis. Consequently, character strengths usage should be taught to increase well-being. In other words, well-being cannot be taught as such, but ingredients and antecedents of happiness can be introduced in the form of teaching how to use one's character strengths. Interventions are one way to spark new ideas in character strength teaching. According to our findings, the effects of a student-centered character strengths intervention may influence the whole class. This was evidenced in teacher accounts that revealed greater class cohesion and improved spirit after the intervention. This notion is in line with Quinlan and her colleagues' statement (2012) *few people exercise their strengths in isolation.*

5.2 General methodological reflections

Having multiple researchers analyze the data and applying mixed methods yielded a multi-faceted picture of the studied phenomena and improved the quality of the research. However, several issues should be considered as potential limitations of the study.

Teddlie and Tashakkori (2011) propose the term *inference quality* to refer to issues associated with validity in the context of mixed-methods research which consists of *design quality* (i.e., the degree to which a researcher has selected the

most appropriate procedures for answering the research questions) and *interpretive rigor* (the degree to which researchers accurately understand participants' views, thoughts, feelings, intentions, and experiences). Moreover, to evaluate the generalizability of a study the *inference transferability* is recommended. It includes external validity, which is common in quantitative research, and *transferability*, which is typical for qualitative research. Next, the validity of the present mixed-method study is examined from the perspectives as mentioned above (Teddlie & Tashakkori, 2011).

First, regarding the self-reporting scales used in the original studies, the concept of strength in the *Strength usage scale* (Govindji & Linley, 2007) was not specified. Hence, when asking about strengths, all kinds of strengths may have come to the respondents' mind, not just the character strengths. More fine-grained measures are needed to get a profound view of the many-sided usage of strengths. Notably, some instruments used in Studies 1-2 were designed and validated for adult populations, which might be considered as a limitation to this study's validity. To address this issue, a measurement developed explicitly for children and youth strengths knowledge and usage is needed in future studies. Furthermore, the *Supportive organization climate* scale in Study 3 was used only once before Study 3 (Paakkanen et al., 2020), and the psychometric properties of the scale have not been thoroughly analyzed. In addition, answering "happiness questionnaires" is sensitive to respondents' daily moods and random occasions may affect the results, particularly in children. Also, social desirability bias needs to be considered when using self-reported questionnaires.

Second, when considering the *design quality* of the current study, in Study 1, a large convenience sample of students with a great age span was available. However, it was not representative of the population. Thus, external validity is not guaranteed. Regarding internal validity in Study 1, the sample size was big enough to specify a structural equation model (SEM). The main feature of a SEM is to compare the mathematical model to empirical data (Nachtigall et al., 2003). The model fit the data well, and neither gender nor age altered the results when included as covariates in the model. However, causal relations cannot be inferred from a SEM or any cross-sectional study. Thus, the internal validity of the study is not guaranteed. All found effects could very well be the other way around or ever reciprocal.

Also in Study 2, convenience sampling was used to save limited research resources. In addition, the sample was not randomized. In Study 3, all ECE head teachers from one municipality participated in the study. Although locally very representative, the results cannot be generalized in larger populations but rather seen as pilot cases. In addition, in Studies 2 and 3, the low number of participants in the control group reduces external validity. One of the difficulties in running

an intervention is to find a suitable control group and keep it motivated to answer the questionnaires (which can be a challenge with the intervention group, too).

Third, through the process of classification and redefining the categories for teachers' responses, the research's *interpretive rigor* was increased through multiple researchers in the analytical process (Miles & Huberman, 1994). Using several researchers, it was possible for the analysts to discuss problems to provide further coding and improve interpretation of the results (Barbour, 2001). We hired an independent graduate student in special education who carried out the teacher interviews and coded and analyzed the data in Study 2. In Study 3, two authors were tightly involved in the content analytical process. Difficulties and several perspectives were discussed regularly to achieve a more nuanced understanding of the possible interpretations of the research objects (Liamputtong & Ezzy, 2005).

5.3 Reflections on the interventions

In Study 2, one of the main ideas in the intervention was to activate the teachers in the process and give them opportunities to share fresh ideas and talk about potential difficulties on a common digital platform developed for the intervention. The digital platform seemed to benefit the teachers greatly in delivering the intervention contents and learning from each other during the process. Indeed, there seems to be a considerable need for collaboration between teachers. Teachers who participate in collaborative professional learning activities, report being notably more confident in their teaching abilities and more satisfied with their jobs (OECD, 2014, p. 3).

The same was echoed in many teacher interviews, especially in the discourses of *praise* and d*oubt and challenges* in this study. Professional development and getting new perspectives in teaching were mentioned several times.

With the help of the digital platform, proceeding with the character strength intervention could be viewed from several perspectives. Collecting feedback afterwards would not give information about participants' learning to the same extent. To the researcher, the digital platform gave better opportunities to understand the knowledge, new ideas, and skills acquired by the teachers who participated in the intervention. Although research material was not collected directly from the digital platform during the intervention, it helped the researcher to improve the intervention contents and benefitted the end results.

In Study 3, I developed the weekly recurring lessons and ran them, making it possible to continuously monitor the progress and make changes in the program if needed. A framework by Dunst (2015) was applied in this iterative mode of intervention implementation. After every lesson, the teachers tried the newly learned ideas combined with their previous knowledge in their ECEC

settings. Then the outcomes were discussed, and feedback was given by me and the participating headteacher colleagues. This clearly improved the following intervention round(s), which could be noticed in participants' motivation. However, that individual teachers' ideas, thoughts and doubts may have received considerably much attention in running the intervention this way should be taken into account. So, there needs to be a balance between participants' contributions with the predetermined contents of the intervention.

Implementation fidelity encompasses the degree to which an intervention is implemented and conducted in following the designers' aims (Dhillon et al., 2014; Durlak & DuPre, 2008). Next, the implementation fidelity in Studies 2 and 3 was examined according to the following concepts: *promotion of the program fidelity, intervention adherence, exposure, quality of delivery, program adaptation,* and *participation responsiveness* (Dane & Schneider, 1998; Roberts et al., 2016).

The implementation fidelity was promoted by training all the teachers before starting the character strength intervention in Study 2. In addition, the teachers were given an online teaching manual about the intervention. According to the teachers' notes on possible challenges, feedback was given to them every week to ensure intervention adherence. Furthermore, regarding the quality of the delivery of intervention, the effectiveness of any school-based intervention program varies due to teachers' motivation and knowledge. To fit contextual features, such as school, classroom, and student characteristics, teachers make adaptations while implementing the intervention (Sutherland et al., 2013). This influences outcomes (Moir, 2018; Smolkowski et al., 2013).

In Study 2, most of the teachers participating in the intervention were already enthusiastic about positive education. They most probably did their best to make the intervention successful and put a lot of personal resources into it. These factors may have improved the outcomes of the study. Moreover, those who wanted to be interviewed after the intervention were probably especially content. On the other hand, it is difficult to find a representative sample of teachers motivated to participate in a four-month intervention study without personal interest in the topic. Without excellent cooperation with the participants, it is practically impossible to run any school-based intervention with novel practices.

One of the strengths of the quality assurance was that I completely designed and implemented the intervention (Flay et al., 2005; Smolkowski et al., 2013). So, the researcher worked hands-on with the teachers, ensuring that the core line of the contents was maintained. In Study 3, participation in the intervention was mandatory and considered a part of the head teachers' yearly in-service training. Not all teachers were eager to start the training or participate or fill the questionnaires, which may have affected the results. This could also be observed by the researcher who was present in all intervention sessions.

Intervention exposure in terms of frequency of exercises and length of sessions was reported in teachers' notes in both studies (see Tables 3 and 4). However, the effectiveness and loyalty to the themes the time use is not exactly known. Every teacher has a personal way of teaching. There are no two identical teachers, so there cannot be two identical teacher-driven interventions. Programs should always be adapted to the particular context to ensure fit. In schools and ECEC settings, there are many distractions that cannot be ruled out. The complexity of the context adds a lot of intervening variables that "disturb the purity of the intervention" and affects the results. In the end, one cannot be sure if the findings were due to the intervention contents even in the presence of a control group. Yet, it is unlikely that the teachers or students would have learned the measured skills elsewhere during the time. Therefore, in Studies 2 and 3, it is justifiable to believe that participant responsiveness was caused by the interventions, although the degree to which *individual* participants responded to the intervention is not known in detail.

The two new character strength intervention programs were found to be successful in many ways. According to the teacher accounts, materials helped them deliver lessons and integrate character strength teaching in their normal daily schedules. The materials left enough space for teachers' pedagogical objectives and thus suited the Finnish school context with a lot of teacher autonomy.

5.4 Educational implications

While character strength interventions have gained popularity and are used in schools globally, most of these interventions have not been well studied and lack evidence-based approaches (Quinlan et al., 2012). More empirically valid research on character strength interventions *in schools and ECEC settings* is needed as the research is still scarce (Lavy, 2020; Lottman et al., 2017). According to Lavy (2020, p.26), when it comes to teaching character strengths in schools*, the practice appears to be more dominant than its research.* Consequently, what is done in practice should follow the experiences and suggestions obtained from research.

According to White (2021, p. 167) and Kristjánsson (2017, p. 188), too little attention is put on the teacher's role in positive education. As the teacher is the critical in-school factor impacting student outcomes (Allen et al., 2018; Hattie, 2009), more focus should be put on the pedagogy in the character strength interventions (White & Kern, 2018, White, 2021, p. 169). Teachers must be given time to live and learn the competencies required first (Noddings, 2015; Waters, 2021, p.155). The findings in this study provide a promising idea that it is possible to spark knowledge of character strengths even with a short intervention that helps teachers become familiar with the new concepts of character strengths (Coppley & Niemiec, 2021, p. 407-409). The present study suggests that teachers benefit

from character strength training as their pedagogical skills improve, impacting both relationships between teachers, teachers and their students and students with their peers. Following the character strengths intervention in Study 2, teachers reported a change in their mindset. For some, this meant having a "fresh way to observe every learner" and for others, it validated what they were already doing. Furthermore, when teachers become aware of their own character strengths (Lottman et al., 2017), they may also learn to encourage strengths usage in their students (Gradišek, 2012). To summarize, the results of the current thesis propose a teacher-centered start for character strength interventions in education.

This thesis showed that when students have more opportunities to apply personal strengths in schoolwork, it may serve as a running board for achieving more positive experiences at school (Study 1). However, simply increasing awareness of individual strengths is not enough. The usage of character strengths should be taught as well. Students seem to benefit from exact activities that encourage them to use their strengths in a variety of ways (Study 2). This, in turn, may improve their trust in their own capabilities (Madden et al., 2011; Quinlan et al., 2015; Seligman et al., 2009) and in their social skills (Rashid et al., 2013).

The idea that character strengths are something that can be explicitly instructed is essential. Time needs to be allocated to them. All curricular newcomers compete with existing contents, and this can result in a fragmented approach in the already fully packed learning schedules. In ECEC settings, teaching character strengths is often more easily integrated in the curriculum. Furthermore, given the importance of early education to children's well-being and learning, a greater emphasis of positive education and character strength teaching could be considered during the ECE time (Haslip & Donaldson, 2021; Shoshani & Slone, 2017).

To sum up, teachers need training in both theory, practicalities and scheduling their instruction on character strengths. Although not studied in the current thesis, a whole school approach, where all education professionals are committed to the new pedagogy, seems a promising way (Hoare et al., 2017; Norrish et al. 2013, Norrish & Seligman, 2015; Slemp et al., 2017).

Conducting and studying character strength interventions is at the beginning of its journey in Finland. However, in the course of this thesis, the growth and proliferation of the positive education movement and interest in incorporating character strength teaching both in ECEC settings and in basic education have been evident. An increasing number of teachers has become interested in including strength teaching in their pedagogy and they have focused on what is working well in their students, colleagues, and the whole organization. More and more schools have adopted inclusive policies, which means that a wide variety of learners study in the same classroom or group. Appreciating and celebrating diversity is at the heart of positive education. Making character strengths visible and the students aware

of what they are capable of is the positive educator's priority. A positive educator can help students become their best versions no matter what challenges they face. Furthermore, it is encouraging to see the educational authorities committed to policies that prioritize every learner's chance to develop as a whole person by fulfilling his or her potential (OECD, 2020a).

Interventions often work as starting points. How long new ideas will last and live depends much on the community. If many teachers in a school or ECEC setting continue with a new pedagogical approach, something may stay and start growing. However, even if one teacher or student started seeing themselves or others in a more positive light, interventions have had an impact worth mentioning.

5.5 Future studies

Character strength interventions for teachers and students need to be studied further and in new contexts. Most of the character strength interventions to date have focused on studying individual students' outcomes. Less is known about the interpersonal, classroom level, or even school culture factors explaining the effectiveness of the character strength interventions and programs (Quinlan et al., 2012). The connection between character strength usage and outcomes at the interpersonal levels characterized by relationships and collective well-being should be extensively studied and measured with a broader range of outcome variables. New methods shall be developed to holistically capture students', teachers', and parents' experiences and the systemic impacts. Future research to replicate the intervention in Study 2 would be welcome, but focusing on the whole class and/or school level as a starting point.

A recent study (OECD, 2021b) highlighted that students' social and emotional skills have age-related differences and the 15-year-olds exhibit lower levels of the skills compared to the 10-year-olds. Future research on character strengths could include interventions to high school students to tackle some of the social and emotional issues. Can the impact of an intervention be stronger in this age group as typically life satisfaction and psychological well-being dip when students get older (OECD, 2021b, p. 21)? Thus, character strength teaching buffer against decrease in happiness in high school students (see also Uusitalo-Malmivaara, 2014b).

In future research, it would be worthwhile replicating the findings of the current thesis in other cultural and educational environments. Students of a variety of backgrounds and specific needs should be included to shed light on how character strength teaching can influence individual and collective well-being in different surroundings. According to the OECD (2021b, p. 19), that kind of research would be especially timely, as socio-economically advantaged students score higher in every social and emotional skill measured by OECD Survey on Social and Emotional

skills (OECD, 2021b). Also, it would be interesting to study how character strength teaching is related to academic performance in various school subjects.

It seems crucial that in future studies, researchers and field practitioners seek to advance a coherent framework to *strength-based approaches* in Finland. These areas are yet to be fully defined and part of the confusion arises from teachers and other professionals across educational levels to label anything positive as "strengths-based" (Niemiec & Pearce, 2020). Moreover, the collaboration between researchers, teachers and policymakers is required to advance the practice of "strengths-based" pedagogical tools and steering documents to promote the integration of strengths (not just character strengths) into practice at all levels of education to gain maximum benefit.

REFERENCES

Äärelä, T. (2012). *"It means quite a lot what kind of look a teacher has." Young prisoners talking about their experiences at a comprehensive school.* Doctoral Thesis, University of Lapland. Finland. Acta electronica Universitatis Lapponiensis http://urn.fi/URN:ISBN:978-952-484-586-1

Äärelä, T., Määttä, K., & Uusiautti, S. (2014). Young prisoners' experiences of the positive factors of small group teaching during their basic education–toward the pedagogy of preventing social exclusion. *Journal of Studies in Education*, *4*(4), 45-67. https://doi.org/dx.doi.org/10.5296/jse.v4i4.6452

Äärelä, T., Määttä, K., & Uusiautti, S. (2016). Caring teachers' ten dos. "For the teacher, they might be just small things, but for the student they mean the world". *International Forum of Teaching and Studies*, *12*(1), 10–20. http://www.scholarspress.us/journals/IFST/pdf/IFOTS-1-2016/v12n1-art2.pdf

Allen, M. (Ed.). (2017). *The SAGE encyclopedia of communication research methods*. Sage Publications. http://dx.doi.org/10.4135/9781483381411.n264

Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, *30*(1), 1–34. https://doi.org/10.1007/s10648-016-9389-8

Aristotle, R., Ross, W. D., & Brown, L. (2009). *The Nicomachean ethics*. Oxford University Press.

Audley-Piotrowski, S., Singer, A., & Patterson, M. (2015). The role of the teacher in children's peer relations: Making the invisible hand intentional. *Translational Issues in Psychological Science*, *1*(2), 192-200. https://doi.org/10.1037/tps0000038

Axelrod J. (2010). Collaborative for Academic, Social and Emotional Learning (CASEL). In: Clauss-Ehlers C.S. (Ed.), *Encyclopedia of Cross-Cultural School Psychology*. (pp. 232-233). Springer. https://doi.org/10.1007/978-0-387-71799-9_77

Baker, J. A., Dilly, L., Aupperless, J., & Patil, S. (2003). The developmental context of school satisfaction: Schools as psychologically healthy environments. *School Psychology Quarterly*, *18*, 206–222. https://doi.org/10.1521/SCPQ.18.2.206.21861

Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? *British Medical Journal*, 322(7294), 1115-1117. https://doi.org/10.1136/bmj.322.7294.1115

Bask, M., & Salmela-Aro, K. (2013). Burned out to drop out: Exploring the relationship between school burnout and school dropout. *European journal of psychology of education*, *28*(2), 511-528. https://doi.org/10.1007/s10212-012-0126-5

Berkowitz, M. W., & Bier, M. C. (2007). What works in character education? *Journal of Research in Character Education*, *5*(1), 29–48.

Bollen, K. A., & Hoyle, R. H. (2012). Latent variables in structural equation modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 56–67). The Guilford Press.

Boniwell, I. (2013). Educating For Happiness and Resilience: Dr. Ilona Boniwell at TEDxHull. Retrieved from https://www.youtube.com/watch?v=DbC18wFkHNI

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

Chan, D. W. (2009). The hierarchy of strengths: Their relationships with subjective well-being among Chinese teachers in Hong Kong. *Teaching and Teacher Education*, *25*(6), 867-875. https://doi.org/10.1016/j.tate.2009.01.010

Coppley, J., & Niemiec, R. M. (2021). Character Strengths Interventions in Education Systems. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave Handbook of Positive Education* (pp. 395-420). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-64537-3_16

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., & Smith, K. C. (2011). Best practices for mixed methods research in the health sciences. *National Institutes of Health*, *2013*, 541-545. https://doi.org/10.1177/1473325013493540a

Creswell, J., & Plano Clark, V. (2007). *Designing and Conducting Mixed Methods Research*. Sage. https://doi.org/10.1177/10944281083180 66

Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: are implementation effects out of control?. *Clinical psychology review*, *18*(1), 23-45. https://doi.org/10.1016/S0272-7358(97)00043-3

Dewey, J. (1938). *Experience in education*. Collier. Retrieved from https://archive.org/stream/ExperienceAndEducation-JohnDewey/dewey-edu-experience_djvu.txt

Dhillon, S., Darrow, C., & Meyers, C. V. (2014). Introduction to implementation fidelity. In *C.* Meyers & W. C. Brandt (Eds.*), Implementation fidelity in education research* (pp. 22-36). Routledge. https://doi.org/10.4324/9781315795089

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*(3), 542–575. https://doi.org/10.1037/0033-2909.95.3.542

Dolly, J. P. (1975). *A Behavioral Approach in Defining and Teaching Educational Psychology*. Presented as part of a symposium entitled, "Divergent directions for educational psychology in higher education" at the annual meeting of the American Educational Research Association, Washington, D.C., April, 1975.

Duckworth, A. (2016). *Grit: The power of passion and perseverance*. Scribner/Simon & Schuster.

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT–S). *Journal of personality assessment*, *91*(2), 166-174. https://doi.org/10.1080/00223890802634290

Dunst, C. J. (2015). Improving the design and implementation of in-service professional development in early childhood intervention. *Infants & young children*, *28*(3), 210-219. https://doi.org/10.1097/IYC.0000000000000042

Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American journal of community psychology*, *41*(3), 327-350. https://doi.org/10.1007/s10464-008-9165-0

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405–432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Dutton, J., Workman, K., & Hardin, A. (2014). Compassion at work. *The Annual Review of Organizational Psychology and Organizational Behavior, 1*, 277–304. https://doi.org/10.1146/annurev-orgpsych-031413-091221

Dweck, C. S. (2006) *Mindset: The New Psychology of Success*. Random House Digital Inc.

Eldor, L., & Shoshani, A. (2016). Caring relationships in school staff: Exploring the link between compassion and teacher work engagement. *Teaching and Teacher Education*, *59*, 126-136. https://doi.org/10.1016/J.TATE.2016.06.001

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing*, *62*(1), 107-115. https://doi.org/10.1111/j.1365-2648.2007.04569.x

Epstein, M. H. (2000). The Behavioral and Emotional Rating Scale: A strength-based approach to assessment. *Diagnostique*, *25*(3), 249-256. https://doi.org/10.1177/073724770002500304

European Union Law (2016). *General Data Protection Regulation*. Retrieved from https://eur-lex.europa.eu/eli/reg/2016/679/oj

Finnish National Agency for Education (2014). *National core curriculum for basic education*. [*Perusopetuksen opetussuunnitelman perusteet 2014*]. Retrieved from https://www.oph.fi/sites/default/files/documents/new-national-core-curriculum-for-basic-education.pdf

Finnish National Agency for Education, (2016). *The core curriculum of early childhood education 2016. [Varhaiskasvatussuunnitelman perusteet 2016]*. Finnish National Agency for Education. Retrieved from https://www.oph.fi/fi/koulutus-ja-tutkinnot/varhaiskasvatussuunnitelmien-perusteet

Finnish National Agency for Education (2018). *#Paraskoulu* [*#Bestschool*]. Retrieved from https://www.innoduel.com/fi/paraskoulu

Finnish National Board on Research Integrity (2009). *The ethical principles of research with human participants and ethical review in the human sciences in Finland*. Retrieved from https://tenk.fi/sites/default/files/2021-01/Ethical_review_in_human_sciences_2020.pdf

Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on social work practice*, *19*(5), 531-540. https://doi.org/10.1177/1049731509335549

Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., Moscicki, E.K., Schinke, S., Valentine, J.C., & Ji, P. (2005). Standards of evidence: Criteria for efficacy, effectiveness and dissemination. *Prevention science*, *6*(3), 151-175. https://doi.org/10.1007/s11121-005-5553-y

Franco, Z., Friedman, H., & Arons, M. (2008). Are qualitative methods always best for humanistic psychology research? A conversation on the epistemological divide between humanistic and positive psychology. *The Humanistic Psychologist*, *36*(2), 159-203. https://doi.org/10.1080/08873260802111242

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *American psychologist*, *56*(3), 218. https://doi.org/10.1037/0003-066X.56.3.218

Fredrickson, B. L. (2013). *Love 2.0: Finding happiness and health in moments of connection*. Penguin.

Freidlin, P., & Littman-Ovadia, H. (2020). Prosocial behavior at work through the lens of character strengths. *Frontiers in psychology*. https://doi.org/10.3389/fpsyg.2019.03046

Friedman, H. (2008). Humanistic and positive psychology: The methodological and epistemological divide. *The humanistic psychologist*, *36*(2), 113-126. https://doi.org/10.1080/08873260802111036

Froebel, F. (1989 [1826]). *The education of man* (Hailmann W, trans). Appleton.

Gander, F., Proyer, R. T., Ruch, W., & Wyss, T. (2013). Strength-based positive interventions: Further evidence for their potential in enhancing well-being and alleviating depression. *Journal of Happiness Studies, 14*(4), 1241–1259. https://doi.org/10.1007/s10902-012-9380-0

Ghielen, S. T. S., van Woerkom, M., & Christina Meyers, M. (2018). Promoting positive outcomes through strengths interventions: A literature review. *The Journal of Positive Psychology*, *13*(6), 573-585. https://doi.org/10.1080/17439760.2017.1365164

Gillham, J., Adams-Deutsch, Z., Werner, J., Reivich, K., Coulter-Heindl, V., Linkins, M., Winder, B., Peterson, C., Park, N., Abenavoli, R., Contero, A., & Seligman, M. E. (2011). Character strengths predict subjective well-being during adolescence. *The Journal of Positive Psychology*, *6*(1), 31-44. https://doi.org/10.1080/17439760.2010.536773

Govindji, R., & Linley, P. A. (2007). Strengths use, self-concordance and well-being: Implications for strengths coaching and coaching psychologists. *International Coaching Psychology Review*, *2*(2), 143-153.

Gradišek, P. (2012). Character Strengths and Life Satisfaction of Slovenian In-Service and Pre-Service Teachers. *Center for Educational Policy Studies Journal*, *2*(3), 167-180. https://doi.org/10.26529/cepsj.379

Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and teacher education*, *24*(5), 1349-1363. https://doi.org/10.1016/j.tate.2007.06.005

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development*, *76*(5), 949–67. https://doi.org/10.1111/j.1467-8624.2005.00889.x

Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and teacher education*, *16*(8), 811-826. https://doi.org/10.1016/S0742-051X(00)00028-7

Harzer, C. (2011). *Profile verschiedener Berufe* [*Character strengths profiles of different vocations*]. In D. Jungo, W. Ruch, & R. Zihlmann (Eds.), Das VIA-IS (Values in Action Inventory of Strengths), ein Instrument zur Erfassung von Charakterstärken. Informationen und Interpretationshilfen für die Berufs-, Studien- und Laufbahnberatung. (2nd ed., pp. 40-44). SDBB Verlag.

Harzer, C. (2016). *The relationships between character strengths and work-related outcomes in teachers*. In M. Weber (Chair), Character strengths and positive schooling: Focusing on teachers and students. Symposium at the 8th European Conference on Positive Psychology, Angers, France.

Harzer, C., & Ruch, W. (2012). When the job is a calling: The role of applying one's signature strengths at work. *The Journal of Positive Psychology*, *7*(5), 362-371. https://doi.org/10.1080/17439760.2012.702784

Harzer, C., & Ruch, W. (2013). The application of signature character strengths and positive experiences at work. *Journal of Happiness Studies*, *14*(3), 965-983. https://doi.org/10.1007/s10902-012-9364-0

Harzer, C., & Ruch, W. (2015). The relationships of character strengths with coping, work-related stress, and job satisfaction. *Frontiers in psychology*. https://doi.org/10.3389/fpsyg.2015.00165

Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. Routledge. Retrieved from https://eclass.edc.uoc.gr/modules/document/file.php/PTDEU108/Visible%20Learning_A%20synthesis%200r%20over%20800%20Meta-analyses%20Relating%20to%20Achievement_Hattie%20J%202009%20...pdf

Haslip, M. J., & Donaldson, L. (2021). How Early Childhood Educators Resolve Workplace Challenges Using Character Strengths and Model Character for Children in the Process. *Early Childhood Education Journal*, *49*(2), 337-348. https://doi.org/10.1007/s10643-020-01072-2

Hausler, M., Strecker, C., Huber, A., Brenner, M., Höge, T., & Höfer, S. (2017). Distinguishing relational aspects of character strengths with subjective and psychological well-being. *Frontiers in psychology*. https://doi.org/10.3389/fpsyg.2017.01159

Hefferon, K., Ashfield, A., Waters, L., & Synard, J. (2017). Understanding optimal human functioning – The 'call for qual'in exploring human flourishing and well-being. *The Journal of Positive Psychology*, *12*(3), 211-219. https://doi.org/10.1080/17439760.2016.1225120

Hepburn, A. & Potter, J. (2007). Discourse analytic practice. In C. Seale, G. Gobo, J. F. Gubrium & D. Silverman (Eds.), *Qualitative Research Practice*, (pp. 168-84). SAGE.

Hoare, E., Bott, D., & Robinson, J. (2017). Learn it, live it, teach it, embed it: Implementing a whole school approach to foster positive mental health and well-being through positive education. *International Journal of Wellbeing, 7* (3), 56–71. https://doi.org/10.5502/ijw.v7i3.645

Hone, L. C., Jarden, A., Duncan, S., & Schofield, G. M. (2015). Flourishing in New Zealand workers: Associations with lifestyle behaviors, physical health, psychosocial, and work-related indicators. *Journal of Occupational and Environmental Medicine*, *57*(9), 973-983. https://doi.org/10.1097/JOM.0000000000000508

Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods,* 3, 424–453. https://doi.org/10.1037/1082-989X.3.4.424

Huebner, E. S., Hills, K. J., Jiang, X., Long, R. F., Kelly, R., & Lyons, M. D. (2014). Schooling and children's subjective well-being. In Ben-Aryeh, A., Frønes, I., Casas, F., & Korbin, J. E. (Eds.), *Handbook of child well-being*, *2*, (pp. 797-819). Springer.https://doi.org/10.1007/978-90-481-9063-8

Hughes, J. N. (2011). Longitudinal effects of teacher and student perceptions of teacher-student relationship qualities on academic adjustment. *The Elementary School Journal*, *112*(1), 38–60. https://doi.org/10.1086/660686

Husén, T. (1997). Research paradigms in education. In J.P. Keeves (Ed.), *Educational research, methodology, and measurement: An international handbook*, second edition (pp. 16–21). Cambridge University Press.

Hwang, J. Y., Plante, T., & Lackey, K. (2008). The development of the Santa Clara brief compassion scale: An abbreviation of Sprecher and Fehr's compassionate love scale. *Pastoral Psychology, 56*(4), 421–428. https://doi.org/10.1007/s11089-008-0117-2

Ivens, J. (2007). The development of a happiness measure for schoolchildren. *Educational Psychology in Practice*, *23*(3), 221–239. https://doi.org/10.1080/02667360701507301

Jennings, P. A. & Greenberg, M. T. (2009). The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*(1), 491–525. https://doi.org/10.3102/0034654308325693

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher, 33*(7), 14-26. https://doi.org/10.3102/0013189X033007014

Jørgensen, M. W., & Phillips, L. J. (2002). *Discourse analysis as theory and method*. Sage. https://doi.org/10.4135/9781849208871

Jørgensen, I., & Nafstad, H. E. (2004). Positive psychology: Historical, philosophical, and epistemological perspectives. In P. A. Linley & S. Joseph (Eds.), Positive psychology in practice (pp. 15–34). John Wiley & Sons.

Jubilee Centre. (2017). *A framework for character education in schools*. Retrieved from https://www. jubileecentre.ac.uk/userfiles/jubileecentre/pdf/character-education/Framework% 20for%20Character%20Education.pdf

Jöreskog, K. G. (1969). A General Approach to Confirmatory Maximum Likelihood Factor Analysis. *Psychometrika*, 34, 183-202. https://doi.org/10.1007/BF02289343

Jöreskog, K. G. (1970). A general method for estimating a linear structural equation system. *ETS Research Bulletin Series, 1970*(2), i-41. https://doi.org/10.1002/j.2333-8504.1970.tb00783.x

Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology, 3*(4), 219-233. https://doi.org/10.1080/17439760802303044

Kaukiainen, A., Junttila, N., Kinnunen, R., & Vauras, M. (2005). *MASC. Multiassessment of Social Competence*. Centre for Learning Research, University of Turku.

Kenny, D. A. (2008). Reflections on mediation. *Organizational research methods, 11*(2), 353-358. https://doi.org/10.1177/1094428107308978

Kern, M. L., & Taylor, J. A. (2021). Systems informed positive education. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave Handbook of Positive Education* (pp. 109-135). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-64537-3_5

Kern, M. L., & Wehmeyer, M. L. (2021a). Introduction and overview. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave Handbook of Positive Education* (pp. 1-17). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-64537-3_1

Kern, M. L., & Wehmeyer, M. L. (2021b). Conclusion. In M. L. Kern & M. L. Wehmeyer (Eds.), *The Palgrave Handbook of Positive Education* (pp. 1-17). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-64537-3_30

Kirschenbaum, H. (1982). What humanistic education is... and is not. *Elementary School Guidance & Counseling, 17*(1), 25–27. http://www.jstor.org/stable/24008792

Kristjánsson, K. (2017). Teachers as facilitators of student flourishing in positive education: What are the political implications? In M. White, G. Slemp, & A. Murray (Eds.), *Future directions in well-being: Education, organizations and policy*. (pp. 87-190). Springer International Publishing AG. https://doi.org/10.1007/978-3-319-568 89-8

Kumpulainen, K., Mikkola, A., Rajala, A., Hilppö, J., & Lipponen, L. (2014). Positiivisen pedagogiikan jäljillä [Tracking positive pedagogy]. In L. Uusitalo-Malmivaara (Ed.), *Positiivisen psykologian voima [The power of positive psychology]* (pp. 224– 242). PS-kustannus.

Kunnari, I., & Lipponen, L. (2010). Building teacher-student relationships for well-being. *Lifelong Learning in Europe, 2*, 63-71.

Lappalainen, K., Savolainen, H., Kuorelahti, M., & Epstein, M. H. (2009). An international assessment of the emotional and behavioral strengths of youth. *Journal of Child and Family Studies, 18*(6), 746-753. https://doi.org/10.1007/s10826-009-9287-5

Lappalainen, K., & Sointu, E. (2013). Vahvuuksia tunnistamalla käyttäytymisen ja tunteiden hallintaa koulussa. Itä-Suomen yliopisto, Itä-Suomen kehittämisverkosto (ISKE-hanke.) Retrieved from https://www. researchgate. net/profile/Erkko_ Sointu/publication/236873371_Vahv uuksia_tunnistamalla_kayttaytymisen_ja_ tunteiden_hallintaa_koulussa/links/00 463519c8cc4ad7dd000000. pdf

Lavonen, J. (2018). Educating professional teachers in Finland through the continuous improvement of teacher education programmes. *Contemporary pedagogies in teacher education and development*, 3-22. https://doi.org/10.5772/intechopen.77979

Lavy, S. (2020). A review of character strengths interventions in twenty-first-century schools: Their importance and how they can be fostered. *Applied Research in Quality of Life*, *15*(2), 573-596. https://doi.org/10.1007/s11482-018-9700-6

Lavy, S., & Littman-Ovadia, H. (2017). My better self: Using strengths at work and work productivity, organizational citizenship behavior, and satisfaction. *Journal of Career Development*, *44*(2), 95-109. https://doi.org/10.1177/0894845316634056

Lavy, S., & Naama-Ghanayim, E. (2020). Why care about caring? Linking teachers' caring and sense of meaning at work with students' self-esteem, well-being, and school engagement. *Teaching and Teacher Education*, *91*, 103046. https://doi.org/10.1016/j.tate.2020.103046

Lavy, S., & Benish-Weisman, M. (2021). Character Strengths as "Values in Action": Linking Character Strengths With Values Theory–An Exploratory Study of the Case of Gratitude and Self-Transcendence. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.576189

Lerkkanen, M. K., Kiuru, N., Pakarinen, E., Poikkeus, A. M., Rasku-Puttonen, H., Siekkinen, M., & Nurmi, J. E. (2016). Child-centered versus teacher-directed teaching practices: Associations with the development of academic skills in the first grade at school. *Early Childhood Research Quarterly*, *36*, 145-156. https://doi.org/10.1016/j.ecresq.2015.12.023

Leskisenoja, E. (2016).Year of school, year of joy – PERMA-based classroom practices enhancing perceived joy at school. University of Lapland. Acta electronica Universitatis Lapponiensis. http://urn.fi/URN:ISBN:978-952-484-915-9

Leskisenoja, E., & Uusiautti, S. (2017). *How to increase joy at school? Findings from a positive-psychological intervention at a Northern-Finnish school.* Education in the North, 24(2), 36–55. https://doi.org/10.26203/p2aq-3212

Leskisenoja, E., & Uusiautti, S. (2019). Human strength-spotting at school as the future foundation of "us" in the Arctic. In S. Uusiautti, & N. Yeasmin (Eds.), *Human migration in the Arctic: The past, present, and future*, (pp. 239-261). Palgrave Macmillan.

Liamputtong, P., & Ezzy, D. (2005). *Qualitative research methods. (2nd ed.)* Oxford university press.

Lillard, A. S., Heise, M. J., Richey, E. M., Tong, X., Hart, A., & Bray, P. M. (2017). Montessori preschool elevates and equalizes child outcomes: A longitudinal study. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2017.01783

Lim, Y. J., & Kim, M. N. (2014). Relation of Character Strengths to Personal Teaching Efficacy in Korean Special Education Teachers. *International Journal of Special Education*, *29*(2), 53-58.

Linkins, M., Niemiec, R. M., Gillham, J., & Mayerson, D. (2015). Through the lens of strength: A framework for educating the heart. *The Journal of Positive Psychology*, *10*(1), 64-68. https://doi.org/10.1080/17439760.2014.888581

Littman-Ovadia, H., Lavy, S., & Boiman-Meshita, M. (2017). When theory and research collide: Examining correlates of signature strengths use at work. *Journal of Happiness Studies*, *18*(2), 527-548. https://doi.org/10.1007/s10902-016-9739-8

Littman-Ovadia, H., Dubreuil, P., Meyers, M. C., & Freidlin, P. (2021). VIA Character Strengths: Theory, Research and Practice. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.653941

Lonka, K., Makkonen, J., Berg, M., Talvio, M., Maksniemi, E., Kruskopf, M., Lammassaari, H., Hietajärvi, L., & Westling, S. K. (2018). *Phenomenal learning from Finland*. Edita.

Lopez, S. J., & Louis, M. C. (2009). The principles of strengths-based education. *Journal of College and Character*, *10*(4), 1-8. https://doi.org/10.2202/1940-1639.1041

Lottman T.J., Zawaly S., & Niemiec R. (2017). Well-Being and Well-Doing: Bringing Mindfulness and Character Strengths to the Early Childhood Classroom and Home. In: Proctor C. (Eds.), *Positive Psychology Interventions in Practice*. (pp. 83-105). Springer. https://doi.org/10.1007/978-3-319-51787-2_6

Louis, K. S., Murphy, J., & Smylie, M. (2016). Caring leadership in schools: Findings from exploratory analyses. *Educational administration quarterly, 52*(2), 310-348. https://doi.org/10.1177/0013161X15627678

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social indicators research*, 46(2), 137–155. https://doi.org/10.1023/A:1006824100041

Madden, W., Green, S., & Grant, A. M. (2011). A pilot study evaluating strengths-based coaching for primary school students: Enhancing engagement and hope. *International Coaching Psychology Review*, *6*(1), 71-83.

Manning, J. (2017). In vivo coding. In Matthes, J. (Ed.), *The international encyclopedia of communication research methods*. Wiley-Blackwell. https://doi.org/10.1002/9781118901731.iecrm0270 Manning, J. (2017). In vivo coding. *The international encyclopedia of communication research methods*.

Mansikka, J. E. (2019). Pedagogical documentation in the framework of Reggio Emilia and poststructuralism. *Journal of Early Childhood Education Research*, *8*(1), 100–120. https://doi.org/10.17051/ilkonline.2021.01.021

Maslow, A. H. (1954). *Motivation and personality*. Harper & Row.

Mayer, A., Thoemmes, F., Rose, N., Steyer, R., & West, S. G. (2014). Theory and analysis of total, direct, and indirect causal effects. *Multivariate Behavioral Research*, *49*(5), 425–442. https://doi.org/10.1080/00273171.2014.931797

McGrath, R. (2018). What is character education? Development of a Prototype. *Journal of Character Education*, *14*, 23-35.

Milatz, A., Luftenegger, M. & Schober, B. (2015). Teachers' relationship closeness with students as a resource for teacher wellbeing: A response surface analytical approach. F*rontiers in Psychology*. http://doi.org/10.3389/fpsyg.2015.01949

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Ministry of Education and Culture (2007). *Special education strategy.* [*Erityisopetuksen strategia*]. Reports of the Ministry of Education 2007:47, Helsinki. Retrieved from https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/79498/tr47.pdf?sequence=1

Ministry of Education and Culture (2014). *Oppimisen ja hyvinvoinnin tuki. Selvitys kolmiportaisen tuen toimeenpanosta*. [*Support for learning and well-being. Clarification on conducting the three-tiered support*]. Publications of the Ministry of Education and Culture 2. Retrieved from https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/75235/okm02.pdf?sequence=1&isAllowed=y

Ministry of Education and Culture (2021). *Pre-primary education*. Retrieved from https://okm.fi/en/pre-primary-education1

Moir, T. (2018). Why is implementation science important for intervention design and evaluation within educational settings?*Frontiers in Education*, *3*(2018), 61. http://doi.org/10.3389/feduc.2018.00061

Morse, J. M., & Niehaus, L. (2009). *Mixed methods design*. Principles and procedures. Left Coast Press.

Moss, D. (2001). The roots and genealogy of humanistic psychology. In Schneider, K. J., Bugental, J. F., & Pierson, J. F. (Eds.), *The handbook of humanistic psychology: Leading edges in theory, research, and practice* (pp. 5-20). SAGE Publications, Inc. https://doi.org//10.4135/9781412976268.n1

Muthén, B. O., & Satorra, A. (1995). Complex sample data in structural equation modeling. *Sociological methodology*, 267–316. https://doi.org/10.2307/271070

Muthén, B. O., & Curran, P. J. (1997). General longitudinal modeling of individual differences in experimental designs: A latent variable framework for analysis and power estimation. *Psychological methods*, *2*(4), 371-402. https://doi.org/10.1037/1082-989X.2.4.371

Määttä, K., & Uusiautti, S. (2012). Pedagogical Authority and Pedagogical Love--Connected or Incompatible?. *International journal of whole schooling*, *8*(1), 21-39.

Nachtigall, C., Kroehne, U., Funke, F., & Steyer, R. (2003). Pros and cons of structural equation modeling. *Methods Psychological Research Online*, *8*(2), 1-22.

National Institute for Health and Welfare (2021). School Health Promotion study. Retrieved from: https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/kouluterveyskysely

Nielsen, T. (2003). *Rudolf Steiner's pedagogy of imagination: A phenomenological case study.* International Conference on Imagination in Education, Vancouver, Canada.

Niemiec, R. M. (2013). VIA character strengths: Research and practice (The first 10 years). In Knoop, H. H., & Delle Fave, A. (Eds.), *Well-being and cultures: Perspectives from positive psychology* (Vol. 3, pp. 11-29). Springer Science & Business Media. https://doi.org/10.1007/978-94-007-4611-4_2

Niemiec, R. M. (2018). *Character strengths interventions: A field-guide for practitioners*. Hogrefe.

Niemiec, R. M., & McGrath, R. E. (2019). *The power of character strengths*. VIA Institute on Character.

Niemiec, R. M., & Pearce, R. (2020). The Practice of Character Strengths: Unifying Definitions, Principles, and Exploration of What's Soaring, Emerging, and Ripe With Potential in Science and in Practice. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2020.590220

Noddings, N. (2015). *The Challenge to Care in Schools*, 2nd Edition. Teachers College Press.

Norrish, J. M., Williams, P., O'Connor, M., & Robinson, J. (2013). An applied framework for positive education. *International Journal of Wellbeing, 3*(2), 147–161.

Norrish, J. M., & Seligman, M. E. (2015). *Positive education: The Geelong Grammar School journey*. Oxford Positive Psychology Series. Oxford University Press.

Nykänen, H. (2021). *The line between general and special support. Teachers' and principals' experiences of intensified support in primary education*. University of Oulu. http://urn.fi/urn:isbn:9789526229287

OECD (2014). TALIS 2013 Results: An International Perspective on Teaching and Learning, OECD Publishing. https://doi.org/10.1787/9789264196261-en

Statistics of Finland (2021). *Education*. Retrieved from https://www.stat.fi/til/erop/2020/erop_2020_2021-06-08_en.pdf

OECD (2015), *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Skills Studies, OECD Publishing. Retrieved from http://www.oecd.org/education/skills-for-social-progress-9789264226159-en.htm

OECD (2019a), PISA 2018 Results (Volume III): What School Life Means for Students' Lives. OECD Publishing. https://doi.org/10.1787/acd78851-en

OECD (2019b). *Programme for International Student Assessment (PISA. Finland*. Retrieved from: https://www.oecd.org/pisa/publications/PISA2018_CN_FIN.pdf

OECD (2020a). Curriculum (re)design A series of thematic reports from the OECD Education 2030 project Overview brochure. OECD Publishing. Retrieved from https://www.oecd.org/education/2030-project/contact/brochure-thematic-reports-on-curriculum-redesign.pdf

OECD (2020b). *The impact of COVID-19 on student equity and inclusion: Supporting vulnerable students during school closures and school re-openings*. Retriewed from https://www.oecd.org/coronavirus/policy-responses/the-impact-of-covid-19-on-student-equity-and-inclusion-supporting-vulnerable-students-during-school-closures-and-school-re-openings-d593b5c8/

OECD (2021a). *Survey on Social and Emotional Skills (SSES)*. Retrieved from: https://www.oecd.org/education/ceri/social-emotional-skills-study/sses-helsinki-report.pdf

OECD (2021b). *Beyond Academic Learning: First Results from the Survey of Social and Emotional Skills*, OECD Publishing. https://doi.org/10.1787/92a11084-en

Oppenheimer, M. F., Fialkov, C., Ecker, B., & Portnoy, S. (2014). Teaching to strengths: Character education for urban middle school students. *Journal of Character Education, 10*(2), 91–105.

Paakkanen, M., Martela, F., Hakanen, J., Uusitalo, L., & Pessi, A. (2020). Awakening Compassion in Managers—a New Emotional Skills Intervention to Improve Managerial Compassion. *Journal of Business and Psychology*, 1-14. https://doi.org/10.1007/s10869-020-09723-2

Park, N. (2009). Building strengths of character: Keys to positive youth development. *Reclaiming Children and Youth*, *18*(2), 42-47.

Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23, 603–619. https://doi.org/10.1521/jscp.23.5.603.50748

Park, N., & Peterson, C. (2006). Moral competence and character strengths among adolescents: the development and validation of the Values in Action Inventory of Strengths for Youth. *Journal of Adolescence,* 29, 891–909. https://doi.org/10.1016/j.adolescence.2006.04.011

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification.* American Psychological Association; Oxford University Press.

Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientation to happiness, and life satisfaction. *Journal of Positive Psychology*, 2, 149–156. https://doi.org/10.1080/17439760701228938

Peterson, C., & Park, N. (2009). Classifying and measuring strengths of character. In S. J. Lopez, & C. R. Snyder (Eds.), *Oxford handbook of positive psychology*, 2nd edition (pp. 25-33). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195187243.013.0004

Proctor, C., Maltby, J., & Linley, P. A. (2011a). Strengths use as a predictor of well-being and health-related quality of life. *Journal of Happiness Studies*, *12*(1), 153-169. https://doi.org/10.1007/s10902-009-9181-2

Proctor, C., Tsukayama, E., Wood, A. M., Maltby, J., Eades, J. F., & Linley, P. A. (2011b). Strengths gym: The impact of a character strengths-based intervention on the life satisfaction and well-being of adolescents. *The Journal of Positive Psychology*, *6*(5), 377-388. https://doi.org/10.1080/17439760.2011.594079

Proyer, R. T., Ruch, W., & Buschor, C. (2013). Testing strengths-based interventions: A preliminary study on the effectiveness of a program targeting curiosity, gratitude, hope, humor, and zest for enhancing life satisfaction. *Journal of Happiness Studies*, 14, 275-292. https://doi.org/10.1007/s10902-012-9331-9

Proyer, R. T., Gander, F., Wellenzohn, S., & Ruch, W. (2015). Strengths-based positive psychology interventions: a randomized placebo-controlled online trial on long-term effects for a signature strengths-vs. a lesser strengths-intervention. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2015.00456

Quinlan, D., Swain, N., & Vella-Brodrick, D. A. (2012). Character strengths interventions: Building on what we know for improved outcomes. *Journal of Happiness Studies*, *13*(6), 1145–1163. https://doi.org/10.1007/s10902-011-9311-5

Quinlan, D. M., Swain, N., Cameron, C., & Vella-Brodrick, D. A. (2015). How 'other people matter' in a classroom-based strengths intervention: Exploring interpersonal strategies and classroom outcomes. *The Journal of Positive Psychology*, *10*(1), 77-89. https://doi.org/10.1080/17439760.2014.920407

Quinlan D.M., Vella-Brodrick D. A., Gray, A., & Swain N. (2018). Teachers matter: student outcomes following a strengths intervention are mediated by teacher strengths spotting. *Journal of Happiness Studies*, 20, 2507–2523. https://doi.org/10.1007/s10902-018-0051-7

Raatikainen, P. (2004). *Ihmistieteet ja filosofia*. [*Humanities and philosophy*]. Gaudeamus.

Ranta, S. (2020a). Positive Pedagogy in the Finnish Early Childhood Education and Care Centers and Pre-school. University of Lapland. Acta electronica Universitatis Lapponiensis. http://urn.fi/URN:ISBN:978-952-337-217-7

Ranta, S. (2020b). Positive pedagogy in Finland. Personal email, November 7, 2020.

Ranta, S., Uusiautti, S., & Hyvärinen, S. (2020). The implementation of positive pedagogy in Finnish early childhood education and care: a quantitative survey of its practical elements. *Early Child Development and Care*, 1-17. https://doi.org/10.1080/03004430.2020.1763979

Rashid, T., Anjum, A., Lennox, C., Quinlan, D., Niemiec, R. M., Mayerson, D., & Kazemi, F. (2013). Assessment of character strengths in children and adolescents. In C. Proctor & P.A. Linley, (Eds.) *Research, applications, and interventions for children and adolescents,* (pp. 81-115). Springer. https://doi.org/10.1007/978-94-007-6398-2_6

Roberts, G., Vaughn, S., Beretvas, S. N., & Wong, V. (Eds.). (2016). *Treatment fidelity in studies of educational intervention*. Taylor & Francis. https://doi.org/10.4324/9781315734262

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of consulting psychology*, *21*(2), 95-103.

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 3, pp. 184-256). McGraw-Hill.

Roorda, D. L., Koomen, H. M., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of educational research*, *81*(4), 493-529. https://10.3102/0034654311421793

Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. Journal of Statistical Software, 48(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual review of psychology*, *52*(1), 141-166. https://doi.org/10.1146/annurev.psych.52.1.141

Salmela-Aro, K., Savolainen, H., & Holopainen, L. (2009). Depressive symptoms and school burnout during adolescence: Evidence from two cross-lagged longitudinal studies. *Journal of youth and adolescence*, *38*(10), 1316-1327. https://doi.org/10.1007/s10964-008-9334-3

Salmela-Aro, K., & Upadaya, K. (2012). The schoolwork engagement Inventory. *European Journal of Psychological Assessment*, *28*(1), 60–67. https://doi.org/10.1027/1015-5759/a000091

Salmela-Aro, K., & Upadyaya, K. (2020). School engagement and school burnout profiles during high school – The role of socio-emotional skills. *European Journal of Developmental Psychology*, *17*(6), 943-964. https://doi.org/10.1080/17405629.2020.1785860

Salmela-Aro, K., Upadyaya, K., Vinni-Laakso, J., & Hietajärvi, L. (2021). Adolescents' Longitudinal School Engagement and Burnout Before and During COVID-19 - The Role of Socio-Emotional Skills. *Journal of research on adolescence*, *31*(3), 796-807. https://doi.org/10.1111/jora.12654

Saloviita, T., & Pakarinen, E. (2021). Teacher burnout explained: Teacher-, student-, and organisation-level variables. *Teaching and Teacher Education*, *97*, 103221, 1-14. https://doi.org/10.1016/j.tate.2020.103221

Schneider, K. (2014). Humanistic and positive psychology need each other, and to advance, our field needs both. *American Psychologist, 69, 92*. https://doi.org/10.1037/a0034852

Schlemminger, G. (1999). The Freinet movement: Past and present. *Plaisir d'apprendre et travail coopératif. Les méthodes éducatives et la philosophie pratique de Célestin Freinet*, 17-26.

Schonert-Reichl, K. A. (2017). Social and Emotional Learning and Teachers. *The Future of Children*, *27*(1), 137–155. https://doi.org/10.1353/foc.2017.0007

Schutte, N. S., & Malouff, J. M. (2019). The impact of signature character strengths interventions: A meta-analysis. *Journal of Happiness Studies*, *20*(4), 1179-1196. https://doi.org/10.1007/s10902-018-9990-2

Shoshani, A., & Slone, M. (2017). Positive education for young children: effects of a positive psychology intervention for preschool children on subjective well being and learning behaviors. *Frontiers in psychology*. https://doi.org/10.3389/fpsyg.2017.01866

Seligman, M., & Csíkszentmihályi, M. (2000). Positive psychology. *American Psychologist*, *55*(1), 5-14. https://doi.org/10.1037/0003-066X.55.1.5

Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *American psychologist*, *60*(5), 410–421. https://doi.org/10.1037/0003-066X.60.5.410

Seligman, M. E., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford review of education*, *35*(3), 293-311. https://doi.org/10.1080/03054980902934563

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.

Shoshani, A., Steinmetz, S., & Kanat-Maymon, Y. (2016). Effects of the Maytiv positive psychology school program on early adolescents' well-being, engagement, and achievement. *Journal of School Psychology*, 57, 73-92. https://doi.org/10.1016/j.jsp.2016.05.003

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

Slemp, G. R., Chin, T. C., Kern, M. L., Siokou, C., Loton, D., Oades, L. G., Vella-Brodrick, D., & Waters, L. (2017). Positive education in Australia: Practice, measurement, and future directions. In E. Frydenberg, A. E. Martin, & J. R. Collie (Eds.), *Social and emotional learning in Australia and the Asia-Pacific* (pp. 101–122). Springer. https://doi.org/10.1007/978-981-10-3394-0_6

Smolkowski, K., Strycker, L., & Seeley, J. R. (2013). The role of research evaluation for interventions on school-related behavior disorders. In H. M. Walker, & F. M. Gresham (Eds.), *Handbook of evidence-based practices for students having emotional and behavioral disorders* (pp. 552–566). Guilford.

Sointu, E. T., Savolainen, H., Lappalainen, K., & Epstein, M. H. (2012). Parent, teacher and student cross informant agreement of behavioral and emotional strengths: Students with and without special education support. *Journal of Child and Family Studies*, *21*(4), 682-690.https://doi.org/10.1007/s10826-011-9520-x

Sointu, E. T. (2014). Multi-informant assessment of behavioral and emotional strengths. *University of Eastern Finland*. Finland. https://jyu.finna.fi/Record/jykdok.1467330

Sointu, E. T., Savolainen, H., Lappalainen, K., & Lambert, M. C. (2017a). Longitudinal associations of student–teacher relationships and behavioural and emotional strengths on academic achievement. *Educational Psychology*, *37*(4), 457-467. https://doi.org/10.1080/01443410.2016.1165796

Sointu, E., Virtanen, T., Lappalainen, K., & Hotulainen, R. (2017b). Vahvuuksien ja motivaation tukeminen edistämässä koulupolulle kiinnittymistä ja hyvinvointia [Support for strengths and motivation promote engagement and wellbeing at school]. In S. Puukari, K. Lappalainen, & M. Kuorelahti (Eds.), Ohjaus ja erityisopetus oppijoiden tukena [Guidance and special education as the support for learners] (pp. 111-128). PS–kustannus.

Spivak, A. L., & Durlak, J. A. (2016). *School intervention and prosocial behaviour*. In Tremblay, R.E., Bovin, M., & Peters, R.D. *(Eds.), Encyclopedia of Early Childhood Development*. Retrieved from https://www.child-encyclopedia.com/pdf/expert/prosocial-behaviour/according-experts/school-intervention-and-prosocial-behaviour

Stahlmann, A. G., & Ruch, W. (2020). Scrutinizing the criteria for character strengths: Laypersons assert that every strength is positively morally valued, even in the absence of tangible outcomes. *Frontiers in Psychology*, https://doi.org/10.3389/fpsyg.2020.591028

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of career Assessment, 20*(3), 322–337. https://doi.org/10.1177/1069072711436160

Suldo, S. M. (2016). *Promoting student happiness: Positive psychology interventions in schools*. Guilford Publications.

Sutherland, K. S., McLeod, B. D., Conroy, M. A., & Cox, J. R. (2013). Measuring implementation of evidence-based programs targeting young children at risk for emotional/behavioral disorders: Conceptual issues and recommendations. *Journal of Early Intervention*, *35*(2), 129-149. https://doi.org/10.1177/1053815113515025

Talvio, M. (2014). *How do teachers benefit from training on social interaction skills. Developing and utilizing an instrument for the evaluation of teachers social and emotional learning. University of Helsinki. Behavioural Sciences*, *361*. http://urn.fi/URN:ISBN:978-951-51-0188-4

Talvio, M., & Lonka, K. (2019). How to create a flourishing classroom? An intervention protocol for enhancing teachers' social and emotional learning. In L. E. van Zyl, & S. Rothmann Sr. (Eds.), *Positive Psychological Intervention Design and Protocols for Multi-Cultural Contexts* (pp. 315-339). Springer. https://doi.org/10.1007/978-3-030-20020-6_14

Tashakkori, A., & Teddlie, C. (2010). *Mixed methods in social & behavioral research. Sage.*

Team, R. C. (2020). R: A language and environment for statistical computing. Retrieved from https://www.r-project.org/

Teddlie, C., & Tashakkori, A. (2011). Mixed methods research. *The Sage handbook of qualitative research*, *4*, 285-300.

Toner, E., Haslam, N., Robinson, J., & Williams, P. (2012). Character strengths and wellbeing in adolescence: Structure and correlates of the Values in Action Inventory of Strengths for Children. *Personality and Individual Differences*, *52*(5), 637-642. https://doi.org/10.1016/j.paid.2011.12.014

Uljens, M., & Ylimaki, R. M. (2017). *Bridging educational leadership, curriculum theory and didaktik: Non-affirmative theory of education*. Springer Nature. https://doi.org/10.1007/978-3-319-58650-2

United Nations (2015). *The 17 goals*. Department of Economic and Social Affairs. Sustainable Development. Retrieved from https://sdgs.un.org/goals

Unesco (2021). *Reimagining our futures together. A new social contract for education. Report from the international comission on the futures of education.* Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000379707/PDF/379707eng.pdf.multi

Upadyaya, K., & Salmela-Aro, K. (2013). Development of school engagement in association with academic success and well-being in varying social contexts: A review of empirical research. *European Psychologist*, *18*, 136–147. http://doi.org/10.1027/1016-9040/a000143

Uusitalo-Malmivaara, L. (2012). Global and school-related happiness in Finnish school children. *Journal of Happiness Studies*, *13*(4), 601-619. https://doi.org/10.1007/s10902-011-9282-6

Uusitalo-Malmivaara, L., Kankaanpää, P., Mäkinen, T., Raeluoto, T., Rauttu, K., Tarhala, V., & Lehto, J.E. (2012). Are special education students happy? *Scandinavian Journal of Education Research*, *56*(4), 419-437. https://doi.org/10/1080/00313831.2011.599421

Uusitalo-Malmivaara, L., & Lehto, J. E. (2013). Social factors explaining children's subjective happiness and depressive symptoms. *Social Indicators Research*, *111*(2), 603-615. https://doi.org/10.1007/s11205-012-0022-z

Uusitalo-Malmivaara, L. (2014a). Positiivinen psykologia – mitä se on? *[Positive Psychology - what is it?].* In Uusitalo-Malmivaara (ed.) *Positiivisen psykologian voima [The Power of Positive Psychology].* PS-kustannus.

Uusitalo-Malmivaara, L. (2014b). Happiness decreases during early adolescence. *Psychology*, 5, 541-555. https://doi.org/10.4236/psych.2014.56064

Uusitalo-Malmivaara, L., & Vuorinen, K. (2016a). *Huomaa hyvä! Näin ohjaat lasta ja nuorta löytämään luonteenvahvuutensa [See the Good! - How to guide children and adolescents to find their character strengths].* PS-kustannus.

Uusitalo-Malmivaara, L., & Vuorinen, K. (2016b). *Huomaa hyvä! kortit. [See the Good! - Activity cards].* PS-kustannus.

Uusitalo-Malmivaara, L., & Vuorinen, K. (2017). *Huomaa hyvä! Vahvuusvariksen bongausopas. [See the Good! - Character Crow's strengths spotting book].* PS-kustannus.

Uusitalo, L., & Vuorinen, K. (2020a). *See the Good. How to guide children and adolescents to find their strengths.* Positive Learning Ltd.

Van Petegem, K., Aelterman, A., Rosseel, Y., & Creemers, B. (2007). Student perception as moderator for student wellbeing. *Social Indicators, 83*(3), 447–463. https://doi.org/10.1007/s11205-006-9055-5

VIA Character Institute (2021). V*alues in Action*. Retrieved from https://viacharacter.org.

Vuorinen, K., Erikivi, A., & Uusitalo-Malmivaara, L. (2019). A character strength intervention in 11 inclusive Finnish classrooms to promote social participation of students with special educational needs. *Journal of Research in Special Educational Needs*, *19*(1), 45-57. https://doi.org/10.1111/1471-3802.12423

Vuorinen, K., Hietajärvi, L., & Uusitalo, L. (2021a). Students' usage of strengths and general happiness are connected via school-related factors. *Scandinavian Journal of Educational Research*, *65*(5), 851-863. https://doi.org/10.1080/00313831.2020.1755361

Vuorinen, K., Pessi, A. B., & Uusitalo, L. (2021b). Nourishing Compassion in Finnish Kindergarten Head Teachers: How Character Strength Training Influences Teachers' Other-Oriented Behavior. *Early Childhood Education Journal*, *49*(2), 163-176. https://doi.org/10.1007/s10643-020-01058-0

Waters, L. (2021). Positive Education Pedagogy: Shifting Teacher Mindsets, Practice, and Language to Make Wellbeing Visible in Classrooms. In M. L. Kern & M. L. Wehmeyer (Eds.)*The Palgrave Handbook of Positive Education* (pp. 137-164). Palgrave Macmillan.

Waters, L., Algoe, S. B., Dutton, J., Emmons, R., Fredrickson, B. L., Heaphy, E., Moskowitz, J.T., Neff., K., Niemiec, R., Pury, C., & Steger, M. (2021). Positive psychology in a pandemic: Buffering, bolstering, and building mental health. *The Journal of Positive Psychology*, 1-21. https://doi.org/10.1080/17439760.2021.1871945

Wagner, L. (2019). Which character strengths matter most at school? Addressing the role of students' character strengths in achievement and well-being at school. In L. Castelli, J. Marcionetti, A. Plata, A. Ambrosetti (Eds.). *Well-being in Education Systems Conference Abstract Book. Locarno* (pp. 33-43). Hogrefe.

Wagner, L., & Ruch, W. (2015). Good character at school: positive classroom behavior mediates the link between character strengths and school achievement. *Frontiers in psychology*. https://doi.org/10.3389/fpsyg.2015.00610

Wagner, L., & Ruch, W. (2021). Displaying character strengths in behavior is related to wellbeing and achievement at school: Evidence from between- and within-person analyses. PsyArxiv. Preprints. https://doi.org/10.31234/osf.io/bphrk

Weber, M. (2018). Character strengths in the context of positive schooling. In P., A., George, T., & N.T., S. (Eds.) *Character strength development (pp. 1-30)* . SAGE Publications. https://doi.org/10.4135/9789353287641.n1

Weber, M., Wagner, L., & Ruch, W. (2016). Positive feelings at school: On the relationships between students' character strengths, school-related affect, and school functioning. *Journal of Happiness Studies, 17*(1), 341-355. https://doi.org/10.1007/s10902-014-9597-1

Weziak-Bialowolska, D., Bialowolski, P., VanderWeele, T. J., & McNeely, E. (2021). Character strengths involving an orientation to promote good can help your health and well-being. Evidence from two longitudinal studies. *American Journal of Health Promotion, 35*(3), 388-398. https://doi.org/10.1177/0890117120964083

White, M. A. (2021). Positive Professional Practice: A Strength-Based Reflective Practice Teaching Model. In M. L. Kern & M. L. Wehmeyer (Eds.) *The Palgrave Handbook of Positive Education* (pp. 165-204). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-64537-3_7

White, M. A., & Kern, M. L., (2018). Positive education: Learning and teaching for wellbeing and academic mastery. *International Journal of Wellbeing*, *8*(1), 1-17. https://doi.org/10.5502/ijw.v8i1.588

Wood, A. M., Linley, P. A., Maltby, J., Kashdan, T. B., & Hurling, R. (2011). Using personal and psychological strengths leads to increases in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences*, *50*(1), 15-19. https://doi.org/10.1016/j.paid.2010.08.004

World Economic Forum. (2020). *Schools of the Future Defining New Models of Education for the Fourth Industrial Revolution*. Retrieved from https://www3.weforum.org/docs/WEF_Schools_of_the_Future_Report_2019.pdf

World Health Organization (2021). *UNESCO and WHO urge countries to make every school a health-promoting school.* Retrieved from https://www.who.int/news/item/22-06-2021-unesco-and-who-urge-countries-to-make-every-school-a-health-promoting-school

Yoon, J. S. (2002). Teacher characteristics as predictors of teacher–student relationships: Stress, negative affect, and self-efficacy. *Social Behavior & Personality: An International Journa*l, 30, 485–494. https://doi.org/10.2224/sbp.2002.30.5.485

Zins, J., Weissberg, R., Wang, M., & Walberg, H. (2004). *Building Academic Success on Social and Emotional learning: What does the research say?* Teachers College Press.