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A Case Study of Oulu University's Teacher Students' Understanding of Inclusive Education
and Their Sense of Self-efficacy to Implement Inclusive Education in Their Future Work

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Tapaustutkimus Oulun yliopiston opettajaopiskelijoiden ymmärryksestä inklusiivisesta koulutuksesta ja heidän minäpystyvyydestään toteuttaa inklusiivista koulutusta tulevassa työssään.

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Inklusiivisuus on ollut keskeinen arvo suomalaisessa koulutuksessa 1990-luvulta lähtien. Siitä huolimatta opettajakoulutus ei ole riittävästi mukautunut linjauksiin, joita on tehty inklusiiviseen koulutukseen liittyen kouluissa. Aiempi tutkimus osoittaa, että opettajaopiskelijat kokevat, ettei heidän koulutuksensa ole tukenut tarpeeksi minäpystyvyyden tunnetta inklusiivisen koulutuksen toteuttamiseen. Lisäksi, jotta inklusiivista koulutusta voidaan toteuttaa onnistuneesti, ymmärryksen siitä tulee painottaa jokaisen oppilaan oikeutta laadukkaaseen opetukseen.

Tämän tutkimuksen tarkoituksena on ensinnäkin tutkia ja kuvailla, kuinka maisterivaiheen luokanopettaja- ja erityisopettajaopiskelijat ymmärtävät inklusiivisen koulutuksen. Lisäksi tutkimuksen tavoitteena on luoda kattava käsitys opettajaopiskelijoiden minäpystyvyydestä toteuttaa inklusiivista koulutusta tulevassa työssään. Lopuksi tarkastelemme, kuinka opettajakoulutus on vaikuttanut opiskelijoiden minäpystyvyyteen.

Tutkimuksemme teoreettinen viitekehys tarkastelee inklusiivisen koulutuksen käsitettä, erilaisia lähestymistapoja sen toteutukseen sekä sen tilaa erityisesti suomalaisessa kontekstissa. Lisäksi käsittelemme minäpystyvyyden käsitettä etenkin Banduran teorian mukaan. Tutkimus on kvalitatiivinen tapaustutkimus Oulun yliopistossa. Aineisto kerättiin anonyymien verkkokyselyjen kautta. Analyysimetodinä on käytetty laadullista sisällönanalyysia.

Tutkimustuloksemme osoittavat, että yleisesti opettajaopiskelijat ymmärtävät inklusiivisen koulutuksen koskevan kaikkia oppilaita ja ymmärrys seuraa tasa-arvon ja osallisuuden arvoja. Kuitenkin jotkut opettajaopiskelijat määrittelevät inklusiivisen koulutuksen integraation käsitteen kautta. Erityisopettajaopiskelijoiden minäpystyvyys havaittiin tutkimuksessamme vahvemmaksi kuin luokanopettajaopiskelijoiden. Käytännönläheisyys ja keskustelut koettiin merkittävimmiksi osa-alueiksi minäpystyvyyden vahvistamiseksi. Lisäksi tutkimus osoittaa, että erityisopettajaopiskelijat ovat tyytyväisempiä opintoihinsa inklusiivisesta koulutuksesta. Tutkimus painottaa, että inklusiivinen koulutus tulisi huomioida paremmin opettajakoulutuksessa.

Avainsanat: Inklusio, inklusiivinen koulutus, opettajakoulutus, minäpystyvyys

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Inclusive education has been a prevalent value in Finnish educational context since the 1990s. However, teacher education has not sufficiently adapted to the policy changes regarding inclusive education in schools. Previous research shows that teacher students feel that their education has not given them sufficient competence to implement inclusive education. Additionally, in order to implement inclusive education successfully, inclusive education must be understood as a right of every student to quality education.

Firstly, the purpose of this research is to examine and describe how master's level classroom and special education teacher students understand the concept of inclusive education. Secondly, the research aims to gain an in-depth understanding of teacher students' sense of self-efficacy to implement inclusive education in their future work. Lastly, we examine how teacher education has developed the teacher students' sense of self-efficacy.

The theoretical framework of our research considers inclusive education as a concept, different approaches to the implementation of it and its state particularly in the Finnish context. Additionally, we will discuss sense of self-efficacy especially according to Bandura. The research is a qualitative case study situated at the University of Oulu. The data was collected through an anonymous online questionnaire. The chosen analysis method is qualitative content analysis.

The research findings reveal that overall teacher students understand inclusive education to consider all students and reflect values of equality and participation. However, some define inclusive education through the concept of integration. Special education teacher students' self-efficacy was found higher than that of the classroom teacher students. Practicality of the studies and discussions were found most meaningful for the strengthening of their sense of self-efficacy. Additionally, special education teacher students are more satisfied with their studies regarding inclusive education. The research highlights that inclusive education must be considered more in teacher education.

Keywords: Inclusion, inclusive education, teacher education, self-efficacy

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1 Introduction

Inclusive education is a prevalent topic of today's educational discussion, and it has contributed to development in educational contexts. Many countries are acknowledging the importance of promoting inclusion of every individual student regarding equal activities and opportunities and physical placement irrespective of the students' differences or educational challenges. Instead of placing students with special educational needs in separate classrooms and schools, the students are brought to mainstream classrooms. Unlike the previous general understanding of inclusive education being the integration of students with disabilities or special educational needs into the mainstream classroom, the overall philosophy of inclusive education is today to include and accommodate all children with or without special educational needs in general school activities by implementing adaptations appropriate to their needs (see e.g., Ainscow, Booth & Dyson, 2006; Ainscow & Sandhill, 2010; Booth, 2011; Halinen & Järvinen, Lynch & Irvine, 2009; Ruby, Owiny, Brawand & Josephson, 2017). Inclusive education is not only seen as a right, but also a duty which requires everyone from school staff to parents to be involved, and instead of the students having to adapt to the school, the school must adapt to its students' needs (Halinen & Järvinen, 2008; Lynch & Irvine, 2009).

Inclusive education is an international human right as per the Convention on the Rights of Persons with Disabilities (CRPD) (de Beco, 2022), and it plays an important role in the education systems both in Finland and in other countries (Takala, Sirkko & Kokko, 2020). However, inclusive education is not simple to define, and it has also not been defined in detail in the CRPD (de Beco, 2022). Thus, the concept of inclusive education can be interpreted differently. As the concept of inclusive education is fluid and context situated, an exhaustive definition should not be seen as the aim (Ainscow et al., 2006).

A decision about placing a student into a segregated special education classroom is inevitably linked to questions of equality and equity as the consequences of such decision affect the marginalisation of the person and thus shapes their access to educational opportunities (Moberg, Muta, Korenaga, Kuorelahti & Savolainen, 2020). The inclusion of students in segregated special education into the mainstream classrooms has been an ongoing trend since the 1990s (Oja, 2012; (Takala, Lakkala & Äikäs, 2020). However, Finland still has a basic school system with a large sector of segregated special education (Saloviita, 2020). Although there are less special education schools, the portion of students in separate special education classrooms, which are

mostly situated in mainstream schools, is still high in European comparison (EADSNE, 2012; Tilastokeskus, 2016). There has not been any official policy to change the situation (Act on Basic Education, 1998/628). For example, completely segregated special education is still allowed in Finland (Halinen & Järvinen, 2008; Moberg & Savolainen, 2015), and therefore the principles of inclusive education are still partly lacking in school legislation.

Despite what has been stated above, mainstream classrooms in Finland nowadays consist of many diverse types of learners. According to studies and estimates, learning difficulties occur in 10-15 percent of school aged children in Finland (Voutilainen & Ilveskoski, 2000). In the first and second grades in primary education, it is estimated that five to six students out of 20 have difficulties related to learning or development (Adenius-Jokivuori, 2001). In addition, every one in four children attending basic education in Helsinki has a background with immigration (Helsingin kaupunki, 2021), and in 2020, 22 041 students studied other than Finnish or Swedish as their native language (Opetushallitus, n.d.). According to Tilastokeskus (2018), in 2017, 17.5 percent of basic school students received intensified or special support. It can be stated that Finnish classrooms are diverse regardless whether or not they are considered special education or mainstream classrooms.

As mentioned previously, different definitions of inclusion produce different meanings and influence how inclusion is viewed and implemented (Nilholm & Göransson, 2017). Literature presents that successful implementation of inclusive education depends, among others, on how teachers define it (Hodkinson, 2005). Thus, even though we have mentioned that there is no universal definition for inclusive education, for the effective implementation of it, it is still important that the understanding is somewhat similar and that it promotes the equality of all students. Teachers' and teacher students' understanding of inclusive education has not been studied much (Boyle, Topping & Jindal-Snape, 2013; Saloviita & Consegna, 2019). Previous research shows that teachers consider inclusive education as a beautiful idea in theory but think that it is not suitable for everyone (Moberg & Savolainen, 2015). This statement is however contradicting to the main principles of inclusive education (Moberg & Savolainen, 2015). Thus, it can be considered whether teachers and teacher students have actually understood the meaning of inclusive education, or can it be effectively implemented if different stakeholders in education do not understand it in the same way.

Self-efficacy refers to a person's perceived ability to complete a task successfully (Bandura, 1997). Thus, in our research, perceived competence is used as a synonym for the concept of self-efficacy. Sense of self-efficacy is a crucial element of successful implementation of inclusive education. When the self-efficacy of the teacher student regarding the implementation of inclusive education is high, they are more likely to implement it efficiently in their future work (Woodcock, Sharma, Subban & Hitches, 2022). It has been stated that teachers' preparedness during pre-service teacher education programmes can be considered an indicator of their future success in inclusive classrooms (Ahsan, Deppeler & Sharma, 2013; Caires, Almeida & Vieira, 2012) and willingness to implement inclusive education (Desombre, Delaval & Jury, 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020). Additionally, high sense of self-efficacy regarding the implementation of inclusive education is linked to more positive attitudes towards inclusive education and students with special educational needs (Crispel & Kasperski, 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020; Sari, Celikoz & Seçer, 2009). This is also an indicator of teachers' willingness and success in implementing inclusive education (Desombre et al., 2021). Self-efficacy can be strengthened in teacher education (Ahsan et al., 2013; Desombre et al., 2021; Moberg & Savolainen, 2015; Sokal & Sharma, 2014).

Saloviita (2020, p. 273) argues that "the need for more knowledge to meet individual differences is regularly stressed by state authors but without positive response from the side of teacher training institutions". Teacher education should focus on giving teacher students more competence to implement inclusive education (Ahsan et al, 2013; Desombre et al., 2021; Lappalainen & Mäkihönko, 2004; Moberg & Savolainen, 2015; Sokal & Sharma, 2014). Teacher students feel that they are not prepared enough to implement inclusive education when entering work life (Crispel & Kasperski, 2021), and they have expressed a need for more knowledge about special educational topics during teacher education (Opetusministeriö, 2007).

In our literature review we found that although there is some research directly on teacher students' sense of self-efficacy, the research available is not extensive. There is a need for further research on pre-service teachers in relation to their sense of self-efficacy to implement inclusive education (Ahsan et al., 2013). As sense of self-efficacy and attitudes are closely connected, we discuss previous literature related to attitudes towards the implementation of inclusive education. We relate our findings about sense of self-efficacy to teach specific student groups directly

to two research: Saloviita's (2020) research called "Attitudes of teachers towards inclusive education in Finland" and Takala and Sirkko's (2022) research "Pre-service teachers' attitudes towards inclusion in Finland". As the attitudes of pre-service teachers reflect those of in-service teachers (Saloviita, 2020), we found it meaningful to relate the findings of our research to the previously mentioned studies.

However, in our research, we expand the discussion from attitudes to the feeling of competence to teach specific student groups so that our findings would provide more specific knowledge on where the sense of self-efficacy to implement inclusive education is sufficient and where it is lacking. In previous research in Finland, the perceived competency to teach specific student groups has not been mapped out and instead the sense of self-efficacy has been considered in a wider perspective (see e.g., Moberg et al., 2020; Saloviita, 2020; Seppälä-Päkäläinen, 2009; Takala & Sirkko, 2022). The student groups that were included in this research were influenced by the above-mentioned studies by Saloviita (2020) and Takala and Sirkko (2022). It should be noted that the groups we chose are not identical but rather reflect upon the student groups defined by Saloviita (2020) and Takala and Sirkko (2022). Additionally, we want to clarify that when discussing students, we refer to children in the classroom, and when discussing teacher students, we refer to pre-service teachers.

In this research, we aim to provide an in-look to what the participants of our research have found the most meaningful aspects of teacher education to implement inclusive education. Previous research defines teacher education as important in developing the teacher students' sense of self-efficacy to implement inclusive education in their future work (see e.g., Ahsan et al, 2013; Desombre et al., 2021; Lappalainen & Mäkihonko, 2004; Moberg & Savolainen, 2015; Sokal & Sharma, 2014). We aim to specify the previous research that considers Finnish teacher education insufficient in providing the teacher students adequate competence to implement inclusive education (see e.g., Lakkala, 2008; Moberg et al., 2020; Opetusministeriö, 2007; Saloviita, 2020). Based on our research findings we aim to propose aspects of improvement as well as highlight what the teacher students feel has been most meaningful in teacher education's contents about inclusive education. We hope that through our findings we can contribute to the possible development of teacher education so that the teacher students could in the future implement inclusive education more effectively and respond to the needs of their students in inclusive classrooms better.

To conclude, due to the principles of inclusive education, mainstream classrooms consist of students with diverse needs as well as students from different cultural backgrounds. This means that each teacher whether they are a classroom or a special education teacher must have enough competencies to meet the individual needs of the students in their classroom as soon as they enter work life. Currently, research indicates that this is not the case. However, previous research is not comprehensive regarding teacher students' self-efficacy in Finland and the factors in Finnish teacher education that support its development. Additionally, the successful implementation of inclusive education is dependent on the teacher's understanding of it, which has previously not been studied extensively when it comes to teacher students in the Finnish context. Thus, the purpose of this qualitative case study is to examine and describe Oulu university's teacher students' understanding of inclusive education and gain an in-depth understanding of their sense of self-efficacy to implement inclusive education in their future work and how teacher education has developed their self-efficacy. We will compare master's level classroom and special education teacher students' views.

Based on the aforementioned issues we have formulated two main research questions which are the following:

1. How do teacher students at the University of Oulu define and understand the concept of inclusive education?
2. How do teacher students perceive their competence in implementing inclusive education in their future work?

As our interest is how teacher education and which specific aspects in teacher education support the development of the teacher students' self-efficacy to implement inclusive education, one sub-research question was needed, which is worded as follows:

- A. How has teacher education developed the teacher students' perceived competence to implement inclusive education?

The research is divided into four parts: theoretical and historical framework, methodology, findings and discussion. In the theoretical and historical framework, we will first discuss the concept of inclusive education. Secondly, we will view the development of inclusive education and the relation between inclusive and special education in the Finnish context. Thirdly, we will consider the concept of self-efficacy from the perspective of teacher education, and how teacher

education can strengthen the self-efficacy of the teacher students to implement inclusive education according to previous research. Then, we will discuss our methodological choices, present how the data was collected and discuss the analysis process. After, we will present the findings following qualitative content analysis. Lastly, we will summarize our findings as well and discuss the implications of them.

2 Inclusion and Inclusive Education

In order to consider our research problem and questions, it is vital to understand the meaning of the concepts of inclusion and inclusive education. Thus, the definitions of these keywords are being addressed in this chapter. However, we recognise the concepts are multidimensional, dynamic and complex, and an absolute definition cannot be given (Ainscow et al., 2006).

In the following sub-chapters, we will first discuss the concept of inclusion as a societal structure. Secondly, we will consider inclusion in the context of education, later defined as inclusive education. We will analyse inclusive education according to theoretical perspectives that underpin the theory and practice of it, consider who fall within the scope of inclusive education based on different views and discuss how inclusive education can efficiently be implemented. Next, we will consider the relation between integrative and inclusive educational practices. Lastly, we will define how inclusive education is considered in laws and educational policies both internationally and in the Finnish context.

2.1 Inclusion as a Social Concept

Although inclusion as a concept has evolved, its definition has remained contradictory (Hick, Kershner & Farrell, 2009). Inclusion can be considered from various perspectives depending on the field of study or focus, and it has plural views around it. Väyrynen (2001) argues that inclusion always appears different in different environments and the presence of different surrounding background factors gives inclusion different meanings.

Dyson (1999) describes four discourses of inclusion: inclusion can be considered from the perspective of individuals or communities, and it includes economical, political, ethical and pragmatic discourses. The economical discourse emphasizes the social and economic benefits or profits of inclusion whereas the political discourse refers to the efforts made between different groups to either maintain the existing structures (which are based on segregation) or develop them to be more inclusive (Dyson, 1999). The ethical discourse sees inclusion as essential for the realization of equality, and the pragmatic discourse is interested in different forms of practical implementation of inclusion (Dyson, 1999). Puri and Abraham (2004) also understand inclusion through four dimensions first of them being similar to Dyson's (1999) ethical discourse: the main aim of inclusion is seen as a human rights issue and the realization of human

rights. Secondly, the achievement of the aforementioned aim requires the creation of a spirit of unity and sense of community (Puri & Abraham, 2004). Thirdly, inclusion is built by combating repetitive practices that contradict its aims and prejudices, and fourthly, inclusion enables everyone to learn the same important skills and knowledge (Puri & Abraham, 2004). Like Dyson's (1999) views, when examining inclusion through the lenses of social system theory developed by Niklas Luhmann, inclusion can be considered from the perspective of different function systems in society, such as economy, politics, science or religion (Schirmer & Michailakis, 2015). The Luhmannian approach sees inclusion as the link between humans and societal structures (Schirmer & Michailakis, 2015).

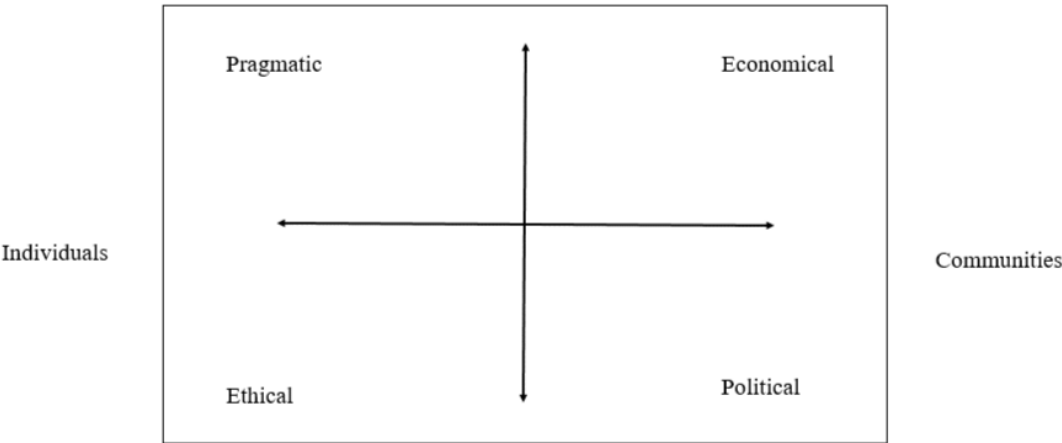


Figure 1: A coordinate about discourses of inclusion based on Dyson (1999).

In several countries, the main principles of inclusion are related to the development of democracy in society and the concept of democratic citizenship (Young, 2000). Thus, concepts of democracy, egalitarianism, welfare state and western individualism relate closely to the concept of inclusion (Hargreaves & Fullan, 1998; Hautamäki, 1993). Egalitarianism as an ideology is based on the idea that all individuals are equal and deserve equal treatment regardless of their differences, which applies to the concept of inclusion (Hautamäki, 1993). The main characteristics of individualism, all of which also support the philosophy of inclusion, are respect for human dignity, individual autonomy, a person's right to privacy and self-development (Hautamäki, 1993). Also democratic rights and the underlying ideology of welfare states include the recognition of the equal value of every individual (Hautamäki, 1993; Kolbe, 2009).

According to some views, social inclusion emphasizes collective belonging, and it is not seen only as an issue of who has a minority status but a society can be considered inclusive only if all people feel valued, their differences are respected and their basic needs, both on a physical and emotional level, are fulfilled (Silver, 2010). However, inclusion can also be considered to give access to and invite parties previously seen as not sufficient of belonging to certain institutions or to the groups experiencing disadvantage and discrimination, and it can thus be seen as a way of challenging the restrictions to participation (Armstrong , D., Armstrong, A. & Spandagou, 2011; Norwich, 2005; O'Donnel, 2014). Inclusion is always a social, ongoing process between two or more parties that is situated in a specific time frame and structures (Qvortrup, A. & Qvotrup, L., 2016). Thus, it includes personal and possibly differing views between the parties: the actor may think they are being inclusive while the object of the action does not feel included. In addition, inclusion cannot be thought of as an attainable goal after which it is fully complete, but instead a person can be included in or excluded from different communities in different degrees (Qvorturp, A. & Qvotrup, L., 2016).

However, inclusion also provides a risk of further exclusion, and according to the Luhmannian approach, inclusion should not unquestionably be seen as unproblematic (Schirmer & Michailakis, 2013). For instance, according to O'Donnel (2014), if inclusion is understood through sameness and similarity, it may result in unintentional assimilation, whereas emphasizing being different from one another provides a risk of classification, ranking and comparison. Assimilative inclusion process in its most radical form can be described as total inclusion (A. Qvortrup & L. Qvotrup, 2018). In total inclusion the individuals lose their individuality and become simply part of the mass (A. Qvortrup & L. Qvotrup, 2018). In addition, if inclusion is seen only as welcoming bodies previously not welcomed to an institution without profound reflection or reforming the operational culture of the institution accordingly so that it does not leave anyone outside in the first place, the power structures and norms of normality remain (O'Donnel, 2014). As inclusion always appears differently in different discourses and contexts, it can thus be stated that it is always subject to imbalance (Altrichter & Elliot, 2000).

Central to inclusion is its value-based nature. According to Booth (2011), inclusion should be seen as an ethical value base that promotes action both on an individual as well as cultural levels. Booth (2011) has created an Index for inclusion that acts as a guide for developing dif-

ferent settings in an inclusive way. The values that underline inclusion are equality, rights, participation, respect for diversity, community, sustainability, non-violence, trust, honesty, courage, joy, compassion, love/care, optimism/hope and beauty (Booth, 2011). According to Booth (2011), inclusion is the practical implementation of these underlying values. Also Slee (2011) argues that adopting inclusive policies and practices is always a value-based decision. However, it should be noted that it is not possible to make a complete list of inclusive values, but the meaning of the values and their implications to practice are complex and must be clarified (Ainscow et al., 2006).

2.2 Understanding Inclusive Education and Who It Caters to

As discussed above, inclusion can be considered having different approaches or paradigms and it can focus in certain areas or sectors of society (Norwich, 2005). Even though in our research we are interested in inclusion in the context of education, we recognise that inclusion is present in overall social participation also beside the school environment. However, for clarity, in this study, we will use the term inclusive education when referring to inclusion in an educational setting and the term inclusion or social inclusion when referring to a broader social and societal concept. Inclusive education is therefore seen as one part of inclusion and a structure where inclusion or, its opposite, exclusion can take place (Norwich, 2005).

However, the concepts of inclusion and inclusive education are holistic and intertwined and cannot thus be completely separated from each other (Lynch & Irvine, 2009; Norwich, 2005). Education-related issues are always linked to society's wider issues of power and political situations: often educational decisions are reflections of the political field at different levels of society (Hargreaves & Fullan, 1998), and school reforms are aimed to develop broader social equality (Kolbe, 2009). Democratic countries consider education not only good for the individual but for the whole society, and education is seen as essential for the promotion of democracy (Ahonen, 2003; Hargreaves & Fullan, 1998; Hautamäki, 1993). According to Dewey's (1899) constructivist theory, school acts as a model for democratic citizenship. Thus, inclusive education represents broader social inclusion and aims to enable equal opportunities also in non-educational settings (Lynch & Irvine, 2009). Also, according to Hargreaves and Fullan (1998), school is the best place to start creating democratic, and thus inclusive, sense of community that continues in wider social contexts. Overall, schools are not closed institutions detached

from society, but they belong to a wide social network, which must also support the principles of inclusion and inclusive education (Lakkala, 2008).

Similarly to inclusion, previous literature presents several different definitions for inclusive education (Lynch & Irvine, 2009; Nilholm & Göransson, 2017), and thus far, the research on both the learning outcomes as well as the success of inclusive education on social and physical levels is not unanimous (Takala, Lakkala et al., 2020). It is important to understand that in our research the concept of inclusive education is seen to include more than just the integration of students with disabilities or special education needs into the mainstream classroom, which in many countries is often the general understanding of inclusive education (Ainscow et al., 2006; Ainscow & Sandhill, 2010; Booth, 2011; Halinen & Järvinen, 2008; Lynch & Irvine, 2009). This understanding is considered more in the following paragraphs.

The overall philosophy of inclusive education is to include all children in general school activities and to meet the individual needs of all children in the classroom (Lynch & Irvine, 2009; Ruby et al., 2017). Inclusive education includes the fundamental understanding that students are different, have different needs and learn differently and, most importantly, they learn best if the environment is adapted to those individual needs (Quavang, 2017). Inclusive education should not only be seen as a right, but also a duty which requires everyone from school staff to parents to be involved; instead of the students having to adapt to the school, the school must adapt to its students' needs (Halinen & Järvinen, 2008; Lynch & Irvine, 2009). According to Väyrynen (2001), inclusion is based on a starting point according to which students are different, but despite the differences everyone can learn. Thus, authentic inclusive education promotes high-quality teaching that benefits all students at their own level (Ainscow et al., 2006).

Inclusive education is built upon inclusive values (Booth, 2011; Halinen & Järvinen, 2008), and the fundamental rights of equity and collective belonging (Loxley & Thomas, 2001). Thus, in addition to supporting the students' academic learning, inclusive education aims to provide every individual the opportunity to learn among peers of same age, gain social relationships and friendships and develop a sufficient or good self-esteem (Lynch & Irvine, 2009; Moberg & Savolainen, 2009). Booth (2011) argues that in addition to every child being entitled to participate in their local educational setting, the main aim of inclusive education is to create a common and equal school environment and community for all those being part of it including families, students and staff. Thus, the concept of sense of belonging relates closely to the principles

of inclusive education, meaning that the student perceives themselves as an irreplaceable part of the community both inside and outside the school and the student feels valued and accepted by their peers and the staff in the school community (Willms, 2003). Ferguson (1995, p. 286) recognises inclusive education as a comprehensive system of justice that goes beyond academic success and describes it as follows:

“a unified system of public education that incorporates all children and youths as active, fully participating members of the school community; that views diversity as the norm; and that ensures a high-quality education for each student by providing meaningful curriculum, effective teaching, and necessary supports for each student.”

Ainscow et al. (2006) also confirm the idea that inclusive education is not only about academic achievement but more broadly about social participation in educational environments. According to Ainscow et al. (2006), inclusive education consists of three equally important and necessary dimensions that are presence, participation and achievement. As for social inclusion, inclusive education cannot be taken from its cultural context, but inclusion and exclusion always happen locally and are related to the local cultural setting of the school (Ainscow et al., 2006). Ainscow et al., (2006, p. 25) agree on some features that define inclusive education and refer to them as follows:

“The process of increasing the participation of students in, and reducing exclusion from, the curricula, cultures and communities of local schools.

Restructuring the cultures, policies and practices in schools so that they respond to diversity of students in their locality.

The presence, participation and achievement of all students vulnerable to exclusionary pressures, not only those with impairments or those who are categorised as having special educational needs.”

The dimension of access is used along the aforementioned dimensions defined by Ainscow et al. (2006). All types of learners must be ensured access to the common school spaces through accessible facilities, also referred to as physical inclusive education (Mitchell, 2008). Inclusive

school buildings and environments must be safe and supportive of different types of learning methods which include, among others, access to different floors and spaces in the building, favorable lighting and volume etc. (Mitchell, 2008). An inclusive physical environment also enhances the feeling of an inclusive school community. For example, all students' work should be visible in the school regardless of the end result which leads to everyone getting to participate in creating a common physical environment with their contribution and thus feeling that they are an important part of it (Mitchell, 2008).

Also A. Qvortrup and L. Qvortrup (2018, p. 812) describe three dimensions of inclusive education which are “(1) The numeric level: Is the student physically included in the community? (2) The social level: Is the student socially active in the community? (3) The psychological level: Does the student perceive him- or herself as being recognised by other members of the community? Is there a sense of school belonging?”. The first dimension focuses on the individual student and physical inclusion in the classroom whereas the second dimension considers the participation of the student in the school community (A. Qvortrup & L. Qvortrup, 2018). The third dimension emphasizes the student’s feeling of being a member of the community and whether or not they think that they are recognised as full members of the community by their peers (A. Qvortrup & L. Qvortrup, 2018). In figure 2 below, we have created a venn diagram that visualizes the three dimensions of inclusive education described previously.

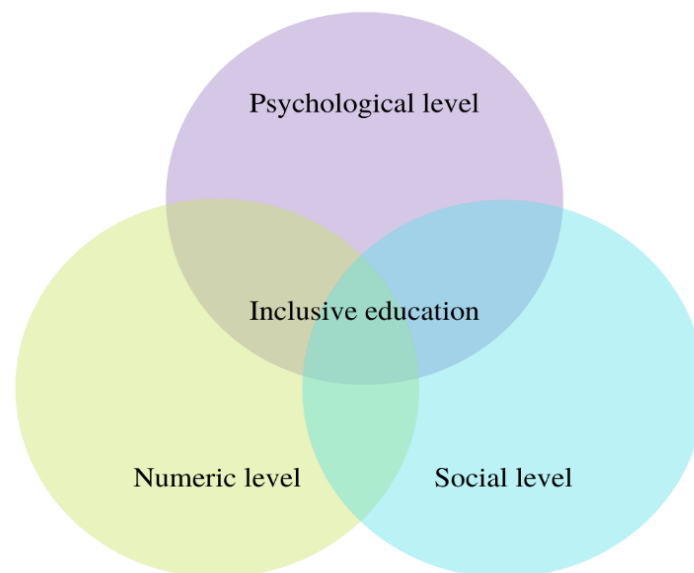


Figure 2: Venn diagram based on the dimensions of inclusive education by A. Qvortrup and L. Qvortrup (2018).

Before moving on to discuss about who falls within the scope of inclusive education and the different views around it, we will present a table that summarizes the aspects of inclusive education we have considered previously in this sub-chapter.

Values	Physical access	Social access	Quality education
Social justice and human rights	Participation in general education and local school principle	Acknowledgement of individuality	The right for additional support as soon as needed
Equality and equity	Administrative decisions	Building a feeling of collective belonging among all those part of the local school setting	Equal potential to meet curricular goals at own level
Respect for diversity	Accessible facilities in school buildings	Culture of diversity	Equal possibility to academic achievement
Compassion towards and caring of others	Learning with peers of similar age	Equal opportunities to gain social relationships and friendships	High-quality teaching

Figure 3: A table about different aspects of inclusive education based on, among others, Ainscow et al. (2006), Booth (2011) and A. Qvortrup and L. Qvortrup (2018).

Similarly to social inclusion, there are different views about who are at the focus of inclusive education. In many countries, schools have been created to serve the needs of the average student (Dudley-Marling & Burns, 2014; Taylor et al., 2009). Thus, the dominant view in many countries has for long been that inclusive education considers only students with special educational needs, such as learning difficulties or disabilities, including those who have difficulties reaching the mainstream educational goals without additional support (Ainscow et al., 2006; Ainscow & Sandhill 2010; Booth, 2011; Dudley-Marling & Burns, 2014; Halinen & Järvinen, 2008; Lynch & Irvine, 2009). However, there is a risk that difficulties in learning and social life in school are seen as the result of the disability rather than a consequence of unsuitable curricula, teaching methods and school culture if inclusion and special education are automatically linked together (Booth, 2011). The view also ignores other ways students with disabilities or special educational needs can be derived from participation (Ainscow et al., 2006).

Inclusive education can thus be considered to cater especially to those whom the general curricula and methods do not serve, those affected by excluding pressures and those with disadvantages that create additional social and educational barriers, such as poverty, ethnicity, gender and native language (Ainsow et al., Booth, 2011; UNESCO, 2009). According to Quavang (2017), inclusive education thrives to establish a focus on students being at risk of being excluded. Butera and Levine (2009) claim that the starting point for inclusive education is the understanding of unequal power structures between those who belong to marginalized groups and minorities in contrast to those in mainstream and majority positions because these social power structures are also present in educational settings. Thus, overall and in our research, inclusive education is understood to acknowledge and consider students with, among others, different ethnicities, religions, cultures or languages, students who are gender-diverse as well as students with disabilities or special educational needs (Takala, Lakkala et al., 2020; Takala, & Sirkko, 2022).

Additionally, it has been studied that students who need more challenge in the classroom and are considered to be above average do not receive the same attention from teachers as those who face difficulties (Taylor et al., 2009). According to inclusive principles, more advanced students deserve the same treatment as other students (Uusikylä, 2020). Thus, teachers are also required to be able to differentiate their teaching so the learning needs of advanced students are met as well (Uusikylä, 2020).

Because of the prevalence of the role of special education in the development of the principles of inclusive education, next we will consider the relation between special education and inclusive education from two different theoretical perspectives that are deficit and social constructivist perspectives (Dudley-Marling & Burns, 2014). According to the deficit perspective, individual's lower school performance or need for special education is due to them differing from the norm, thus being somehow deficient, and the role of school is to provide the individual with access to the skills that the activity in a normal environment requires, whereas the social constructivist perspective sees disability as a social construct and different characteristics of individuals become disabling only in relation to the context and other people (Dudley-Marling & Burns, 2014). An individual's disability does not make them flawed in any way, but diversity is a common feature in a society and the aim should not thus be to 'cure' disabled people (Dudley-Marling & Burns, 2014).

According to the deficit perspective and its stance on inclusive education, students with special educational needs should be taught in the least restrictive environment which generally is not in mainstream education (Dudley-Marling & Burns, 2014). The exclusion from general education is justified on the basis that it is best for the students because of their additional educational needs as general classroom teachers are seen as incapable to meet those needs of the students and the professionalism of a special educational teacher is required (Dudley-Marling & Burns, 2014). The view also emphasizes finding an accurate diagnosis for the difficulties in learning so that the most effective solutions to the challenges can be found (Dudley-Marling & Burns, 2014). On the contrary, according to the theory of social constructivism, placement to general education is the starting point for every student, but the support of special education teacher should also be available if needed (Dudley-Marling & Burns, 2014). While the deficit perspective focuses on finding a solution to correcting individual's so-called deficiencies, the social constructivist perspective looks for deficiencies in the structures of the school system (Dudley-Marling & Burns, 2014).

Nevertheless, from the 1990s a movement called "Education for all" has become more prevalent (Ainscow et al., 2006). According to the movement, inclusive education is seen to reduce exclusion of all forms and to increase the participation of all across the world, not only certain, specified groups (Ainsocw et al., 2006; Booth, 2011). Although this view has caused concern in the parents of students with special educational needs or disabilities about their rights not having enough priority, it remains the main understanding and the starting point of inclusive education nowadays (Ainscow et al., 2006) and in our research.

According to the idea of education for all, inclusive education must be developed in such a way that it extends to all learners without separating them into 'normal' and 'abnormal' (Naukarinen & Ladonlahti, 2001). In inclusive schools the students who are in need of additional support must receive the support they need without the above-mentioned categorisation (Takala, Lakkala et al., 2020). Inclusive education does not thus exclude typical methods of special education, but it requires new arrangements of learning environments and other facilities, teaching methods, socio-educational structures and actions in order to meet the specific needs of different learners (Rodriguez & Garro-Gil, 2015; Moberg & Savolainen, 2015). The implementation of inclusive education in practice is discussed more broadly in the next sub-chapter. However, this view can also be criticized: if students are categorized, it may stigmatize them, but if

special support groups are not defined, students may not get the support they need (Nilholm, 2006). Thus, a dilemma in inclusive education remains about how to give all students the same opportunities while at the same time considering the students' individual differences (Nilholm, 2006; Quavang, 2017).

2.3 Implementation of Inclusive Education

For inclusive education to be effective and authentic, arrangements and the recognition of inclusive values at different levels of education are required (Halinen & Järvinen, 2008; Lynch & Irvine, 2009). Halinen and Järvinen (2008) define the different levels including educational policies, provision of education, curriculum, instructional practices, general support of studies, special support and teacher education. Lipsky and Gartner (1997) have defined seven factors for organising educational institutions to achieve successful inclusive education that are visionary leadership, collaboration, refocused use of assessment, support for staff and students, funding, effective parental involvement, curricular adaptation and effective instructional practices. For example, curriculum could be altered so that the traditional curriculum and traditional subjects, such as mathematics or foreign languages, would be replaced with a global rights based curriculum that includes subject headings such as relationships and health, life on earth or ethics, power and government (Booth, 2011). Not all of the aforementioned actions are something that the teacher can directly influence since, for example, funding is a political decision separate from teachers' authority.

As discussed above, implementation of effective inclusive education is not the sole responsibility of the teacher, but other adults in the students' lives support the teachers' work, such as healthcare workers or those in charge of social support for families. However, teachers' actions and attitudes are also important in the implementation of inclusive education, and it is not possible to be an everyday practice if the teacher is unwilling to advance it, has negative approaches towards inclusive education or low professional skills (Halinen & Järvinen, 2008; Moberg & Savolainen, 2009). The principles of inclusive education stem from socio-constructivist learning approach according to which the teachers are also seen as learners and reflectors (Ojanen, 2006). According to Halinen and Järvinen (2008), in order to implement inclusive education, teachers need high-quality pre-service education and time to develop their professional skills also through in-service training and collaboration with other teachers. The attitudes of teachers

and teacher students and their feeling of competence, later defined as self-efficacy, related to the implementation of inclusive education are discussed more thoroughly later in the chapter 4.

Each individual student's learning style is taken into account in implementing inclusive education (Woodcock et al., 2022), which can be defined as differentiation. Differentiation includes appropriate adaptations of teaching methods, instruction or given assignments (Ruby et al., 2017). Adaptations refer to the overall term that includes different support methods for students with difficulties in learning which include accommodations and modifications (Ruby et al., 2017). Accommodations mean the support provided for the students to successfully access the general education and curriculum without changing the learning objective and expectations whereas modifications, in turn, refer to changing the expectations in performance outcome (Ruby et al., 2017).

When considering the Finnish context, in the past Finnish teachers have been required to work mostly independently, but in today's school world, cooperation is seen as a positive opportunity in teachers' work and there has been a shift towards more collaborative ways of working in education (Takala, Sirkko et al., 2020). Multi-professionalism is an integral part of effective implementation of inclusive education (Devecci & Rouse, 2010). Inclusive education thrives to build a learning environment that utilizes multi-professional cooperation where students and experts could learn and develop their skills together (Brownell, Adams, Sindelar, Waldron & Vanhover, 2006). Multi-professionality can be implemented, for example, between teachers or school healthcare (Koskela, 2009).

As the school world changes according to the principles of inclusive education, teachers have expressed feeling overwhelmed (Kansallinen koulutuksen arviointikeskus, 2018), and that there is a need for more efficient ways of expanding the cooperation of experts in the field of education (Kykyri, 2020). One possible way to implement inclusive education is co-teaching (Takala, Sirkko et al., 2020). With co-teaching, teachers can share responsibilities and strengthen common competence through sharing their own areas of strength (Takala, Sirkko et al., 2020). When teaching and learning are planned and evaluated by two or more teachers, it is also easier to differentiate (Takala, Sirkko et al., 2020). Co-teaching can therefore support inclusive education although it does not automatically guarantee it (Takala, Sirkko et al., 2020). It is important to note that teachers' willingness to collaborate is not enough if the school structures do not support it (Malinen, 2013). Teachers must be provided with time within working hours to plan,

teach, and reflect with their colleagues as well as seek help from outside experts and communicate with families (Malinen, 2013).

Based on her research about a development project on inclusive education which was implemented in teacher education, Lakkala (2008) presents a model for inclusive teaching which concludes the aforementioned aspects that are needed to implement inclusive education introduced in the figure below. Below, we have attached a modification of the model which summarizes what has been discussed in this sub-chapter.

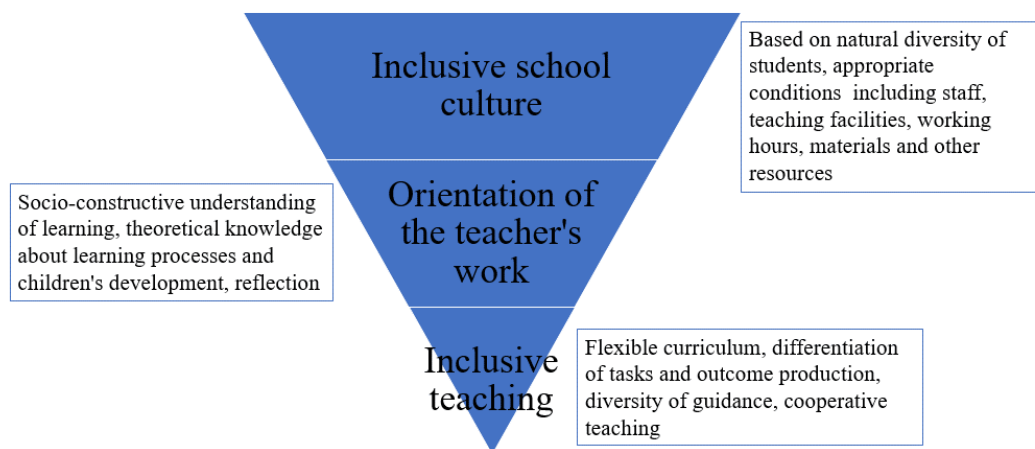


Figure 4: A model for implementing inclusive education based on Lakkala (2008).

2.4 Integration or Inclusive Education

Inclusive education and integration are sometimes used as synonyms, but in our research, it is important to make a distinction between these concepts. As there are no universal definitions for inclusive education and integration, it sometimes leads to the varying usage of the terms (Moberg & Savolainen, 2015). For instance, many schools that label themselves as inclusive are often actually following the principles of integration meaning that the student is placed to a regular classroom but instead of reforming the classroom practices to meet the needs of the student, the student is expected to conform to the classroom (Lynch & Irvine, 2009). This delusion of inclusion refers to the schools' misunderstanding or lack of understanding on inclusive practices (Lynch & Irvine, 2009).

Etymologically integration refers to two previously separate things becoming one (Moberg & Savolainen, 2009). As students with special educational needs were strongly segregated from the mainstream classrooms in the past, two groups were formed: students in mainstream education and students in special education, therethrough the concept of integration was prevalent (Emanuelsson, 2001). The inclusion movement in education started from the dissatisfaction of the definition of integration as a term and what it contained as a practice (Moberg & Savolainen, 2009). The establishment of the term inclusive education has thus been preceded by a confrontational discussion of the nature, methods and goals of integration (Lakkala, 2008). On the other hand, the concept of integration has also been used as meaning almost the same as inclusive education for quite a long time as the term inclusive education started to be used in its current meaning only in the early 1990s although inclusive practices in their current meaning have been used before (Hick et al., 2009). Especially in the United States, integration has been viewed more negatively as a term, but in Finland, the term integration has been used more closely to inclusive education (Moberg & Savolainen, 2009).

However, previously there has been a tendency to define inclusive education simply as the placement of a student with a disability in the regular classroom (Lynch & Irvine, 2009). Social and psychological levels of inclusive education have often been overlooked in relation to the individual's sense of belonging and the focus has simply been on the physical integration of the student (A. Qvortrup & L. Qvortrup, 2018). Nowadays inclusive education is not seen only as an issue of placement (Lynch & Irvine, 2009), whereas integration can be considered to refer to placing different students together without reforming the school policies so that the school is truly responsive to diversity and all its students (Booth, 2011; Rodriguez & Garro-Gil, 2015). Where integration, as defined nowadays, always starts from a viewpoint where the students are in segregated groups, inclusion does not separate different individuals and all members are equal with their individual characteristics and are part of the same community from the beginning (Moberg & Savolainen, 2009). According to some views, integration can also be seen in other ways than just as physical arrangements and if integration was fully realized it would be considered inclusive education (Takala, 2010a). Still, in Finland, when integration is mentioned in a school setting, it is used to imply that the student is placed in special education, but sometimes takes part in the mainstream classrooms' lessons (Takala, 2010a).

The reason why we have discussed the relation between inclusive education and integration is that one of our research questions focuses on the understanding of the concept inclusive education. It is important to examine if teacher students define inclusive education as it is understood nowadays, or if they define it so that it reminds more of integration. The aim of the previous sections in this chapter has also been to highlight how multifaceted inclusion and inclusive education are as concepts, which might possibly be visible in our results as different understandings of the concept.

2.5 Inclusive Education in Laws and Policies

Inclusion and inclusive education are acknowledged as part of human rights in the law. The World Conference on Special Needs Education, Access and Quality, later known as the Salamanca conference, in 1994 realized inclusion and participation being essential to human dignity and to the enjoyment and exercise of human rights (Rodriguez & Garro-Cil, 2015; UNESCO, 1994). Parties attending the conference became expected to adopt a law or policy based on the main principle of inclusive education as defined in the conference enrolling all children in mainstream schools regardless of any difficulties they may have, unless there are compelling reasons for doing otherwise (Rodriguez & Garro-Cil, 2015; UNESCO, 1994).

The conference represented a shift in the context of inclusive education from placing the focus on the disability of the student to focusing on their strengths (Hakala & Leivo, 2015). In addition, the required changes in the policies defined in the conference were not targeted only to the students who receive additional educational support, but to the entire school institutions and the prevalent educational culture (Hakala & Leivo, 2015). The attending parties were required to, among others, improve their education systems and give education more budgetary priority, encourage cooperation between countries that already have experience in inclusive education and the participation of parents and communities of students with disabilities in the planning and decision-making processes (UNESCO, 1994). The inclusion model approved at the Salamanca conference, however, has faced resistance in almost all countries when practical implementation of the new policies should have started (Saloviita, 2020).

The Convention on the Rights of the Child (CRC) and The Convention on the Rights of Persons with Disabilities (CRPD) also acknowledge equal access to education for all children and young people (UN 1989; UN, 2006). The article 28 of the CRC states that children must have the right

to education no matter who they are, regardless of race, gender or disability or if they are a refugee (UN, 1989). The article 23 states that active participation of a mentally or physically disabled child in their community should be facilitated (UN, 1989). The article 24 of the CRPD, A right to inclusive education, declares that all disabled students must have a right to participate in every form of mainstream education with appropriate support (UN, 2006). All countries except for one have signed the CRC (UN, n.d.-a; World Vision, 2021), whereas all but 32 countries have ratified the CRPD (UN, n.d.-b) although the general principles of the Conventions are not fully ensured or widely known this day (Unicef, n.d.).

Also, The Finnish Basic Education Act in 1998 is based on the philosophy of inclusive education supporting all children individually so that they can successfully complete their basic education (1998/682). Teaching should help and support the student in such a way that they have equal opportunities to fulfill the requirements of their compulsory education together with peers of similar age (Finnish Basic Education Act, 1998/628; Lakkala, 2008). Factors promoting inclusive education in The Basic Education Act include, among others, local school principle, meaning that the municipality assigns the student generally to the school closest to their home, and it also encourages multi-professional cooperation (Finnish Basic Education Act, 1998/628; Hakala & Leivo, 2015; Halinen & Järvinen, 2008). Special education should not primarily be seen as separate or segregated from mainstream education, but it should be viewed as the individualization of teaching in general education (Lakkala, 2008). In the article 4 it is stated that a student who requires regular additional educational support must be provided with improved support methods that are in accordance with their personal learning plan as soon as needs for support arise (Finnish Basic Education Act, 1998/628; Opetushallitus, 2014; Oja, 2012).

According to Kivirauma and Ruoho (2007), the fact that students can receive so-called part-time special education can be considered one factor that promotes the equality and equity of the Finnish education system. Part-time special education means that students study mainly in mainstream education but receive additional teaching from a special-education teacher individually or in small groups from one to several hours a week, instead of being fully placed to a self-contained special education classroom (Kivirauma & Ruoho, 2007).

However, inclusion or inclusive education as terms are not nor have ever been mentioned in The Basic Education Act (Saloviita, 2019). According to research about Finnish teachers' readiness to include students with special educational needs in their teaching, 66% of teachers think

that The Basic Education Act promotes inclusive education whereas 5% disagree (Saloviita, 2019). This implies that the The Basic Education Act is seen as inclusive by more than half of teachers, which could be higher. Saloviita (2019) argues that self-contained special education classrooms are still common in primary education because of the imprecise criteria related to inclusive education in the law and Finnish school policies. Also Halinen and Järvinen (2008) and Moberg and Savolainen (2015) state that even though inclusion of students with special educational needs to mainstream classrooms is encouraged in the policies, fully segregated special education is still allowed.

Finnish educational policies and regulations leave a lot of power to the municipalities to decide on inclusive education (Halinen & Järvinen, 2008). It is important to note that municipalities receive extra funding from the state if a student is placed in special education instead of a mainstream classroom (Moberg & Savolainen, 2015). Thus, it is legitimate to claim that economic factors influence inclusive education and the placement of a student and may create differences between municipalities in Finland (Moberg & Savolainen, 2015). The Finnish Basic Education Act (1998/628) also legislates preparatory education to be provided for students who do not have sufficient language proficiency in Finnish or Swedish, generally students with some kind of immigrant background, which may be considered one form of segregation as well as against the local school principle.

The main chapter two has presented different ways of understanding inclusion and inclusive education, which is meaningful to our first research question that considers the understanding of teacher students of inclusive education. We have tried to point out that there is no one definition for these concepts that everyone would agree on, but social, historical, economic, political and cultural contexts and interactions influence the implementation and understanding of inclusion and inclusive education (Sayed, Soudien & Carrim, 2003). Inclusive education does not happen only at the classroom level, but it is built into the whole education system (Lakkala, 2008). It is also important to note that the situation in Finland is different than worldwide, for example, on a global scale, the biggest challenge in inclusive education is to reach those children who do not yet receive any kind of education (Lakkala, 2008). In the next chapter it is therefore necessary to consider Finnish educational development from the perspective of inclusive education. In addition, we have tried indicate that even though in our research we are researching teacher students' sense of self-efficacy to implement inclusive education, teachers'

competence alone is not enough but other structures must support inclusive education as well. As inclusive education is about the equality of all students, it should consider society as a whole, not only teachers and other experts working close to students (Lakkala, 2008).

3 Inclusive Education in the Finnish school system

In this section, we will explore the segregated nature of special education in Finland before and after the 2000s and the development of Finnish education system to be more inclusive. The historical context provides explanations to where certain views, attitudes or understandings stem from because, as discussed before, the concept of inclusive education was acknowledged before using it in its current meaning. We think it is important to take a look at the history of inclusive education in Finland as we believe it can better explain where the current understandings and attitudes towards inclusive education of teachers and teacher students in Finland might originate from.

3.1 The Development of Inclusive Education in Finland

Nordic education development after the Second World War can be divided into three sections: The golden years of democracy 1945-1970, the radical left period ca. 1970-1980 and the Globalisation and neoliberal phase ca. 1980 onwards (Imsen, Blossing, & Moos, 2017; Telhaug, Mediås & Aasen, 2006). The first period focused on the idea that education should be universal and compulsory as it was seen as the best way to spot the talents of individuals as well as provide everyone an equal opportunity to learn (Sahlberg, 2011; Telhaug et al., 2006). The second period shifted the view of the student being something that school should shape into the student being viewed more as an individual with a voice of their own, and cross-disciplinary teaching was highlighted (Imsen et. al, 2017; Telhaug et al., 2006). In this phase the public sector was also expanded further in general (Sahlberg, 2011). The third phase, which is still ongoing, is characterized as more competitive and economy- and entrepreneurship-based (Imsen et. al, 2017; Telhaug et al., 2006) as well as promoting knowledge in changing societies (Sahlberg, 2011). From the different phases one can observe that the idea of school for all can already be seen in the late 1940s meaning that some of the principles of inclusive education have been considered in Finnish education for over 80 years.

In Finland the folk school (Fin. kansakoulu) system started in the 1860s (Halinen & Järvinen, 2008; Kivirauma, 2012). Only those who were able to manage at school independently were allowed to participate (Kivirauma, 2012). In bigger cities there were special education schools (Fin. apukoulut), which were intended for those who could not participate in the folk schools

(Kivirauma, 2012). However, schooling was voluntary at this time meaning that a large portion of children did not attend school at all (Halinen & Järvinen, 2008; Kivirauma, 2012). At the beginning of the 1900s, separate classes for those with special educational needs as well as educational institutions (Fin. kasvatustaitokset) were created in the bigger cities (Kivirauma, 2012). Institutions were seen as the correct place for these students as it was thought that the institutions were a sign of a “civilized” society (Kivirauma, 2012). In the 1960s there was some resistance against the institutions arguing that the institutions were oppressing marginalized children (Kivirauma, 2012). After the comprehensive education reform in the 1970s, special education became a part of the national educational policy making (Kivirauma, 2012) as educational equality was seen as a central goal of education (Lepistö, 2010). Teacher education also became uniform in the whole country due to the reform (Kivirauma & Ruoho, 2007).

The focus in the 1980s was on normalization and integration of students with special educational needs (Halinen & Järvinen, 2008). In the 1990s talk about inclusive education begun as a result of the resistance towards the term integration (Moberg & Savolainen, 2015). In 1998, The Basic Education Act of Finland was changed so that the curriculum and distribution of lesson hours became coherent in all of Finland, which also became the basis for special education (Halinen & Järvinen, 2008; Oja, 2012). This meant that mainstream educational policies and special education policies became more uniform (Takala, Lakkala et al., 2020).

The number of students participating in special education has been continuously increasing in the last sixty years (Kivirauma, 2012; Moberg & Savolainen, 2015). The increase has been most drastic in the 1970s as a result of the school reform as well between the years 2000 and 2007 (Kivirauma, 2012). After the reform in the 1970s, special education was seen crucial to ensure the comprehensive nine-year teaching of the whole age group (Kivirauma, 2012). One of the main goals of the reform was to make education more equal to the students (Moberg et al., 2020). After the reform, special education was mainly targeted at those students with difficulties in reading, writing and speech (Moberg & Savolainen, 2015).

The integration of students in segregated special education into mainstream classrooms began in the 1990s as the students started to take part in arts and crafts subjects as well as in other individual subjects in mainstream education (Takala, Lakkala et al., 2020). This trend continued in the 2000s, which influenced the further increase in students taking part in special education (Takala, Lakkala et al., 2020). In the 2000s the increase was influenced by the shift in involving

students with disabilities under the municipal educational administration (Fin. opetustoimi) instead of the social welfare administration (Fin. sosiaalitoimi) (Kivirauma, 2012).

3.2 The Three-tiered Support System as a Response to Inclusive Education

Finnish education system has aimed to provide inclusive education further in the 2000s. In the Finnish National Core Curriculum, it is stated that “the development of basic education is guided by the inclusion principle” (Opetushallitus, 2014, p. 32). One specific way that the Finnish education has aimed to include all students in the education system in the 2000s has been establishing hospital schools so that those students that are hospitalized can still access education (Halinen & Järvinen, 2008). Another way that inclusive education is provided in Finland nowadays is through the introduction of the three-tiered support system in 2010 (Yada et al., 2021), which relates to the different sections of special education by Kivirauma (2012) presented earlier in this sub-chapter. The development work of the system began in 2006 with its aim being “developing ways to analyse the need for the amount of special educational services, developing legislation concerning special education, developing teacher education, developing administrative procedures in special educational services, and developing other areas related to special education” (Björn, Aro, Koponen, Fuchs L. & Fuchs D., 2018, p. 2). The system was first introduced in the Basic Education Act in 2010, and the implementation phase began in 2011 (Björn et al., 2018).

The system is divided into three tiers: general support, intensified support and special support (Yada et al., 2021). No medical diagnosis is needed in order to receive additional support (Björn, Aro, Koponen, Fuchs L. & Fuchs D., 2016). General support usually takes place in the mainstream classrooms and is taught by the classroom teacher in collaboration with the special education teacher (Björn et al., 2016). The general support is occasional, and it should be given immediately (Björn et al., 2016; Oja, 2012). Intensified support takes place both in the mainstream classroom and small groups taught by the special education teacher depending on the needs of the student (Björn et al., 2016). Intensified support is longer term support, and it often focuses on a specific subject or subjects (Björn et al., 2016; Oja, 2012). Special support takes normally place in a small group classroom led by the special education teacher (Björn et al., 2016). All students in special support have individualized education programmes (Björn et al.,

2016). On all support levels, the evaluation of the need for support is done by the teacher, special education teacher and the parent in collaboration (Björn et al., 2016).

Part-time special education happens in general and intensified support tiers. It refers to the student receiving on average two hours per week with the special education teacher, and it has been significantly increasing in the 1990s and 2000s (Kivirauma, 2012). Because of this development, it has been made mandatory that all schools should have at least one special education teacher, who has not been appointed their own class (Yada et al., 2021). This way the special education teacher has more time to co-teach with the other teachers and collaborate (Oja, 2012). The proportion of all basic school students participating in part-time special education was as high as 22,7% in the school years 2020-2021 (Tilastokeskus, 2022). In 2021 ca. 80% students who received special education received part-time special education as their support method (Tilastokeskus, 2022). Part-time special education is aimed at those students who have moderate learning difficulties (Takala, 2010b).

The history of the segregated nature of special education in Finland can partly explain the still continuing segregation. In European comparison, Finland has proportionally one of the highest numbers of separate special education classrooms (EADSNE, 2012; Saloviita, 2020; Tilastokeskus, 2016). The number of students with special educational needs has increased rapidly. Due to the rapid increase in students who receive special education as well as the increase in students participating in part-time special education, it is necessary for classroom teachers to also acquire competence in teaching students with diverse needs (Lappalainen & Mäkihohko, 2004). With the increase of inclusive education in Finnish classrooms through the three-tiered support system and part-time special education, it is not only the special education teachers who are responsible for teaching students with special educational needs. All teachers must acquire the competencies to teach students with special educational needs and to implement inclusive education.

4 Teacher Students' Self-Efficacy in Implementing Inclusive Education

Previous research shows that there is a clear correlation between teachers' attitudes towards inclusive education and their feeling of self-efficacy in implementing inclusive education (Desombre et al., 2021; Moberg et al., 2020; Saloviita, 2020; Sari et al., 2009). The higher the self-efficacy of the teacher towards the implementation of inclusive education, the more positive their attitude towards inclusive education is, and vice versa (Malinen, 2013; Moberg et al., 2020; Saloviita, 2020; Sari et al., 2009). This means that when the teacher's self-efficacy and their attitude towards inclusive education are positive, they are more likely and more willing to implement it in their classroom (Desombre et al., 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020). Thus, teachers' attitudes towards inclusive education and the concept of teachers' self-efficacy are intertwined.

In this chapter, we will therefore first discuss how teachers' and teacher students' attitudes towards inclusive education affect their willingness to implement it. We will then discuss the concept of self-efficacy both theoretically and practically and relate its relevance to our research. Afterwards, we will consider how teachers' self-efficacy can be strengthened. We will present a general overview about the strengthening factors of self-efficacy in the context of inclusive education, but our main focus remains on the context of teacher education. In addition, we will present findings from previous research related to teachers' and teacher students' attitudes and sense of self-efficacy to implement inclusive education. These all relate to our research questions on implementing inclusive education and the effect of teacher education on the sense of self-efficacy of the teacher students. To conclude this chapter, we will look at the course contents and curriculum in regards of inclusive education at the University of Oulu to be able to view the learning goals of the courses and the curriculum about inclusive education.

Not a lot of previous research regarding teacher students' sense of self-efficacy to implement inclusive education is found. The available research will be presented in section 4.2. As there is not extensive amount of research on specifically teacher students' self-efficacy, we will present research on the sense of self-efficacy of in-service teachers as well as discuss attitudes towards inclusive education as attitudes reflect the feeling of competence (Desombre et al., 2021; Moberg et al., 2020; Saloviita, 2020; Sari et al., 2009). Teachers' attitudes towards inclusive education have been studied in many different countries for several years (de Boer, Pijl & Minnaert, 2011). In addition, it has been proved that teacher students' attitudes toward inclusive

education follow those of in-service teachers' (Saloviita, 2020), and thus the discussion about previous research also related to in-service teachers is relevant to our theoretical framework even though the focus group of our research is teacher students.

4.1 Teachers' and Teacher Students' Attitudes Towards Inclusive Education

Attitudes are individual evaluations of the world and are subjectively true (Bohndick, Ehrhardt-Madapathi, Weis, Lischetzke & Schmitt, 2022). They influence whether prejudices are overcome or maintained (Byra & Domagała-Zyśk, 2021). Crispel and Kasperski (2021) argue that in addition to professional special educational knowledge, positive attitude towards inclusive education is essential to successful implementation of it. It has been studied that teachers' attitudes about inclusive education differ based on who they consider inclusive practices to cater to (Desombre et al., 2021; Moberg et al., 2020). Teachers' attitudes are most negative towards students who have emotional and behavioural problems or students with intellectual disabilities, such as autism (Desombre et al., 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020; Viljamaa & Takala, 2017). If the teacher's attitude towards inclusive education is negative, they most often do not implement or do not want to implement inclusive education (Desombre et al., 2021).

Research reveals that teacher students' attitudes reflect those of in-service teachers' (Saloviita, 2020). It has been shown that generally teacher students' overall attitude towards inclusive education is positive, but when examining the attitudes towards different types of learners, the attitudes vary (AlMahdi & Bukamal, 2019; Al Shoura & Aznan, 2020; Byra & Domagała-Zyśk, 2021; Richards & Clough, 2004). Teacher students express more negative attitudes towards students with profound and multiple learning difficulties, those who require individualised education plans (Al Shoura & Aznan, 2020; Byra & Domagała-Zyśk, 2021) and who show aggressive behaviour or require communicative technologies in learning (AlMahdi & Bukamal, 2019). Comparatively, more positive attitudes are expressed towards students with language or attention difficulties (AlMahdi & Bukamal, 2019) and those with physical or sensory disabilities (Byra & Domagała-Zyśk, 2021; Moberg et al., 2020). It has also been proved that special education teacher students have more positive attitudes towards inclusive education than classroom teacher students (Al Shoura and Aznan, 2020).

Several aspects affect the teacher students' and teachers' attitude towards inclusive education. Education, including among others teaching practices and course contents, plays a great role in the formation of attitudes related to inclusive education of teacher students. Modifying teacher education to more inclusion positive leads to teacher students developing their attitudes accordingly (MacFarlane & Woolfson, 2013). Based on research by Sokal and Sharma (2014), it can be said that teacher education is an important mechanism to reduce teachers' concerns towards inclusive education and to increase positive attitudes towards teaching students with special educational needs. Through teacher education, however, not all concerns related to inclusive education can be eliminated (Sokal & Sharma, 2014). When it comes to in-service teachers, lack of resources, the possible increased workload and larger class size through the introduction of inclusive practices in education are some factors that affect the attitudes towards inclusive education (Crispel & Kasperski, 2021). Teacher education cannot have an effect on these. In addition, support for the teachers including actual as well as perceived support, in-service training, experience and self-efficacy can influence the teacher's attitude (Desombre et al., 2021). Of the abovementioned aspects, we will next focus on what the sense of self-efficacy is.

4.2 Sense of Self-efficacy

Teachers often have reservations about advancing inclusive education in their classroom (Moberg & Savolainen, 2015). The willingness is connected to the teachers' sense of their own competence to teach a heterogenous and diverse group of students (Moberg & Savolainen, 2015). Competence refers to an individual's ability to complete a task satisfactorily (Huntly, 2008). The personal feeling of having competence or being competent can also be called self-efficacy. The term self-efficacy was developed by Albert Bandura (1995, p. 2) who defines it as:

“... beliefs in one's capabilities to organize and execute the courses of action required to manage the prospective situation.”

Teachers' self-efficacy has been studied since the 1970s after the development of the concept of self-efficacy by Bandura (Narkun, 2019). Below we present developed definitions of the concept of self-efficacy related specifically to teachers working in inclusive settings. Common for the understanding of the concept of self-efficacy is that it is seen as the individual's personal

perceived competence and the experience of it. It cannot be quantitatively measured, and it does not necessarily reflect the true level of the individual's competence.

“In general, efficacy is perceived as teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated.” (Guskey & Passaro, 1994, p. 628)

“The self-efficacy of a teacher in inclusive education, may be perceived as his belief, regarding his capabilities of teaching in an inclusive classroom, of being able to deal with difficult behaviour, and of the possibility of cooperation with other teachers, specialists, and parents.” (Narkun, 2019, p. 160)

The influence of self-efficacy on behaviour is both direct and indirect (Malinen, 2013). Self-efficacy affects emotions, thinking and actions of a person (Narkun, 2019). Overall, a strong sense of self-efficacy helps the person try something that possibly is out of their competence level, which in turn leads to the person developing their skills further (Bandura, 1995; Bandura, 2012). Without a strong sense of self-efficacy, the person might simply stay in their comfort zone without using their full competence or potential (Bandura, 1995; Bandura, 2012). People with low self-efficacy easily consider their efforts ineffectual if they encounter obstacles or difficulties, whereas those with high self-efficacy are more likely to find ways to overcome the difficulties (Bandura, 2012). Betz (2000) writes about different behavioural outcomes based on the person's level of perceived self-efficacy. According to Betz (2000), individuals with low self-efficacy are, in addition to having a tendency to quit when encountered with discouragement or failure, more likely to avoid difficult issues and indicate poorer performance results. The influence of self-efficacy on performance can refer to, for example, ability to complete university coursework or a job training programme whereas the effects of self-efficacy on persistence are essential for pursuing and achieving long-term goals (Betz, 2000) (see figure 5).

When it comes to the implementation of inclusive education, teachers with low self-efficacy focus more on classroom management in their teaching practices (Woodcock et al., 2022), whereas teachers with higher sense of self-efficacy are more skilled in handling behavioral issues in the classroom and can thus place more focus on providing accessible, high-quality education where the aim is to help each student succeed (Woodcock et al., 2022; Zee & Koomen,

2016). The lower the sense of self-efficacy, the more the teacher tends to lean to custodial orientation as the teacher does not believe in their ability to be in control of the classroom (Bandura, 1995). Therethrough, they try to control the classroom through normalization of the students trying to conform them to learning styles that might not be ideal for them (Bandura, 1995), which is against the principles of inclusive education. Crispel and Kasperski (2021) state that teachers with low self-efficacy tend to blame the students for their learning difficulties leading to the failure of the implementation of inclusive education. Additionally, teachers who have higher self-efficacy to implement inclusive education are more prepared to face the possible resistance that there might be towards inclusive education (Ahsan et al., 2013), such as their colleagues or the parents of the students opposing it.

Overall, findings in a study by Kiel, Brown, Muckenthaler, Heimlich and Weiss (2020) conclude that teachers with higher self-efficacy evaluate themselves as better at implementing inclusive education, including differentiation of teaching and achievement goals, using diverse learning methods, collaborating with colleagues and developing an inclusive school culture. Thus, it can be stated that in general teachers with high sense of self-efficacy are more likely to include students with additional education needs (Woodcock et al., 2022), and the implementation of inclusive education is more often effective and successful (Crispel & Kasperski, 2021).

The feeling of not having enough support or lack of other resources influences the teachers' views on inclusive education negatively (Desombre et al., 2021). The lack of resources to implement inclusive education is often mentioned as a reason for not wanting to implement inclusive education (Crispel et al., 2021; Desombre et al., 2021; Saloviita, 2020). This implies that the teachers fear that inclusive education would increase their workload (Desombre et al., 2021). However, Saloviita (2020) claims that the discourse on the lack of resources is simply a socially acceptable way to deny the inclusion of students with special education needs into the teachers' classrooms. In addition to having an influence on the implementation of inclusive education, high sense of self-efficacy has been shown to have a positive influence on the teachers' well-being and job satisfaction as well as to prevent burn outs (Bandura, 1995; Narkun, 2019; Yada et al., 2021; Zee & Koomen, 2016). Therefore, the strengthening of self-efficacy does not only improve the implementation of inclusive education but also the overall well-being of the teacher.

The sense of self-efficacy of the pre-service teachers affects what happens in their classrooms later when they enter work life (Ahsan et al., 2013). In general, pre-service teachers' sense of self-efficacy in implementing inclusive education is lower than that of the in-service teachers (Yada et al., 2021). As previous teaching experience has a positive influence on the self-efficacy of the teacher in implementing inclusive education (Yada et al., 2021), as will be discussed in the next sub-chapter, it is understandable that in-service teachers have a stronger self-efficacy as they have more experience than pre-service teachers. According to a research by Seppälä-Päköläinen (2009), teacher students perceive their readiness to face special needs in their future classroom as low or lacking. According to a study by Loreman, Sharma and Forlin (2013), teacher students who report that they have a low level or no knowledge on inclusive education as well as no experience or training about inclusive education also report lower self-efficacy towards the implementation of inclusive education. On the contrary, Shaukat, Sharma and Furlonger (2013) and Hsien (2007) argue that teacher students who have received training and have experience in educating students with special educational needs have higher self-efficacy towards implementing inclusive education (see also Forlin, Tait, Carroll & Jobling, 1999; Hopper & Stogre, 2004; Richards & Clough, 2004). Therefore, in the next sub-chapters we will examine different ways teacher students' self-efficacy regarding the implementation of inclusive education in their future work can be strengthened in teacher education.

4.3 How Can Self-Efficacy Be Strengthened?

In this sub-chapter, we will discuss Bandura's self-efficacy theory (1997) that consists of four main sources that strengthen one's self-efficacy. These are mastery experiences, vicarious experiences, verbal and social persuasion, and psychological and affective conditions (1997).

Mastery experiences are the strongest of the four sources that affect self-efficacy according to Bandura (1997). Mastery experiences happen when a person themselves takes action and either succeeds or fails in it (Bandura, 1997), and they serve as indicators of the person's perceived capability or competence in a certain context (Betz, 2000). When a moderate level of self-efficacy has developed, to establish a stronger and more resilient sense of self-efficacy, succeeding in more difficult tasks than previously is required (Betz, 2000). However, it should be added that successful experiences strengthen the self-efficacy of the individual whereas unsuccessful experiences can weaken it (Ahsan et al., 2013).

Bandura (1997) defines vicarious experiences as experiences which are received through observation. Thus, in vicarious experiences the person observing is not an active participant in the action but rather an observer (Bandura, 1997). It is important that the model the participant is observing has some similarities with the observer (Betz, 2000). The development of one's self-efficacy is also stronger if there are more competent models than just one as there is more uncertainty about the observer's own competence which later leads to further development of the perceived self-efficacy (Bandura, 1997). Observing success increases self-efficacy whereas observing the model failing or observing them succeeding in something that the observer has previously failed in can reduce it (Betz, 2000).

Verbal and social persuasion mean the feedback the person receives from so-called influential others (Bandura, 1997). In the context of education, these influential others can, for example, be the principal in relation to the teacher or different relations between peers or colleagues. The received encouragement enhances and sustains one's sense of self-efficacy (Betz, 2000). However, social persuasion must remain within realistic boundaries (Betz, 2000). If the social persuasion goes too much beyond what the person is actually capable of doing, it will not be effective (Betz, 2000). Additionally, the given feedback should focus on the individual's success and be encouraging in nature rather than highlighting failures (Betz, 2000).

The fourth and final source that Bandura (1997) defines is psychological and affective conditions. They include somatic information conveyed by emotional states during, before or after a performance, such as stress or anxiety, or physical indicators such as sweating, fast heart beat or fatigue (Bandura, 1997; Betz, 2000). By reducing these symptoms by different methods, such as stress-management, one can enhance their level of perceived self-efficacy (Betz, 2000). It should be noted, that the four aforementioned sources of self-efficacy are not separate from one another but rather intertwined, and together they influence a person's self-efficacy either increasing or decreasing it (Yada et al., 2021).

In the figure below, we have visualised the promoting factors of self-efficacy as well as the behaviour outcomes of self-efficacy discussed in sub-chapters 4.2 and 4.3.

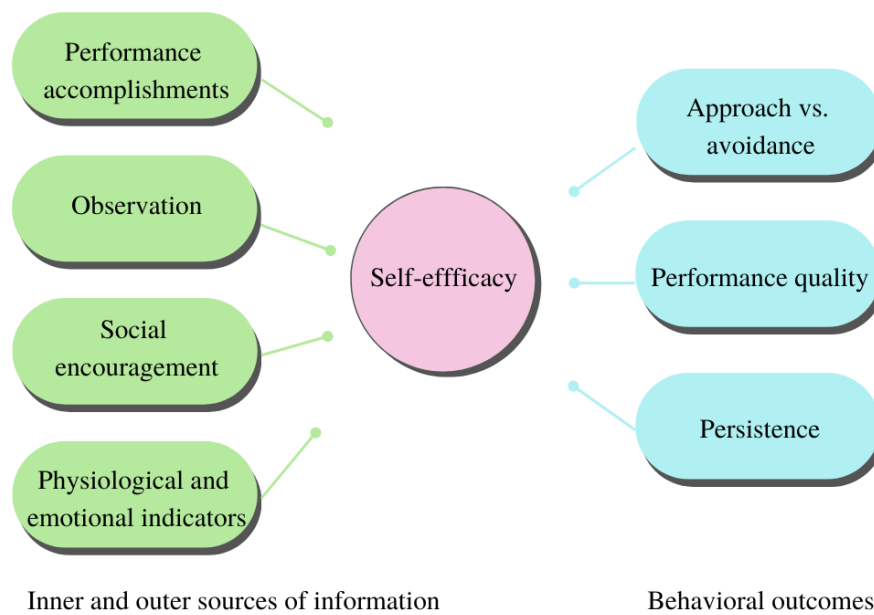


Figure 5: A modified figure of the self-efficacy theory presented by Bandura (1995, 1997) and Betz (2000).

4.4 Self-Efficacy in Implementation of Inclusive Education Internationally and in the Context of Finnish Teacher Education

In this chapter, we will examine the strengthening factors of self-efficacy in regards to the implementation of inclusive education based on Bandura's (1997) self-efficacy theory and discuss how inclusive education is considered in teacher education both internationally and nationally nowadays.

The feeling of not being prepared enough when entering work life is shared by many newly graduated teachers from different countries (Crispel & Kasperski, 2021). The competence to teach a heterogenous and diverse group can and must be strengthened in teacher education (Lappalainen & Mäkihonko, 2004). As stated previously, pre-service teachers' opposition towards inclusive education can be reduced by increasing their sense of teaching competence (Malinen, 2013). Caires, Almeida and Vieira (2012) have studied the experiences and perceptions of teacher students about teacher's work, and their study concludes that positive self-efficacy of teacher students is important in terms of success in future work, and teacher education should thus focus on developing it. Lancaster and Bain (2007) have conducted a study about

whether participation in an inclusive education course that consists of subject content and applied experiences leads to an improvement in the self-efficacy of pre-service elementary education teachers. According to the research, participation in the course correlates with positive self-efficacy (Lancaster & Bain, 2007).

Finnish teacher education has not developed simultaneously with other educational policies related to inclusive education (Saloviita, 2020). In her dissertation, Lakkala (2008) argues that efforts to include studies about inclusive education in teacher education in Finland have not been made earlier than during the past recent years, and a proper, holistic teacher education based on the principles of inclusive education has not yet been organized in any Finnish teacher education university. Finnish teacher education is based on international laws, and this also applies to inclusive education as well (Lappalainen & Mäkihonko, 2004). According to Butler and Naukkarinen (2017), in the early 2000s, the principles of the 1994 Salamanca statement were not yet properly recognised in Finnish teacher education. In 2007, at the University of Jyväskylä, two credits were transferred from teaching practice to other studies focusing on inclusive education (Naukkarinen & Rautiainen, 2020). The Finnish National Core Curriculum 2014 and the Law on student welfare emphasize inclusive education also from the perspective of teacher training, and inclusive education is one key theme of teacher education nowadays (Naukkarinen & Rautiainen, 2020). Although teacher education offers options to acquire additional information about inclusive education (Lakkala, 2008), according to the Teacher Training 2020 working group (Opetusministeriö, 2007), in-service training programmes and optional courses for pre-service teachers are insufficient and there are large differences on a regional level as well between the universities and education programmes.

Teaching experience contributes positively to self-efficacy because it provides mastery experiences discussed in the previous chapter (Bandura, 1995; Caires et al., 2012; Yada et al., 2021). The self-efficacy of a future teacher is easily influenced at the beginning of their career or during teaching practices that are part of their studies (Caires et al., 2012; Narkun, 2019). It is important that teacher students get the possibility to meet a variety of students and practice as well as observe teaching in a school that implements inclusive education (AlMahdi & Bukamal, 2019; Arvelo-Rosales, Alegre de la Rosa & Guzmán-Rosquete, 2021; Opetushallitus, 2020). Since teacher students' experiences influence their attitudes and sense of self-efficacy (Al Shoura & Aznan, 2020), those students who have been in contact with students with special

educational needs have a more positive attitude and a higher sense of self-efficacy than those with no experience with these students (Loreman et al., 2013).

Finland's teacher training schools seldom have students with severe intellectual disabilities, and they have less students with other severe disabilities than schools that are not teacher training schools (Opetushallitus, 2020). Although the teaching practices in Finland are guided by experienced teachers, whose guidance qualifications are high when comparing internationally, the amount of teaching practice in the Finnish teacher education is not large compared to many other countries (Kansanen, Pohjolainen & Ropo, 2007). From the point of view of more effective implementation of inclusive education, it can be considered whether there would be a valid reason to increase the number of practices as teaching practices are seen as the most influential part of the teacher education according to recent graduates (Takala, Sutela, Ojala & Saarinen, 2023).

Nevertheless, as mentioned previously, unsuccessful mastery experiences can have a negative influence on the sense of self-efficacy of the teacher student (Ahsan et al., 2013). Based on a research by Martins, Costa and Onofre (2015), teaching practices can also be perceived as a reason for low self-efficacy: experiences of failure, vicarious experiences that have a negative effect, such as seeing someone else succeed in a task where the person themselves has failed, negative emotions and the lack of feedback have a weakening effect on students' self-efficacy. The study argues that in order to improve teacher education, these factors that might weaken the students' self-efficacy must thus be taken into account (Martins et al. 2015.).

Additionally, it should be noted that in-service teachers play a great role in shaping the teacher students during their practices as pre-service teachers can easily be influenced (Caires, Almeida & Vieira., 2012; Narkun, 2019). All teaching practices in the context of Finland are supervised by an in-service teacher, which means that their sense of self-efficacy to implement inclusive education influences the teacher students' experience and the given guidance related to inclusive education.

A study by Ahsan, Deppeler and Sharma (2013) found that the length of teacher training has less of an effect on the sense of self-efficacy of pre-service teachers than appropriate curriculum content. Teacher students must receive knowledge and skills related to diverse students as well as strategies to work in inclusive educational settings (Dally et al., 2019; Majoko, 2017; Tamtik

& Guenter, 2019). Teacher education should include courses about inclusive education as learning about the issues increases the self-efficacy of teacher students and challenges their attitudes (Narkun, 2019). Lancaster and Bain (2010) conducted a study in which they examined the effects of inclusive education courses on the self-efficacy of pre-service elementary education teachers. The study shows that the courses were associated with positive effects on the students' self-efficacy (Lancaster & Bain, 2010).

Additionally, professional special educational knowledge is essential to successful implementation of inclusive education (Crispel & Kasperski, 2021). Thus, to promote inclusive education, the education of pre-service teachers must include courses directly related to special educational needs (Crispel & Kasperski, 2021; Takala & Sirkko, 2022), and they should be introduced early in the teacher education programme to enhance the development of the teacher students' competence and self-efficacy (Crispel & Kasperski, 2021).

In Finland, The Teacher Training 2020 working group set by the Ministry of Education (2007) found out in a questionnaire aimed at pre-service teachers that there is a growing need for more knowledge about special educational topics. The amount of special educational pedagogy included in teacher education is seen as too little by many Finnish teacher students and as a result they feel a great uncertainty towards teaching students with special educational needs (Seppälä-Päköläinen, 2009). Also Saloviita (2009) states that Finnish classroom teacher education has been criticized for the fact that the students do not receive enough information to meet the different special needs of their future students. Based on a research by Saloviita and Tolvanen (2017), the lowest levels in competence according to recently graduated teachers are in special educational knowledge. Every future teacher in Finland should be better prepared in teacher training than currently to consider students with special educational needs in their future work (Lakkala, 2008).

It should be noted that teacher students also need concrete examples of the implementation of inclusive education during their studies rather than only academic, theoretical information (Symeonidou, 2017). Carroll, Forlin and Jobling (2003) argue that teacher education emphasizes acquisition of knowledge more than equipping the future teachers with practical skills. The course contents' relation to future practice is particularly important in the formation of a strong self-efficacy towards adapting inclusive practices to consider the diverse needs of an

increasingly heterogeneous student population (Billingsley, Carlson, & Klein, 2004; Fore, Martin & Bender, 2002). Also in Finland, there has been an increasing call for teacher education to be more practice oriented (Jenset, Klette & Hammerness, 2018). In a pro gradu research by Holma and Kuoppala (2006), teacher students expressed the need for more practical information about how to handle everyday situations at school related to inclusive education and not so much for theoretical information about, for example, different diagnosis. Having lectures that consist of the combination of a teacher-led approach as well as practical approach towards the taught issue has been seen as one good method to provide both academic and practical knowledge about topics related to inclusive education (Symeonidou, 2017).

However, the contribution of research knowledge on teaching in addition to practical training and knowledge is also significant as the theory guides the practice (Paksuniemi, Määttä, & Uusiautti, 2013). Research offers a toolbox of practices that the teacher can adapt in their own teaching (Biesta, Filippakou, Wainwright & Aldridg, 2019). Finland has long roots with research-based teacher education (Aspfors & Eklund, 2017). The academic, research-based approach to teacher education has been present for 30 years (Toom et al., 2011), and there are benefits in a research-oriented teacher education regarding the implementation of inclusive education and the teacher students' self-efficacy related to it. Educational research exposes hidden assumptions and tries to change common perceptions about what is normal or valuable in education (Biesta et al., 2019). Some key features of research-based teacher education in the Finnish context include the idea of didactically-thinking and autonomous teachers (Kansanen, 2014; Toom et al., 2011). Through a research-oriented education the teachers learn to rely on most recent research to support their didactical choices in their classrooms, they become more analytical and are capable of developing their own teaching and learning environments through reliable sources (Paksuniemi et al., 2013).

In addition to academic knowledge, practical skills and actual practice periods, there needs to be discussion about topics related to inclusive education as well as self-efficacy and attitudes (Narkun, 2019). As pre-service teachers have less chances to have mastery experiences, two other sources presented by Bandura (1997) to strengthen the sense of self-efficacy play a bigger role: vicarious experiences and verbal persuasion. These two sources play also an important part in teaching practices as, for example, encouraging verbal persuasion from the supervising teacher enhances the teacher students' self-efficacy (Yada et al., 2021). Malinen (2013) and

Yada et al., (2021) highlight the importance of having adequate support in order to achieve successful inclusive practice experiences. The support can be in a form of informal exchanges of ideas between experienced expert teachers or peers and other collaborative problem-solving among others who struggle with similar issues, for example during course contents (Malinen, 2013).

Although teacher education can and must offer knowledge that promotes the learning of pedagogical skills, teachers' personal educational philosophy is still mostly developed through self-reflection (Häkkinen & Lepoaho, 2001). One possible way to generate future teachers with skills and will to implement inclusive education is the promotion of reflection in teacher education (Symeonidou, 2017). Reflection in a teacher's work can be understood as systematic self-study and observation of one's colleagues (Lakkala, 2008). Reflection emphasizes the questioning of action and looking at failure as a source of learning (Lakkala, 2008). This includes, for example, asking questions like what happened, why did it happen and how can I improve my teaching (Sharma, 2010). Teacher students should understand that they are evidently affecting social justice in their future work and that together with different actors in the field they can transform structures of exclusion, and one way to do it is by systematically evaluating their own practices (Pantic & Florian, 2015).

Finnish teacher education highly promotes self-reflection (Kansanen, 2006). The aim of Finnish teacher education is to produce reflective teachers with the competence and will for life-long learning (Kansanen, 2006; Opetus- ja kulttuuriministeriö, 2016). Efforts to support the development of the teacher students' self-reflection skills in teacher education include learning diaries, portfolios, essays, watching video materials and discussions in pairs or groups (Juuti, Krzywacki, Toom & Lavonen, 2011). One study found that most of the recently graduated teachers had acquired good reflection skills during their teacher education (Saloviita & Tolvanen, 2017). To conclude, educational experts equipped with skills, knowledge, attitudes and self-efficacy to implement inclusive education are needed (Takala & Sirkko, 2022).

Malinen (2013) and Savolainen, Engelbrecht, Nel and Malinen (2012) argue that teachers who perceive themselves as effective collaborators feel more secure towards and recognise less threat in implementing inclusive education. Thus, it can be stated that collaboration is an essential way to build more inclusive schools (Devecci & Rouse, 2010; Kykyri, 2020; Malinen, 2013; Savolainen et al., 2012). All teachers should start to learn already during their teacher education

how to work together with their teacher colleagues, parents as well as other educational professionals (Malinen, 2013). Oswald (2007) argues that skills in interpersonal communication and a shared decision-making approach should be promoted in order to educate teachers who will succeed in collaboration.

It can be argued that multi-professionalism between special education and classroom teachers in the actual field is not reflected in Finnish teacher training (Lakkala, 2008; Saloviita & Tolvanen, 2017). Research shows that in Finland recently graduated teachers' views on their competencies in aspects such as cooperation competence is mostly positive but not overwhelmingly so (Saloviita & Tolvanen, 2017). Guided and mandatory collaboration that includes practicing cooperation and experimenting with different co-teaching models between classroom and special education teacher students is needed during teacher education in order to promote inclusive education and the development of the students' self-efficacy related to inclusive education (Ladonlahti & Naukkarinen 2006).

Related to teacher students' attitudes towards inclusive education, it is typical that they have a rather high permanence and, conversely, weak changeability (Hirsjärvi, 1983). However, attitudes can change, for example, when a person gets new information, but the change is still often slow (Hirsjärvi, 1983). For the change of an attitude, the importance of personal development and learning, unlearning and relearning are thus central (Oskamp & Schultz, 2005), which are also an integral part of teacher education. Teacher students' attitudes towards inclusive education can therefore be positively affected in teacher education (Shade & Stewart, 2000; Takala & Sirkko, 2022). Practical ways they can be affected include brief lectures, audiovisual presentations, small-group discussions, roleplay, and empathy-building exercises (Shade & Stewart, 2000). The attitudes formed during teacher education are difficult if not impossible to change later on (Ahsan et al., 2013). Additionally, as education strengthens the self-efficacy of teacher students, it also has a positive impact on their attitudes towards inclusive education as a strong self-efficacy is connected to teachers' positive attitudes towards inclusive education as already argued (Yada et al., 2021). Thus, the meaningfulness of teacher education also for the development of positive attitudes towards implementing inclusive education can be justified.

The belief or experience	The consequence	Referenced in
Positive attitude towards inclusive education	The teacher's and/or teacher student's self-efficacy increases	(Moberg et al., 2020; Narkun, 2019; Saloviita, 2020; Takala & Sirkko, 2022; Yada et al., 2021)
Enough perceived and actual support	-"-	(Desombre et al., 2021; Malinen, 2013; Yada et al., 2021)
Successful mastery experiences related to the implementation of inclusive education	-"-	(Bandura, 1997; Betz, 2000; Narkun, 2019; Malinen, 2013; Yada et al., 2021)
Successful vicarious experiences related to the implementation of inclusive education	-"-	(Bandura, 1997; Betz, 2000, Narkun, 2019; Yada et al., 2021)
Successful verbal persuasion related to the implementation of inclusive education	-"-	(Bandura, 1997, Betz, 2000; Narkun, 2019; Yada et al., 2021)
Adequate emotional or physiological states related to the implementation of inclusive education	-"-	(Bandura, 1997, Betz, 2000; Narkun, 2019; Yada et al., 2021)
Successful experience in multi-professional collaboration	-"-	(Malinen, 2013; Sharma, 2010)
Enough education about special educational topics	-"-	(Crispel & Kasperski, 2021; Dally et al., 2019; Majoko, 2017; Takala & Sirkko, 2022; Tamtik & Guenter, 2019)
Enough education about inclusive education topics	-"-	(Dally et al., 2019; Majoko, 2017; Narkun, 2019; Tamtik & Guenter, 2019)

Discussion about issues related to inclusive education	-''-	(Malinen, 2013; Narkun, 2019; Yada et al., 2021)
Reflection of issues related to inclusive education	-''-	(Pantic & Florian, 2015; Sharma, 2010; Symeonidou, 2017)

Figure 6: A table about the strengthening factors of self-efficacy in the context of inclusive education.

In the figure 6 above, the table we have created outlines the main ideas related to different strengthening factors of self-efficacy in the context of inclusive education and teacher education discussed in sub-chapters 4.3 and 4.4.

Even though we have discussed the deficiencies in Finnish teacher education related to the possibilities offered to teacher students to acquire a strong sense of self-efficacy to implement inclusive education in their future work, we have also tried to present the strengths of Finnish teacher education in relation to the topic. National context affects how teacher education is organised (Florian & Rouse, 2009). In international comparison, Finnish teacher education is still ranked high (Saloviita & Tolvanen, 2017) despite the challenges we have highlighted in this sub-chapter. It can be concluded that although Finnish teacher education has room for development, Finland can be seen as one of the leaders of high-quality teacher education (Tirri & Laine, 2017).

Overall, to strengthen teacher students' self-efficacy and thus ensure effective implementation of inclusive education, all teacher students should familiarise themselves with inclusive education, its core values and main principles about equality and equity (Takala & Sirkko, 2022). Teacher students must understand that all students have similar rights to be included (Slee, 2001), and that providing additional and individual support is the responsibility of all teachers (Takala & Sirkko, 2022). Thus, instead of only providing individual courses about the topic, the overall content of teacher education must be inclusive in its nature. Therefore, next we will look at how inclusive education is considered in teacher education at the University of Oulu where our case study is situated.

4.5 Overview of The Course Contents at Oulu University from the Perspective of Inclusive Education

In this sub-chapter, we will examine how inclusive education is considered in teacher education at the University of Oulu. We will present an overview of the teacher education curricula at the University of Oulu during the academic year 2022-2023 from the perspective of inclusive education as our case study is about the self-efficacy of teacher students, who currently study at the University of Oulu, to implement inclusive education in their future work. The information is retrieved from the official study guide of the university called Peppi. We will search for mentions about topics related to inclusive education in the course contents as well as in the overall study descriptions. It is important to note that this overview is our own interpretation.

The University of Oulu offers multiple teacher education lines: the general classroom teacher education, Intercultural Teacher Education, which is also a classroom teacher education line, special teacher education, early childhood and music teacher education. Additionally, one can study to become a subject teacher in various subjects at the University of Oulu. However, our research focus remains on classroom teacher students including the general classroom teacher education and Intercultural Teacher Education as well as special education teacher education.

We will start by defining the basic context of teacher education in Finland. To become a classroom teacher or a special education teacher in Finland one must study a bachelor's and a master's degree at university in the field of education together worth of 300 ECTS one ECT being equivalent to 27 hours of work (Saloviita & Tolvanen, 2017). Master's degree has been a requirement for becoming a qualified teacher since 1979 (Takala et al., 2023), and the degree was divided into a 3 (Bachelor's)+2 (Master's) year model in 2005 (Saloviita & Tolvanen, 2017). Overall, the majority of classroom teacher studies consist of pedagogical (60 ECTS) and multidisciplinary studies (60 ECTS) (Saloviita & Tolvanen, 2017). Generally minor studies are worth 60 ECTS (Saloviita & Tolvanen, 2017). The remaining ECTS consists of thesis writing and research methodology courses, language and optional studies as well as practice periods (Saloviita & Tolvanen, 2017).

The teacher education curriculum in each university that offers the classroom teacher degree includes compulsory studies varying from one to six ECTS related directly to special educational topics (Opintopolku, 2021; Takala & Sirkko, 2022). At the University of Oulu, there is

an optional special education minor of 25 ECTS which all teacher students can apply for but that does not give the qualification of a special education teacher (Opintopolku, 2021). Classroom teacher students can, however, also apply for a unit of 60 ECTS in order to become qualified special education teachers (Opintopolku, 2021). Special education teacher students major in a separate, specific subject called special education (Opintopolku, 2021).

The education programme of both classroom and special education teacher students generally includes three to five practice periods, about 20 to 25 ECTS in total, some of which are done in a teacher training school and some in other schools or educational institutions (Kansanen et al., 2007; Saloviita & Tolvanen, 2017; Takala & Sirkko, 2022). These practices are spread out throughout the whole teacher degrees (Saloviita & Tolvanen, 2017).

4.5.1 Classroom Teacher Education Programmes

Next, we will move on to examining the curriculum content at the University of Oulu in more detail. The overall content of the general classroom teacher education at the University of Oulu emphasizes teacher students' ability in their future work to create a classroom that is accepting of diversity, which relates to the main principles of inclusive education (Peppi, 2023x). During the studies the students will become aware of the societal significance of the classroom teacher's work (Peppi, 2023x). From the point of view of inclusive education, the overall learning outcomes include the teacher student knowing how to notice the needs of their students related to learning and take them into account in their own teaching activities, being able to evaluate educational interactions from the perspectives of equality and human rights as well as acting empathetically and ethically and being able to work in a multi-professional and multicultural work community (Peppi, 2023x).

The main contents of Intercultural Teacher Education focus on cultural diversity in educational contexts and having a critical and analytical philosophy towards teaching and education (Peppi, 2023y). The values that underline the degree programme are based on research, and they include practical familiarity, active citizenship, ethical and aesthetic sensitivity and capacity for pedagogical and didactic thinking and action, which can be considered to reflect the values of inclusive education (Peppi, 2023y). The learning aims of the Intercultural Teacher Education include, from the perspective of inclusive education, recognising learning as a life-long process, being able to examine and assess the special educational and diverse needs of students and

identify appropriate strategies to meet those needs, showing empathy and ethicalness in educational situations, being capable of working in a multi-professional environment and participating in the development of education (Peppi, 2023y).

We have tried to find the following aspects of inclusive education in the course descriptions, which are based on our theoretical framework: multi-professionality, inclusive education, differentiation, background variables of the students, language awareness and cultures. The most prominent component that is present in almost all of the course descriptions for the classroom teacher education programmes is the self-reflectivity of the student. Critical self-reflection is seen as an essential way to develop the teaching identity of the teacher students in the course descriptions (Peppi, 2023h). This is in line with previous literature about the Finnish teacher education's strong emphasis on critical and active reflection (Kansanen, 2006; Opetus- ja kulttuuriministeriö, 2016). After self-reflection, the second most prominent component in the course descriptions is the idea of 'different learners, different needs' and how to adjust the teaching to fit the theme of differentiation (Peppi, 2023j; Peppi, 2023m-n; Peppi, 2023t-u; Peppi, 2023w). Inclusive education is discussed, according to the course descriptions, more in the bachelor's level courses than in the master's level (Peppi, 2023i-n). The master's level provides more freedom and flexibility in choosing courses that could potentially increase the sense of self-efficacy of the teacher students in implementing inclusive education.

It is important to note here that while the courses differ between the Classroom Teacher Education (LO) and Intercultural Teacher Education (ITE) at the university of Oulu, there are many courses that the programmes share including all multidisciplinary studies. However, there are also differences. For example, cultures are mentioned in more courses in the ITE courses than in the LO courses (Peppi, 2023a-h), where as inclusivity is mentioned in more LO courses than in ITE courses (Peppi, 2023i-n). Topics of language, diversity of students (e.g different family backgrounds) and multi-professionality are mentioned in similar amounts in both programmes (Peppi, 2023d; Peppi, 2023f; Peppi, 2023k; Peppi, 2023 o-s; Peppi, 2023v). Additionally, differentiation is mentioned more often in LO course descriptions than in the ITE course descriptions (Peppi, 2023j; Peppi, 2023m-n; Peppi, 2023t; Peppi, 2023u; Peppi, 2023w).

As can be concluded based on the previous paragraphs, themes of inclusive education are present in several courses in the curriculum of classroom teacher education programmes. However, although aspects of inclusive education are present, inclusive education as a word has not been

directly mentioned in the overall study descriptions and otherwise it is mentioned mainly in relation to special education.

4.5.2 Special Education Teacher Programme

In this section, we will consider the curriculum and course contents of the special education teacher programme from the point of view of inclusive education, similarly to the previous sub-chapter. As the minor studies consist of the basic studies in special education, which are the same for the degree students in special education teacher programme, we find it meaningful to specifically consider these courses. Additionally, in our data analysis we have put together those who have done a special education minor with those degree students who study fully in the special education teacher programme.

Overall, in the special teacher education curriculum, the main goal of the education is to train educators with versatile special pedagogical expertise and good cooperation skills (Peppi, 2023ee). The education emphasizes inclusion referred to as full participation and equality, life-long learning, the importance of community and emotional and interaction skills (Peppi, 2023ee). The contents of the programme include recognising support needs of children and knowing how to respond to them, as well as expertise in pedagogical solutions that support the development and learning of children (Peppi, 2023ee). The learning aims have similarities to the ones in classroom education programmes, although understanding inclusive values is specifically mentioned in the overall study description whereas in the classroom programmes there is not (Peppi, 2023ee).

The course descriptions of the special education basic studies are more specific in comparison to those of classroom teacher courses. Specific student groups are mentioned such as students who are neurodivergent or have socio-emotional challenges (Peppi, 2023bb-cc). Additionally, teacher students are expected to learn about various ways to support a diverse group of students as well as reflect on their own experiences with people with disabilities or learning difficulties (Peppi, 2023aa-dd; Peppi, 2023z). By aiming for reflection, the educators aim to deconstruct possible negative experiences students might have had with people with disabilities. This is a crucial element in strengthening self-efficacy as discussed above attitude influences the self-efficacy of the teacher student.

5 Methodology

5.1 Qualitative Case Study

The approach we have chosen for this study is qualitative case study research as we believe it serves our research purpose and questions the best. Creswell (2018) characterizes qualitative research as an inquiry process and a set of interpretative practices to explore social or human issues. Qualitative research approach includes several different research methods, and because of this versatility, the aim of the research may also differ significantly (Puusa & Juuti, 2011). The aim of qualitative research may therefore include describing, deepening understanding, questioning or finding new information about a real-life experience (Hirsjärvi, Remes & Sajavaara 2009; Puusa & Juuti 2011). The object of the research is typically one phenomenon that is examined thoroughly and holistically (Hirsjärvi et al., 2009). Our study explores personal views and aims to provide a deeper understanding of the studied issue, teacher students' understanding of inclusive education and their competence to implement it in their future work, as well as provide new research knowledge for the possible development of teacher education, which relates our research to qualitative research approach.

Qualitative research can also be seen as a process, because the perspectives emerging from the collected data and interpretations related to them as well as the theoretical framework can change during the research process (Kiviniemi, 2007). In addition, the nature of qualitative research includes the idea that not all stages can necessarily be structured and prepared perfectly in advance, but they are shaped as the research progresses (Kiviniemi, 2007). Based on this, our research can be considered theory-driven, because even though the theoretical framework was written in advance, we returned to it during the analysis phase. In theory-driven analysis, the theory guides the analysis process (Tuomi & Sarajärvi, 2009). It differs from theory-based analysis as it does not aim to prove whether or not a theory is true but rather the theory helps to focus on a specific part of the collected data (Tuomi & Sarajärvi, 2009). Theory-driven analysis can be used, for example, in case study research as the flexibility and dialogue between the data and the theory are important to case study research (Saarela-Kinnunen & Eskola, 2007).

Case study research traditionally studies bounded systems such as programmes, individuals or multiple individuals, groups or situations (Creswell, 2018; Yin, 2014). The research focus of a case study is to develop and provide “an in-depth description and analysis of a case or multiple

cases” (Creswell, 2018, p. 150). Yin (2014) characterizes case study as a research approach that allows the researchers to gain a holistic and meaningful understanding of a specific real-life situation or experience. As the focus group of our research is very specific, master’s level teacher students at the university of Oulu, and our research aims to holistically describe the understanding of inclusive education of teacher students and gain an in-depth understanding of their perceived competence to implement it and how teacher education has developed it, using case study research is justified.

However, the concept of case study is multifaceted and can therefore be applied differently (Saarela-Kinnunen & Eskola, 2007; Yin, 2014). Although it is used particularly in humanities (Flyvbjerg, 2011; Yin, 2014), case study is not limited to qualitative research, but quantitative research can also utilize it (Saarela-Kinnunen & Eskola, 2007). Despite the nature of the research, the core element of a case study is always centred around a specific case, which is examined extensively and thoroughly (Saarela-Kinnunen & Eskola, 2007).

There are several ways to collect information inside case study research, for example, interviews and questionnaires fall under the typical data collection methods (Creswell, 2018). In many previous studies, teachers’ and teacher students’ attitudes towards inclusive education have been studied with questionnaires (Boyle et al., 2013; Saloviita & Consegna, 2019). We chose to use a questionnaire, because we argue that by guaranteeing anonymity, we would receive more reliable answers. Since there is often a contradiction in the thoughts of teacher students towards inclusive education as the concept of inclusive education is seen positively but the perceived competence and attitude are dependent on the type of learner (AlMahdi & Bukamal, 2019; Al Shoura & Aznan, 2020; Byra & Domagała-Zyśk, 2021), we found that it would be important for the questionnaire to be anonymous. As the questions reveal the attitudes of teacher students towards different learners through their sense of self-efficacy to teach those students, it could have been quite difficult for the participants to express possible negative feelings had the method of research been different.

It is also important to note that qualitative and quantitative research approaches are not necessarily exclusive of each other (Hakala, 2007). Typically, case study research includes more than one data collection method (Saarela-Kinnunen & Eskola, 2007). Although we found questionnaire the best method as described above, we added variation by adding questions that had a different format. We decided to include close-ended questions, typical for a quantitative study,

so that the participant could possibly more easily reflect on the presented issues. We thought that the close-ended questions could provoke the participants' thinking so that the participants could later on in the open-ended questions answer more thoroughly. If all of the questions had been open-ended, some participants might have decided not to participate in the research at all as they would have found the questionnaire too heavy to answer.

The close-ended questions also produce a mean value, which could be used to compare the results better with previous literature. In order for our results to be easily comparable with previous research, we used a five-point Likert scale already in the questionnaire phase as this was the scale that had been used in the previous research. Additionally, we looked at the research by Saloviita (2020) and Takala and Sirkko (2022) to get insights, which specific student groups we would include in the questionnaire. However, the questions and the student groups formulated were our own and not directly chosen from previous research. We are aware of the limitations of our data due to the small number of answers and acknowledge that generalizations cannot be made, and the comparisons are between a much larger data set from previous research and our smaller data set. Still, we argue that comparing can show how our participants' views might differ from or reflect those of previous research.

5.2 Presentation of the Data

The material used to collect data for this study is an anonymous questionnaire (see appendix one) with one background question, and 19 questions related to the research questions. Anonymity is guaranteed by the link being open to everyone and not asking for any identifying information. We found it unnecessary to ask for other identifying information apart from the study programme of the participant, such as age or gender, as previous research shows that they play minor or no part in what the participants attitude towards inclusive education is and therethrough how the participants perceive their self-efficacy (Saloviita, 2020).

Out of the 19 questions related to the research questions, nine questions are close-ended. Seven of them follow the structure of a Likert scale with five answer options from strongly disagree to strongly agree where only one answer is accepted. Two of the questions follow a ten-point Likert scale where one is the lowest possible option and ten the highest. One of the questions is

a close-ended and open-ended multiple-choice question where one or more answers are accepted. The open-endedness of the question comes from it providing the possibility to, in addition to the answer options provided, write what the participant would like to answer.

Nine questions in total are open-ended. All but one question is mandatory. This question offers the participants additional space to add something related to the topic of the questionnaire that was not separately asked or to modify the participant's answers as in the questionnaire after moving to the next page, one cannot return to the previous one. The participants were informed about this at the beginning of the questionnaire. The reason why we formulated the questionnaire in this way is that we wanted to reduce the risk that the questionnaire would guide the participant's answers or that the participant would go back to modify their answers based on the questionnaire. This way we hoped to improve the credibility of the answers. The answers we received to the open-ended questions were quite short consisting of some sentences. Although the answers were not extensive, they included profound reflections that could be analysed.

The number of participants in the questionnaire is fourteen (n=14). Ten of the answers came from classroom teacher students, three from special education teacher students and one from a classroom teacher student with a minor in special education. Whether the student was an ITE student or not was not an option in the background question of the questionnaire. Therefore, it cannot be determined how many of the classroom teacher students study in the ITE programme and how many in the general classroom teacher programme. However, it can be stated that there are participants from both study programmes. This is indicated from the answers, for example based on which courses the participants highlight. We did not separate possible ITE students' answers into their own group as the purpose of our research was to compare classroom teacher students and special education teacher students. In the future, this could be a possible focus group for research on a similar topic. For the sake of the analysis, we have looked at the answers from special education teacher students and from the student with a minor in special education as one entity. As the studies of the special education minor are also courses that the special education teacher students take, we decided that combining the answers into their own entity would be justifiable.

The questionnaire was open for answers from 4th to 18th April 2023. The sharing of the link to the questionnaire was targeted at master level students in the field of education who study in classroom and special education teacher education programmes at the University of Oulu. To

ensure that only master's level students answer, we wrote at the very beginning of the message attached to the questionnaire that it is for master's level classroom and special education teacher students only. Additionally, this information was found on the first page of the questionnaire. The questionnaire link was sent to two WhatsApp groups and to the Oulu faculty of education email list. This was to avoid any conflict with identifying information and to guarantee anonymity by not knowing who answered the questionnaire.

Before conducting the actual research, we did a pilot research. The material used to collect data for the pilot study was similar to the actual questionnaire, and the number of participants in the pilot questionnaire was four (n=4). There were some issues in the pilot questionnaire that we realised through the conduction of the pilot. One of the issues we faced was in getting participants for the pilot study. The original plan for the pilot study was to compare the answers between classroom and special education teacher students. As no answers were given by the special education teacher students, their answers could not be analysed and thus the first question in our questionnaire, the background question, was not relevant for the pilot study. This led to us changing the background question so that there were three options: classroom teacher programme, classroom teacher programme with a special education minor and special education programme. This way we hoped to get more answers from those who had studied special education.

Additionally, one of the questions was misunderstood by two of the participants, which indicated that the question was unclear. The question was "I feel confident teaching a heterogenous group of students". The question was understood to mean a homogenous group of students, which is why in the actual research we changed the term heterogenous to diverse. In the pilot study, we also had to disregard question number five because the answers of the participants did not bring out any new information. The question formulation guided the answer to be reflective of the experiences that the teacher students had had regarding multi-professionality, which led to those who did not have any experience on the matter to answer "I do not know". Due to this, in the actual research, we decided to add an abstract to the beginning of the questionnaire about the fact that the participants should answer based on how they personally perceive their competence towards their future work at the moment when answering, not according to whether or not they already have experience in the matter. Additionally, we changed the

formulation of the question to “I am willing to co-operate” so that it would guide the answers to be specifically about the teacher students’ current thinking.

In the end, the actual questionnaire in this study consisted of six question sections. The question sections were formulated based on overarching topics in the questions and were placed on the same page in the questionnaire. The question sections are as follows: definition of inclusive education (question two), confidence in teaching a diverse group of students and willingness to multi-professionality (questions three-six) and perceived competence to teach different students and examples of implementation of inclusive education (7-14). The questionnaire continues with sections about strengths and weaknesses in implementing inclusive education (questions 15-16), the influence of teacher education on the perceived competence to implement inclusive education (questions 17-19), and something to add to the theme of the questionnaire (question 20). Questions number two, four, six, 14-16 and 18-20 are analysed using the qualitative content analysis which is considered in the next sub-chapter.

5.3 Qualitative Content Analysis and Presentation of the Analysis of the Data

Acquiring good data is essential for good research, but the research is not successful if one does not know how to find the essential information from the acquired data (Hakala, 2007). Therefore, it is not only essential to acquire the data but to also analyse it with a meaningful analysis method. In a case study, it is crucial that the analysis process is clear as the analysis can differ significantly depending on both the research approach as well as the analysis method (Saarela-Kinnunen & Eskola, 2007; Yin, 2014). This is why in this section we provide a comprehensive description of our analysis process.

Qualitative content analysis is one of the basic analysis methods that can be used in many different qualitative studies (Tuomi & Sarajärvi, 2009). The purpose of content analysis is to find new perspectives from the collected data, to discuss the research topic and answer the research problem and questions (Tuomi & Sarajärvi, 2009). It is used to determine the presence of certain words, themes or concepts within the given qualitative data or, in other words, code the text into categories (Lichtman, 2013). The reason we chose to analyse the data by using content

analysis is because we are interested in analysing the meanings and relationships of certain categories found from the answers.

For the analysis of the data, we followed a method by Erlingsson and Brysiewicz (2017) which is typical for content analysis:

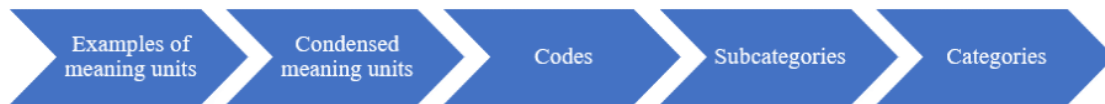


Figure 7: A figure about qualitative content analysis method based on Erlingsson and Brysiewicz (2017).

The analysis goes from lower abstraction levels of information to higher levels of abstraction (Erlingsson & Brysiewicz, 2017). The meaning units consist of direct quotes from the participants' answers in the questionnaire. We have disregarded identical answers in the examples of meaning units as we felt that they would not add additional value. Condensation refers to the process of shortening the participants' answers while still maintaining the core meaning of them (Erlingsson & Brysiewicz, 2017). This is what the condensed meaning unit bracket aims to do in content analysis. Codes describe and summarize what the meaning unit is about, and the codes are organized based on similarities in the content or context to form categories (Erlingsson & Brysiewicz, 2017). We acknowledge that in previous research sometimes multiple codes have been found for a single sub-category. However, as the answers in our research were not as extensive, we could not identify multiple codes for the sub-categories.

After having collected the data, we looked at it together and tried to find the most significant parts for our research. We looked at the answers and started color-coding them therethrough identifying overreaching topics from them. The first step was thus identifying the meaning units by finding similarities and differences in the answers using color-coding to help our thinking process. The answers or parts in the answers that were not responding to the question or were not meaningful to our research focus were not analysed further. Important in content analysis is to be able to narrow down the information found from the answers (Tuomi & Sarajärvi, 2009). Even though, the answers may provide interesting material outside the research questions, it is, however, important to find the relevant information related to the actual research (Tuomi & Sarajärvi, 2009). Therethrough, we had a data set where only the data that would be analysed was present. We then summarized the answers in the condensed meaning units bracket. After

this we aimed to find the core statement of the condensed meaning units and formed them into codes. The codes follow the overarching topics based on which the meaning units were identified. Next, we arranged the data into categories and sub-categories based on the codes. Lastly, as it was possible to answer to the questionnaire either in Finnish or English, at this point we translated the Finnish answers to English.

The figures below act as an example of the progress of the analysis. The rest of the content analysis tables can be found in appendix two.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“Taking everyone into consideration... [in education]”</p> <p>“Including SEN students, students with diverse linguistic and cultural background, students who have socializing problems and etc.”</p> <p>“Education should provide opportunities for every learner to grow and be their best potential.”</p> <p>“Ideally: ensuring as similar possibilities as possible to attend school.”</p> <p>“Understanding and supporting the unique needs of each individual student.”</p>	Education that considers and caters to all students’ individual differences during one’s whole education path.	Equality of education	Equality	Education for all
<p>“It is ... the right of everyone and everything to co-exist...”</p> <p>“Everyone has a right to quality education.”</p>	Receiving quality education at one’s own level is a basic right of every child.	Child’s right to quality education.	Human rights	
<p>“Inclusivity of the whole educational process from kindergarten to university.”</p> <p>“The inclusion of people, ideas and concepts of all kinds within</p>	Inclusivity of the whole educational process	Inclusive education concerning educational structures	Educational structures and inclusive education	

the structure of the educational process.”				
“Three-tiered support system, those in need of special support also go to the nearby school.” “This can also be partially implemented so that a student with special needs goes to school in a special education class but studies some subjects in a so-called "normal" class.”	Students with special educational needs (SEN) are supported withing the mainstream education system through the three-tiered support system.	SEN students in mainstream classrooms	Special education as part of mainstream education	Inclusive education and special education

Figure 8: Classroom teacher students’ definitions and understanding of inclusive education.

The analysis was done analysing the questions from the questionnaire one by one as well as in relation to their question section (see 5.2). However, since question 20 was not mandatory, we have included the findings from the answers to the question in other sections since all of the answers related to findings from other question sections. We decided not to separate and compare the answers to this question between the teacher student groups in our content analysis (see appendix two) as the question was not mandatory and we received only a few answers. We felt that analysing the answers together as well as finding the overreaching and overarching categories across the teacher student groups was more meaningful to the question than comparing the answers between the teacher student groups.

Questions 7-13 have all been given a mean value in their presentation so that they can be compared with previous literature. Question 17 is presented as a figure where it can be seen how many participants have chosen each answer option. All the quantitative figures have been included in the text as we argue that having the visual aid while reading will clarify our findings significantly and help to show the differences between classroom teacher students’ and special education teacher students’ answers.

Previous research and literature informed our analysis as it was used as a base for reflection for our findings as well as enabled deeper review of the findings. This will be further discussed in section 6 as well as 7.2.

6 Findings

Next, we will present the findings of one question section from the questionnaire, described previously, per sub-chapter expect for the question section of something to add to theme of the questionnaire as mentioned above. We acknowledge that typically in qualitative research the findings are presented in relation to the research questions or as a whole from the perspective of the research questions. However, we believe that presenting one question section at a time creates clarity and positively serves the presentation of the findings as the length of the answers was some sentences. While doing so, there could be a risk that the answers in other question sections would have provided additional insight. To avoid this issue, we have taken this into consideration during the analysis phase as well as the presentation of the findings and reflected on the information between the question sections. Additionally, we will present a summary of the findings research question at a time and across the question section borders in the sub-chapter 7.2 Summary of the findings and conclusions.

As mentioned previously, all the content analysis tables, except the classroom teacher students' definitions and understanding of inclusive education (see figure 8 pp. 60-61) are found in appendix two.

6.1 Definition and Understanding of Inclusive Education

6.1.1 Classroom Teacher Students

Based on the answers of classroom teacher students, two categories were formed: Education for all and Inclusive education and special education. The category of Education for all consists of three sub-categories being Equality, Human rights and Educational structures and inclusive education. In the sub-category of Equality, the participants understand inclusive education as education that considers and caters to all students' individual differences and needs equally. The participants define and understand inclusive education as:

“Education should provide opportunities for every learner to grow and be their best potential.”

“Ideally: ensuring as similar possibilities as possible to attend school.”

“Understanding and supporting the unique needs of each individual student.”

However, the use of the word “ideally” might indicate that the participant does not think that inclusive education takes place in this form in reality. This relates to previous literature about teachers viewing inclusive education positively in theory, but in reality, they are hesitant about the actual implementation or success of it (Moberg et al., 2020; Moberg & Savolainen, 2015).

One participant acknowledges that inclusive education thrives to include students who are at risk of being excluded due to disability or social barriers, but does not limit the kinds of students to be included as simply students with special educational needs, which has been the general view in many countries for long (see e.g., Ainscow et al., 2006; Ainscow & Sandhill, 2010; Booth, 2011; Halinen & Järvinen, 2008; Lynch & Irvine, 2009):

“Including SEN students, students with diverse linguistic and cultural background, students who have socializing problems and etc.”

The participant identifies inclusive education to consider, among others, students with diverse linguistic and cultural backgrounds and students who have socio-emotional challenges. The wider perspective of the answer separates it from the typical idea of integration in education as there the main focus is simply on students with special educational needs to be placed in mainstream classrooms.

The sub-category Human rights emphasizes the idea of every child’s right to quality education. The participants define inclusive education as:

“It is ... the right of everyone and everything to co-exist...”

“Everyone has a right to quality education.”

Viewing inclusive education from the point of view of human rights aligns with the core values of inclusive education (Booth, 2011). In the first answer above, the participant reflects the democratic nature of inclusive education being about enabling participation also in non-educational settings (Lynch & Irvine, 2009). The participant sees inclusive education as a wider concept that considers the essence of living, which in our research has been defined as inclusion. It should be reminded that inclusion and inclusive education are intertwined, and schools belong

to the wider social network of a society (Lakkala, 2008), which makes it understandable that this view rises from the answers.

The sub-category Educational structures and inclusive education discusses the inclusivity of the whole educational system and structures behind what happens in a classroom setting as can be identified from one of the answers:

“The inclusion of people, ideas and concepts of all kinds within the structure of the educational process.”

The answer indicates that inclusive education is seen as the responsibility of the teacher, school or the policies that underline the practices implemented in the schools, which also previous literature defines as some of the starting points of inclusive education (Halinen & Järvinen, 2008; Lynch & Irvine, 2009). Although it is great that educational structures and their inclusivity are recognised as an essential part of inclusive education, it did not come up except in one answer meaning that majority of the participants did not mention the importance or influence of the structures. In our theoretical framework, educational structures are seen as a crucial part of inclusive education as they lay the foundation on which inclusive practices are built in everyday school life.

We believe that these three sub-categories considered above can be related to the main category Education for all as previous literature about the idea of education for all and the overall philosophy of inclusive education recognises the topics that rose from the answers. The recognition of inclusive values at different levels of education is an important starting point for the idea of education for all and understanding as well as effective implementation of inclusive education (see e.g., Halinen & Järvinen, 2008; Lynch & Irvine, 2009). Additionally, this is supported both by the principles of the Salamanca statement where inclusive education previously understood as an issue of placement of a student with special educational needs into mainstream education was widened to refer the inclusion of all students through policy changes that would compel the whole school world to change (Hakala & Leivo, 2015). Furthermore, the answers of the teacher students reflect how inclusive education is understood in the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities that both support the idea of education for all (UN 1989; UN, 2006).

Another main category, Inclusive education and special education, is identified from the answers of the classroom teacher students. The view of the teacher students in this category emphasizes the inclusion of students with special educational needs to mainstream education through appropriate adaptations:

“Three-tiered support system, those in need of special support also go to the nearby school.”

The student highlights not only differentiation of teaching but also the right of the student to attend the local school. The local school principle is supported by the Basic Education Act (1998/628). Participation of students in their local school is essential to inclusive education (Ainscow et al., 2006; Willms, 2003). Additionally, this is the only time when the three-tiered support system is mentioned in our questionnaire. This might indicate that the principles of the system are seen as self-evident by the other participants so that they do not specifically mention the support system when discussing supporting mechanisms for the students.

However, the answer reflects a narrower view of inclusive education where the focus is placed mainly or only on students with special educational needs and their placement in mainstream education. Nonetheless the participant acknowledges that appropriate adaptations of teaching are needed for successful implementation of inclusive education.

Another answer that highlights the placement of the student in education was identified from the classroom teacher students' answers. The idea of separating students to 'normal' and 'abnormal' can be considered an outdated or not the ideal view of inclusive education according to today's general understanding of inclusive education (see e.g., Naukkarinen & Ladonlahti, 2001; Takala, Lakkala et al., 2020). This view is visible but only in one answer:

“This can also be partially implemented so that a student with special needs goes to school in a special education class but studies some subjects in a so-called "normal" class.”

On the other hand, the answer also reflects the concept of part-time special education, where the student participates in mainstream classroom but also has some lessons with the special education teacher (Kivirauma, 2012). In Finland the proportion of students, who receive special education, participating in part-time special education was ca. 80% in 2021 (Tilastokeskus, 2022), and it is therefore the most common form of special education. As part-time special

education is so prevalent, it is understandable that inclusive education would be related to it and mentioned by the participants.

6.1.2 Special Education Teacher Students

Based on the answers of special education teacher students, the main categories are the following: Integration and Education for all. Under the category of Integration one participant described that they viewed inclusive education as

“Placing SEN students in mainstream classrooms.”

This view is in line with the idea of integration in education, which has been discussed in detail in sub-chapter 2.4. However, it should be noted that this view was expressed only by one participant. Unlike in the answers of the classroom teacher students, the participant does not mention the importance of offering additional support and the focus is placed only on students with special educational needs.

We identified the category of Education for all from the sub-categories Equality, Differentiation and School culture. As described previously, equality is an integral part of the idea of education for all, which is visible also in the special education teacher students’ answers:

“Inclusive education meets the needs of all students.”

“...aims to ensure that everyone has a chance to participate and learn.”

This reflects similar understandings as in the classroom teacher students’ answers on how inclusive education should consider all students.

In the sub-category Differentiation, the teacher students describe the importance of adapting the learning environment and methods to meet the needs of the student:

“...school, where they [students] are given sufficient support.”

“Adapting the environment to the needs of the student.”

In inclusive education, differentiation is one of the ways it can be implemented in practice (Ruby et al., 2017). Differentiation is highlighted in the overall study description and the course descriptions of the special education teachers (Peppi, 2023ee), which has possibly affected the teacher students’ understanding.

In the sub-category of School culture, one participant discusses inclusive education through school culture as follows:

“...school culture that aims to ensure that everyone has a chance to participate and learn.”

In their opinion, the understanding of inclusive education should include the aspect of school culture as they see an environment where diversity is accepted as essential to the implementation of inclusive education. In the overall study description of the special education teacher students, inclusive education is referred to as full participation and the recognition of community (Peppi, 2023ee). The students' understanding reflects this, which indicates that the education has mostly been successful in promoting inclusive values within the participants of our research.

In the answers of both teacher student groups, classroom teacher students and special education teacher students, different views about inclusive education are visible and the teachers do not understand the concept similarly within their teacher student group. However, when comparing between the answers of classroom and special education teacher students, the differences are not significant. In the answers of both teacher student groups, emerges the idea of inclusive education seeing difference as an integral and natural part of education, but also the point of view that emphasizes disability being something that should be conformed to the majority. As can be noted, some of the main as well as sub-categories are the same between the teacher student groups, which reflects the fact that there are not significant differences between the answers of classroom and special education teacher students.

The understanding of inclusive education of the teacher students mainly follows the idea of education for all described in previous literature. Previous literature understands the idea of education for all being about reducing exclusion of all forms and increasing the participation of all (Ainsocw et al., 2006; Booth, 2011). The participants identify different dimensions of inclusive education instead of inclusive education being only about physical access or academic learning but more broadly about social sense of belonging as defined by, among others, Ainsocw et al. (2006). Inclusive education is seen as a right of every student, and school and teachers are responsible for adapting to the individual needs of the students, which previous literature sees as some of the starting points for inclusive schools (Halinen & Järvinen, 2008; Lynch & Irvine, 2009). Some of the inclusive values defined by Booth (2011), including equality, rights, participation, community, respect for diversity and love/care, are also recognised.

However, some teacher students see inclusive education as concerning only students with special educational needs. This is understandable as it has been the prevalent understanding for a long time and still according to many is the general understanding of inclusive education (see e.g., Ainscow et al., 2006; Ainscow & Sandhill, 2010; Halinen & Järvinen, 2008). The integration perspective is also identified from the answers of the participants meaning that some teacher students refer to inclusive education as placing students with special educational needs to mainstream classrooms without describing any modifications in teaching. This is in line with previous research, which has shown that due to the lack of universal definitions for the concepts of inclusive education and integration, they are sometimes used in different manners or as synonyms (Moberg & Savolainen, 2015). Due to the widespread integration perspective, inclusive education is still, even today, understood as an issue of placement of a student with special educational needs into a mainstream education classroom by some (Lynch & Irvine, 2009).

Additionally, in the question about something to add to the theme of the questionnaire, one participant argues that the concept of inclusive education is not needed, but instead education and inclusive education should be understood similarly as education overall following the values of inclusive education:

“It should just be called education and normalized that way. Most students have unique needs.”

Although previous literature defines inclusive education to cater to all students, inclusive education also includes the understanding of unequal power structures in a society which may contribute to the enhanced risk of some students being excluded in education (see e.g., Butera & Levin, 2009; Quavang, 2017). If inclusive education as a concept was not specifically defined, there could be a risk that the students who are in a stronger risk of being excluded are neglected.

The findings overall prove that the understanding between the teacher students varies and also indicates that teacher education has not been unanimous in providing an understanding about what the values that inclusive education includes. However, as inclusive education as a term is rather complex and cannot be exhausted, it is important to think whether or not there is a need for a universal consensus on it.

Nonetheless, overall in this case study, the teacher students' views reflect the overall philosophy of inclusive education being about including all children in general school activities and making

the activities inclusive from the beginning. The main category Education for all, which reflects the beforementioned view of inclusive education, was much larger in both, the classroom as well as the special education teacher students' answers than the categories that consisted of more narrow views of inclusive education, such as the integration perspective.

It should also be noted that the answers were not that extensive, which could either indicate that the understanding of the teacher students is limited or that they simply summarised their definitions of inclusive education so that they did not mention everything they actually think about the topic.

6.2 Confidence in Teaching a Diverse Group of Students and Willingness to Multi-professionality

6.2.1 Confidence in Teaching a Diverse group of Students

In this question, the teacher students were asked on a scale of 1-10 to rate their confidence in teaching a diverse group of students. The difference between the minimum and maximum values of classroom teacher students' answers is 7 points whereas in the special education teacher students' answers it is only 2. While the maximum value of classroom teacher students is higher, in the answers of the special education teacher students there is less variation between the answers. The difference between the minimum values of the teacher student groups is 4 points with the special education teacher students having a higher minimum value. It can also be noted that the average of special education teachers is higher than that of classroom teacher students. The difference is 1.8 points. The median of special education teacher students is also 2.5 points higher. Based on the comparison and quantitative presentation of the answers, special education teacher students perceive themselves more confident in teaching a diverse group of students than classroom teacher students.

Teacher student group	Min value	Max value	Average	Median
LO	3	10	6	5
EO	7	9	7.8	7.5

Figure 9: Classroom teacher students' (LO) and special education teacher students' (EO) confidence in teaching a diverse group of students presented quantitatively.

After the 10-point Likert scale question, the teacher students were asked to justify their answer, which were analysed using qualitative content analysis. From the answers of the classroom teacher students, two main categories were identified: Practicality and Support. The main category of Practicality consists of two sub-categories that are Lack of practical skills and Lack of experience. In the sub-category of Lack of practical skills, the teacher students describe how they feel that they have not yet acquired sufficient practical skills to be confident in teaching a diverse group of students:

“I feel that I don’t have enough practical skills.”

Similar remarks as in the sub-category Lack of practical skills can be seen in the sub-category Experience. In this category the participant reflect their thoughts about their own experience regarding the implementation of inclusive education:

“Experience teaches.”

“I still am not experienced.”

“... have gained useful tools from substituting, practice and work in the field.”

From the answers it can be concluded that the teacher students perceive experience positively as something to contribute to their confidence to teach a diverse group of students. In one of the answers, it is mentioned that the participant has gained practical experience through working outside of education. This could indicate that the teacher students has looked for opportunities to practice outside of teacher education as they had not received the needed skills through the education. Additionally, the answers are in line with Bandura’s (1997) theory about strengthening one’s self-efficacy through mastery experiences since mastery experiences, such as experience in the field, are seen as the most meaningful way to strengthen one’s self-efficacy.

The second category that we identified is Support. In this category the teacher students discuss that their confidence is connected to how well they are supported in their work:

“I am confident in teaching a diverse group if I get necessary support.”

“The necessary support means, for example, counselors, the help of a special education teacher, and continuous training.”

“Classroom teachers shouldn’t automatically be able to do special education teachers’ work, if there is need for special support.”

The participants describe that with sufficient support they feel or would feel more confident teaching a diverse group of students. Additionally, one student discusses that classroom teachers should not be expected to automatically have the same competencies as special education teachers, but additional support is needed. Previous research has shown that lack of support available for teachers can influence their views on inclusive education negatively (Desombre et al., 2021), and it is often the reason why some do not want to implement inclusive education (Crispel et al., 2021; Desombre et al., 2021; Saloviita, 2020). The need for sufficient support was also present in the answers for something to add to the theme of the questionnaire:

“More resources are needed for effective implementation of inclusive education. Good competences of a teacher are not enough... Smaller group sizes, assistants, and multi-professional collaboration is needed in addition to teacher’s competence”

“Current inclusive education does not reflect the true nature of it but under the decision of the municipalities it has been reduced to everyone in the same classroom, which saves a lot of money as one classroom teacher can teach everyone, and assistants or small group teachers are not needed.”

The teacher students recognise that they are not the only professionals that have the responsibility for the successful implementation of inclusive education. Without the educational structures supporting their work competence, on its own it is not sufficient to the successful implementation of inclusive education. Additionally, in relation to the understanding of inclusive education, the importance of educational structures was mentioned only by one participant, whereas here it is acknowledged by others as well. The teacher students acknowledge that in addition to adequate competencies, there also needs to be financial and personnel resources put in place (Crispel & Kasperski, 2021) as is evident in the answers in our research. The question of financial and personnel resources at schools is, however, something that teacher education cannot affect.

The support given does not necessarily need to be formal, but it can also take place in informal settings, for example through having discussions with peers (Malinen, 2013). This is also visible in the answers about wishes for teacher education about collaboration through discussions.

The answers of the teacher students are in line with previous literature as they also see support as a positive factor for the implementation of inclusive education and necessary for enhancing their feeling of confidence to teach a diverse group of students.

In the answers of special education teacher students, one main category was identified being Confidence. Two sub-categories, Experience and Teacher education, were connected to the main category. In the sub-category of Experience, practical experience regarding teaching students with special educational needs is seen as a supportive factor of the perceived confidence to teach a diverse group of students whereas the lack of experience is seen as contributing negatively to their feeling of confidence as can be interpreted from the answers:

“I have previous experience with students with SEN.”

“I have only a little experience from teaching in practice.”

The answers reflect similar topics as in the classroom teacher students’ answers. As previous research shows and as discussed above in the context of mastery experiences, teacher students who have encountered students with special education needs typically have a higher sense of self-efficacy towards the implementation of inclusive education than those with no experience with students with special education needs (Loreman et al., 2013; Saloviita, 2020). This seems to be similar in our findings.

In one answer, the participant writes that they have encountered different kinds of students and diverse groups of students during teaching practices:

“During practices I have encountered different groups.”

Previous research states that it is important that teacher students get the possibility to meet a variety of students and practice teaching in inclusive settings (AlMahdi & Bukamal, 2019; Arvelo-Rosales, Alegre de la Rosa & Guzmán-Rosquete, 2021; Opetushallitus, 2020). Our research findings confirm that teaching practices can promote the teacher students’ sense of self-efficacy to teach a diverse group of students especially if the teacher students get the possibility to practice teaching in diverse settings.

Additionally, professional special educational knowledge has been proved to enhance the feeling of competence regarding the implementation of inclusive education (Crispel & Kasperski,

2021). The sub-category of Teacher education highlights that the participants feel that their education in special education teacher programme has provided them with the necessary skills and knowledge to implement teaching for different learners as can be identified from the answer of one participant:

“I have received good tools from my education to meet and teach diverse groups of students.”

In their answer, the participant does not state whether the tools they have received or find most meaningful are concrete practical skills or adaptable academic knowledge, which previous research argues are both important (Crispel & Kasperski, 2021; Symeonidou, 2017). However, based on the answer it can be concluded that the participant feels that the education has been successful in offering the skills the participant feels they need to teach a diverse group of students.

When comparing the answers from the teacher student groups, similar codes are present. Lack of experience is seen as a decreasing factor of the confidence to teach a diverse group of students by both teacher student groups. Some participants in both teacher student groups have acquired experience through practices that are a part of their education or other work in the field, which is seen as positive regarding their perceived confidence.

However, the classroom teacher students do not separately mention their education programme as a supportive factor of their perceived confidence like the special education teacher students do. This might indicate that the special education teacher students see that their teacher education has given them better confidence to teach a diverse group of students. Previous literature has criticized the classroom teacher education programme for not providing enough knowledge to meet diverse needs of students (Saloviita, 2009; Seppälä-Päkäläinen, 2009).

Additionally, our overview of the curricula of the two degrees supports these interpretations as well as reflects previous literature as the special education teacher students study more specific courses on inclusive and special education than the classroom teacher students. Courses directly related to special education and inclusive education are seen as meaningful in supporting the self-efficacy of the teacher students (Crispel & Kasperski, 2021; Takala & Sirkko, 2022). The mandatory amount of ECTS on special educational topics in classroom teacher education varies from one to six ECTS depending on the university in question (Opintopolku, 2021; Takala & Sirkko, 2022). The low number of ECTS dedicated to the topic in classroom teacher education

might explain some of the differences in the answers between the teacher student groups as overall, based on the quantitative as well as the qualitative findings, it can be concluded that in this case study, the special education teacher students feel more confident to teach a diverse group of students.

6.2.2 Willingness to Cooperate with Other Professionals

The next question in the questionnaire was about the teacher students’ willingness to cooperate with other professionals. Previous literature acknowledges multi-professionality and collaboration vital in implementing inclusive education (Devecci & Rouse, 2010; Kykyri, 2020; Malinen, 2013; Savolainen et al., 2012), which is why this question was included in the questionnaire. Multi-professionality is also seen to increase the teacher students’ sense of self-efficacy in implementing inclusive education already during their studies if it is included in the studies (Ladonlahti & Naukkarinen, 2006).

When looking at the figure 10, noticeable differences are not present between the answers of classroom and special education teacher students. The maximum value in both teacher student groups is the same, but in the minimum value, there is a two-point difference, classroom teacher students having a higher value. When looking at the average of both teacher student groups, there is a difference of 0.6 points again classroom teacher students’ value being higher. Based on the comparison, classroom teacher students perceive themselves to be a little more willing to cooperate with other professionals but not overwhelmingly so.

Teacher student group	Min value	Max value	Average	Median
LO	9	10	9.9	10
EO	7	10	9.3	10

Figure 10: Classroom teacher students’ and special education teacher students’ willingness to cooperate with other professionals presented quantitatively.

The teacher students were also asked to justify their answers to why they feel a certain way about their willingness to cooperate. Similarly to the quantitative presentation in figure 10, there were not great differences in the qualitative content analysis and the findings based on it as the same main category as well as sub-categories were identified from both teacher student groups’

answers. The main category in both teacher student groups' answers is Collaboration in inclusive education. It consists of three sub-categories first of them being Collaboration as a tool to implement inclusive education. The teacher students in both teacher student groups perceive collaboration generally as an important part of a teacher's work regarding the implementation of inclusive education as the answers indicate:

“Collaboration is vital.”

“Inclusive education cannot be implemented properly without cooperation.”

“Multi-professional cooperation is a necessary part of inclusive education”

“Everyone's skills are combined and thus their own skills and knowledge about inclusive education improves.”

The answers reflect today's general views regarding the relationship between multi-professionality and inclusive education being that multi-professionality is seen as positive in effective and successful implementation of inclusive education as well as an integral part of it (Devecci & Rouse, 2010; Takala, Sirkko et al., 2020).

In the second sub-category, Best for the child, the importance of multi-professionality is justified by the child's interest as it is seen to support them the best:

“SEN student needs all the possible support in their life and learning.”

“Multi-professional cooperation best supports the student themselves, which is most important about it.”

This indicates that the teacher students see multi-professionality to not only support them in their work but also the child. Additionally, the teacher students identify multi-professionality as their responsibility as future teachers. In the answers, it can be identified that multi-professionality is thus seen as a professional responsibility, not only a question of willingness. The answer below reflects the idea of inclusive education understood as being about every child's equal right to quality education and the school adapting to the needs of its students, as some of the participants have stated in sub-chapter 6.1:

“These professionals work for the student and the student deserves the best help they can get which means that I as a teacher has the responsibility to cooperate.”

The answers also show a perspective that the teacher does not need to or is not expected to know and do everything by themselves, but working with other professionals provides necessary support in the teacher’s work regarding inclusive education. This is in line with previous literature according to which the implementation of inclusive education should not only be seen as the sole responsibility of the teacher but also other professionals in the children’s lives (see e.g., Halinen & Järvinen, 2008; Koskela, 2009; Lynch & Irvine, 2009). Previous research, which highlights the independent nature of teachers’ work in Finland (Takala, Sirkko et al., 2020) is not visible in our findings on multi-professionality as it was not mentioned in the answers. Instead, the teacher students feel they can learn from other experts, which is identified both from previous literature (Brownell et al., 2006) and the answers of our participants:

“When the teacher receives more support, the child receives more support.”

“Working in a team is great because it adds perspective and more specific knowledge to support a student's needs.”

“Cooperation with different parties provides such information that the teacher does not necessarily get, which is valuable.”

The issue of sufficient resources and support has risen from answers to other question sections as well. The answers in this sub-category indicate that the teacher students see multi-professionality as one form of support in their work and thus strengthening of their self-efficacy.

In the answers for this question, the only noticeable difference between the teacher student groups can be seen in how the teacher students view multi-professionality as a part of their studies. In the sub-category, Teacher Education and Multi-professionality, the classroom teacher students discuss how they have not had enough experiences with multi-professionality during their studies whereas the special education teacher students see that multi-professionality has been present during their studies.

“... the competence from my studies is not enough.”

“My studies have provided me with good competences to cooperate.”

Previous research shows that it is crucial that multi-professionality is introduced already during teacher education (Malinen, 2013). Previous research states that the moment, the multi-professional nature of the field work at schools is not reflected in teacher training (Lakkala, 2008; Saloviita & Tolvanen, 2017). This is also visible in the answers of classroom teacher students in our research. However, special education teacher students found multi-professionality to be sufficiently present in their studies. It should be noted that answers regarding multi-professionality and teacher education arose only from one participant per teacher student group. Nonetheless, pre-service education must provide versatile opportunities for collaboration for all teacher students as it is essential for the successful implementation of inclusive education (Halinen & Järvinen, 2008).

6.3 Perceived Competence to Teach Different Students and Examples of Implementation of Inclusive Education

6.3.1 Perceived Competence to Teach Different Students

In this section, we will present the findings to the analysis of the answers to questions 7-14. Before going further into this section, we want to clarify that we are aware of the fact that one student, with which we refer to children in the classroom, could be part of several of the below-mentioned student groups. However, as we wanted to get answers on the perceived competence in terms of teaching different kinds of students and specify where the perceived competence is strong and where it is lacking, it was important to distinguish them from one another. Although teachers in general have a positive attitude towards inclusive education, when it is about specific student groups to be included in the classroom, their attitudes vary (Desombre et al., 2021; Moberg et al., 2020). This is why we found it meaningful to define separate student groups. The groups have also been defined and separated in previous literature so in order to reflect our results to previous literature, we needed to define them somehow as well.

It is important to note that the student groups we are considering in this question section are different from the term “a diverse group of students” used in the previous section. The student groups that were examined were students with lower or more advanced skill sets (question 7), students with learning difficulties (question 8), students with physical disabilities (question 9), students who have neurodiverse characteristics, such as ADHD or who are on the spectrum of

autism (question 10), students with behavioural or socio-emotional challenges (question 11), students with multiple native languages and/or cultures (question 12) and students who are people of colour (POC) or belong to the LGBTQIA+ community (question 13). Through including these questions to the questionnaire we aimed to determine which student groups the teacher students feel most confident teaching.

Questions 7-13 were analysed using a five-point Likert scale. The five answer options have been given different values as follows: strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and strongly agree (5). The mean values of the answers tell how the participants see their competence to teach that particular student group. Question 14, where examples on the implementation of inclusive education were asked, was analysed using qualitative content analysis.

The answers of the classroom teacher students varied quite much (see figure 11), the mean value being from 2.5 to 4.5 depending on the question and student group. The highest mean value was on question 13 about students who are POC or belong to the LGBTQIA+ community. Here the mean value is 4.5. The lowest mean value, 2.5, can be found in question 8 where the student group discussed was students with learning difficulties. Questions 7, 11 and 12 have almost identical mean values varying between 3.7-3.8. These questions discussed the students with lower or more advanced skill sets, students with behavioural or socio-emotional challenges and students with multiple native language and cultures. Question 10 on students who have neurodiverse characteristics received a mean value of 3.3, and question 9 which was about students with physical disabilities received a mean value of 2.9.

There is less variation in the answers of the special education teacher students as the mean values based on the answers are between 3.75 and 4.75. The highest mean value, 4.75, can be found in question 13 which is about students who are POC or belong to the LGBTQIA+ community. The second highest mean values are in questions 9 and 10, which are about students with physical disabilities and students who have neurodiverse characteristics. Here the mean value is 4.5. After these, the highest mean values are on differentiation of students with lower or more advanced skill sets (question 7) and students with behavioural or socio-emotional challenges (question 11), which both have a mean value of 4.25. Question 8, which is about students with learning difficulties, has a mean value of 4. Lastly, question 12 on students with multiple native language and cultures has a mean value of 3.75.

Q	Question theme in terms of competence	Teacher student group	Strongly agree=5 (n)	Agree=4 (n)	Neither agree nor disagree=3 (n)	Disagree=2 (n)	Strongly disagree=1 (n)	Mean value
7	Differentiation of students with lower or more advanced skill sets	LO	1	7	1	1		3.8
		EO	1	3	3			4.25
8	Students with learning difficulties	LO		3	2	2	3	2.5
		EO	2	1		1		4
9	Students with physical disabilities	LO		3	3	4		2.9
		EO	2	2				4.5
10	Students who have neuro-diverse characteristics	LO	2	2	3	3		3.3
		EO	2	2				4.5
11	Students with behavioural or socio-emotional challenges	LO		8	1	1		3.7
		EO	1	3				4.25
12	Students with multiple native language and cultures	LO		8	1	1		3.7
		EO		3	1			3.75
13	Students who are POC or belong to the LGBTQIA+ community	LO	5	5				4.5
		EO	3	1				4.75

Figure 11: Quantitative presentation of answers to questions (Q) 7-13 by both classroom teacher (LO) and special education teacher (EO) students.

The special education teacher students' mean values were throughout the different questions higher than that of the classroom teacher students. This is in line with previous research which has concluded that special education teachers are generally more positive towards inclusive education (Al Shoura & Aznan, 2020) and therethrough their perceived competence to implement it is generally higher. The answers also reflect the findings of our research from previous question sections according to which special education teacher students feel more confident to teach a diverse group of students.

The biggest differences were in questions regarding competence to teach students with learning difficulties and students with physical disabilities. The special education teacher students had 1.5 points higher mean value in the question about learning difficulties and 1.6 points higher mean value in the question about physical disabilities. The next biggest difference was in competence to teach students who have neurodiverse characteristics where the difference was 1.2 points. After these three questions, the difference becomes significantly smaller varying between 0.55 and 0.05. The smallest difference can be seen in the question 12 which was about students with multiple native languages and cultures. Here the difference was only 0.05 points, the special education teacher students again having the higher mean value.

In terms of in which order the questions ranked with their mean value, there was quite a lot of variation between the classroom and special education teacher students. Both had the highest mean value for competence to teach students who are POC or belong to the LGBTQIA+ community, but other than that the mean values do not follow the same order between the teacher students. For example, whereas the classroom teacher students had the second highest mean value for competence to teach students with lower or more advanced skill sets, the special education teacher students had students with neurodiverse characteristics as their second highest mean value. The competence to teach students with neurodiverse characteristics received the fifth highest mean value among the classroom teacher students.

Additionally, special education teacher students had the lowest mean value for competence to teach students with multiple native languages and cultures, whereas classroom teacher students had the fourth highest mean value for the competence to teach these students. This could be explained by possibly some of our participants having taken part in the Intercultural Teacher Education (ITE) programme. Based on the overview of the course contents, the overall study description of the ITE programme emphasizes cultural diversity and intercultural competence.

However, it should still be mentioned also in relation the students with multiple native languages and cultures that even though the order differed, the special education teacher students' mean values were higher throughout all the questions when compared to the classroom teacher students.

Question theme in terms of competence	POC or belong to the LGBTQIA+ community	Lower or more advanced skill sets	Behavioural or socio-emotional challenges	Multiple native language and cultures	Neurodiverse characteristics	Physical disabilities	Learning difficulties
Mean value	4.5	3.8	3.7	3.7	3.3	2.9	2.5

Figure 12: Quantitative presentation of answers to questions 7-13 by the classroom teacher students from highest mean value to lowest mean value.

Question theme in terms of competence	POC or belong to the LGBTQIA+ community	Neurodiverse characteristics	Physical disabilities	Lower or more advanced skill sets	Behavioural or socio-emotional challenges	Learning difficulties	Multiple native language and cultures
Mean value	4.75	4.5	4.5	4.25	4.25	4	3.75

Figure 13: Quantitative presentation of answers to questions 7-13 by the special education teacher students from highest mean value to lowest mean value.

The sense of self-efficacy in including certain student groups partly lines up with previous research and partly not. For example, in previous studies it has been stated that often the students with behavioral or socio-emotional challenges as well as students with neurodiverse characteristics are perceived the most negatively or as the most challenging to include in the classroom (Desombre et al., 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020; Viljamaa & Takala, 2017). However, in our research the classroom teachers found that their perceived competence to include students with physical disabilities or learning difficulties was the most challenging. Students with physical disabilities are often perceived positively according to previous

research (Byra & Domagała-Zyśk, 2021), and therethrough the perceived competence should also be higher. Our results here are therefore not in line with previous research.

With special education teacher students the competence to teach students with learning difficulties had the second lowest mean value. However, it should be noted that according to previous research, depending on the severity of the learning difficulty, the teacher's views towards the student varies (Al Shoura & Aznan, 2020; Byra & Domagała-Zyśk, 2021; Moberg et al., 2020). It should still be mentioned that the mean values of the special education teacher students were considerably high throughout their answers with the lowest mean value being 3.75. All other mean values of the special education teacher students were above 4.

As discussed in sub-chapter 4.1, attitudes are connected to competence, which is why we will be comparing the previous research regarding attitudes to implement inclusive education to our findings on perceived competence. The two articles we will be reflecting our findings to in more detail are Saloviita's (2020) research called "Attitudes of teachers towards inclusive education in Finland" and Takala and Sirkko's (2022) research "Pre-service teachers' attitudes towards inclusion in Finland". The first research focuses on in-service teachers' and the second research focuses on pre-service teachers' attitudes. As there has not been any previous research done on the perceived competence to teach specific student groups in the Finnish context, we will be reflecting our findings to these two articles on attitudes. These two studies have utilized similar student groups as we in our research.

The mean values of special education teacher students are in line with the findings from Saloviita's (2020) research. The special education in-service teachers' mean values about their attitude to implement inclusive education regarding different student groups were close to four in the research. The mean values of classroom teacher students from our research are slightly higher than in Saloviita's research about classroom in-service teachers. In Saloviita's research most of the classroom teachers' scores remained below three, and in our research the mean values remained mostly above three.

In comparison to Takala and Sirkko's (2022) research, the special education teacher students' mean values are high in our research. The classroom teacher students' answers from our study mostly follow the findings of the study by Takala and Sirkko (2022) except for physical disa-

bilities. The participants of our research had a considerably lower mean value in terms of perceived competence to teach students with physical disabilities. Even though the values themselves are mainly not that different, the order of the mean values differ, which goes for both the classroom teacher students as well as the special education teacher students. This means that the participants of our research had a different order for which student groups they felt most competent to teach than in the research by Takala and Sirkko (2022), even though the mean values themselves did not differ much between Takala and Sirkko's research (2022) and ours. Thus, although the differences are not great, they are still noticeable.

However, it should be noted that as our sample size is quite small, no generalisations can be drawn from the findings, but that they only reflect the sense of self-efficacy to implement inclusive education of our participants in relation to the much larger sample sizes of previous research.

6.3.2 Examples on How to Implement Inclusive Education

After the participants were asked about their sense of self-efficacy to teach different student groups through the usage of a Likert scale model, they were asked an open-ended question where they were to give examples on how to implement inclusive education in their teaching. We will present the findings from classroom teacher and special education teacher students' answers together.

The same two main categories were identified from the classroom and special education teacher students: Environment and Differentiation. In the classroom teacher students' answers, two sub-categories were identified under the main category Environment being Social environment and Physical environment whereas in the special education teacher students' answer only the sub-category Social environment was recognised. The same three sub-categories in both teacher student groups' answers fall under the main category Differentiation them being Teaching methods, Teaching material and Structure.

In the sub-category Teaching methods, the teacher students saw diverse teaching that responds to the individual needs of their students as a way for everyone to participate and learn at their own skill level as the examples below indicate:

“...different challenges require different support as the children are not copies of each other...”

“... By planning teaching so that it serves all students (differentiation up and down) as well as using different senses in teaching (seeing, hearing etc.).”

“Differentiating teaching individually to fit the needs of the student.”

“... Offer options of working methods (with limitations).”

The views about differentiation as one way to implement inclusive education reflect the teacher students' understanding of inclusive education considered in previous question sections.

Similar views on adapting the teaching are present in the second sub-category Teaching material. The sub-category emphasizes differentiating the material used in teaching:

“ I would present diverse situations and identities in the teaching material.”

“For example, I would offer the students reading book options that would be in their native tongue.”

“Differentiating different tasks for example so that the student can choose from three different options the one matching their own skill level.”

The teacher students recognise that teaching material should be diverse, and it should support the students' academic learning but also their identity and culture.

In the sub-category Structure, the teacher students emphasize using visual instruction so that the structure of the lesson or instruction of an assignment is clear. The teacher students found it important that there would be clear instructions and structure of how the lesson proceeds:

“The structure of the lesson is clear, so going through the timetable of the day.”

“Visual illustration for students who study Finnish as a second language.”

“Maintaining the structure is an effective means of support for many students. Clear speech, clear instructions and visual support as well.”

It can be concluded that the teacher students recognise structure as a supporting factor of students' learning and a way to implement differentiation and inclusive education.

The aforementioned sub-categories and the examples of how to implement inclusive education that the teacher students have highlighted reflect the ideas Ruby et al. (2017) about implementing inclusive education through differentiation of teaching. Overall, the teacher students describe implementing inclusive education by offering support through appropriate accommodations of teaching, so not changing the learning objective and expectations regarding the student's learning, but rather providing different ways for the students that respond to their individual needs to reach the expectations at their own level (Ruby et al., 2017). The teacher students' answers also reflect the values of the Universal Design for Learning model being about designing teaching so that it is accessible for all from the beginning (Arthur-Kelly & Neilands, 2017). For example, from the sub-category of Structure it can be identified that the teacher students find it meaningful to anticipate the course of the day or go through the instruction of a task so that it is clear for all students from the beginning before continuing the day or starting the task.

The second main category is Environment. Equal and inclusive school environment is one of the main aims of inclusive education (Booth, 2011). In the sub-category of social environment, both teacher student groups discuss the importance of the social environment in the classroom. The same idea is recognised also in the teacher students' understanding of inclusive education in the sub-chapter 6.1 where it was mentioned that inclusive education can be understood to refer to school culture that values diversity. The teacher students describe how they would want to create a social environment that accepts and values diversity:

“A positive attitude towards all students, encouraging them and strengthening their self-esteem, encountering students with respect...”

“Classroom rules where there is a common understanding that racism, homophobia transphobia or any other form of discrimination is not allowed and why.”

“Creating an environment in the classroom where we don't judge for our differences.”

“By creating a space where all differences are allowed and natural.”

Social environment is shaped by the attitudes in it. As positive attitudes are essential to the successful implementation of inclusive education (Desombre et al., 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020), it is important that the social environment is accepting.

Teachers play a crucial role in what kind of an atmosphere there is in the classroom (Arthur-Kelly & Neilands, 2017). Therefore, it is important that the teachers are aware of the responsibility that they have in creating the atmosphere of the classroom. Our research findings indicate that the teacher students are aware of this responsibility.

In addition to the social environment, the classroom teacher students also discuss physical environment and the importance of it being inclusive. We have identified these answers under the sub-category Physical environment, which was not identified from the special education teacher students' answers. Both physical and social environment are essential to successful inclusive education (A. Qvortrup & L. Qvortrup, 2018). Inclusive physical environment also strengthens the student's sense of belonging and relates it to the concept of social environment, which improves the students' well-being and academic learning (Takala, Lakkala et al., 2020). Sense of belonging is one of the values upon which inclusive education is built (Loxley & Thomas, 2001). Having every student's work on the walls, for example, is important as it gives everyone an equal chance to participate in the creation of the school environment (Mitchell, 2008).

The answers show that the classroom teacher students would try to create an accepting social environment also through adapting the physical environment accordingly. This can be seen for example in showing support to the LGBTQIA+ community through including rainbow flags in the classroom as interpreted from one answer:

"I would make students' identities visible in the classroom such as decorating with rainbow flags, writing greetings in different languages on the walls."

Adapting the physical environment of the classroom is also seen as enhancing the academic learning of the students through giving different options for working that reflects the idea of offering support for individual needs present in other question sections as well:

"In the case of an ADHD student open classrooms can be a poor choice, which is why for example different space dividers, different chair options, activation toys/stress toys, headphones can help the concentration."

Overall, the answers show that the teacher students in both teacher student groups see positive classroom environment that supports inclusive education as essential to the successful implementation of it.

When giving examples on how to implement inclusive education, the teacher students reflect how they could modify their teaching to respond to individual needs and not place any expectations for the students in their future classrooms to conform to their assumptions. Previous literature shows that sometimes the blame is put on the students when inclusive education is unsuccessful (Crispel & Kasperski, 2021), but this is not present in our findings. In their answers the teacher students do not specifically mention the three-tiered support system. However, aspects of the support system are present in their answers, such as differentiation or individual needs of the students. Even though the teacher students discuss physical environment, they do not bring out physical access to the school spaces. This might relate to the classroom teacher students' low self-efficacy to teach students with physical disabilities as they might not have concrete examples on how to include those students.

6.4 Strengths and Weaknesses in Implementing Inclusive Education

6.4.1 Strengths in Implementing Inclusive Education

In this question the teacher students were asked about their strengths to implement inclusive education. Two main categories were identified from the classroom teacher students' answers: Skills and Personal attributes. The main category, Skills, consists of only one sub-category being Pedagogical skills whereas the main category, Personal attributes, consists of two sub-categories: Love and empathy and Similarities with the students. In the special education teacher students' answers only one main category was identified, Skills, which is the same as identified from the classroom teacher students' answers. However, from the special education teacher students' answers two sub-categories were formulated under the main category of Skills being Pedagogical skills and Practical skills.

In the main category Skills and sub-category Pedagogical skills, the classroom teacher students highlight adaptability, reflectivity and willingness to develop their professionalism as their strengths:

“Flexibility - adapt to a new situation fast.”

“Reflectivity - I tend to reflect over what happened, why, and how I can improve/change.”

“My curiosity and willingness to develop my own professionalism. I like to challenge myself and want to increase my know how on inclusive education.”

Also previous literature emphasizes reflectivity as an important factor of effective implementation of inclusive education (Häkkinen & Lepoaho, 2001; Lakkala, 2008; Symeonidou, 2017). Finnish teacher education promotes self-reflection as part of a teacher’s work (Kansanen, 2006; Opetus- ja kulttuuriministeriö, 2016), and previous research shows that most of the recently graduated teachers have acquired good reflection skills during their education (Saloviita & Tolvanen, 2017). This is in line with our findings according to which the teacher students see reflection skills as one of their strengths in implementing inclusive education. Self-reflection can be seen to emphasize looking at failure as a source of learning (Lakkala, 2008), which relates to the teacher students’ willingness to develop their professionalism.

One classroom teacher student highlights the importance of having specific courses about inclusive topics and that they consider their strengths to include the knowledge they have acquired from these courses:

“From the ITE programme I have learnt to acknowledge and respect diversity. From the gender studies minor I have learnt about the themes of gender, sexuality and equality.”

As mentioned in chapter four, specific courses on special educational needs are crucial for the development of the competence of the teacher students (Crispel & Kasperski, 2021; Takala & Sirkko, 2022). In this answer it can be seen that when something is highlighted in the studies, the students might find it meaningful for the development of their perceived competence.

The second main category that we identified from the classroom teacher students' answers is Personal attributes. In the sub-category Love and empathy, the classroom teacher students highlight being empathetic and caring for their students as their strengths in implementing inclusive education as can be interpreted from the answers:

“My openness and genuine love and respect towards everyone.”

“I am empathetic and genuinely care about them [students] as individuals.”

Also Booth (2011) describes these personal attributes, empathy and love/care, as important values regarding inclusive education. These values were also recognised in the teacher students’

answers about their understanding of inclusive education. This indicates that the teacher caring for their students is seen as important for successful implementation of inclusive education by the teacher students in our study.

The other sub-category that we identified from the classroom teacher students' answers is Similarities with the student. The teacher students discuss that knowing from personal experience the feelings that the students might go through helps them better empathise with the students:

“Personally, belonging to the rainbow community helps with topics related to it.”

“I also have ADHD. I think I can work and sympathize with students with ADHD better.”

Finding similarities can be a way to strengthen the relationship between the teacher and the student (Gehlbach et al., 2016). When there are similarities between the teacher and the student, the teacher-student relationship is more often positive as both parties see likeness in each other (Gehlbach et al., 2016), which might indicate that the attitude of the teacher regarding including the student is higher. Personal experience may also increase the feelings of competence and confidence as the teacher might know how to act or can act naturally in the situation. This might explain why the teacher students have written that possible similarities with the students are one of their strengths in implementing inclusive education.

In the answers of the special education teacher students, in the sub-category Practical skills, experience is seen as a strength. As mastery experiences are the most important factor in strengthening self-efficacy according to Bandura (1997), as discussed previously, it is understandable that experience in the field is seen as a strength. The same view has risen from answers of the special education teacher students in previous questions sections as well.

Secondly, in the sub-category Pedagogical skills, the special education teacher students highlight the importance of encountering the students equally:

“Encountering students equally.”

“Encountering students with socio-emotional challenges”

“I know how to encounter students and think about the support methods that are suitable for them”

Being able to encounter each student equally is one of the main values of inclusive education (Booth, 2011), and has been discussed by the special education teacher students regarding their confidence to teach a diverse group of students. Based on this, it may be concluded that the teacher students feel that teaching experience and teaching different students has affected their sense of self-efficacy positively and they view it as a positive factor for developing their self-efficacy.

Thirdly, the special education teacher students perceive cooperation skills as a strength:

“Cooperation and interaction skills”

Cooperation can in this case refer to the students or to other professionals. In the case of students, cooperation can be seen to relate to the previous point on encountering students. When referring to other professionals, multi-professionality can be seen as the perceived strength. As described in section 6.2.2, multi-professionality is essential in inclusive education, and it is again mentioned by the special education teacher students here in a positive context in a way that shows that the multi-professional skills are perceived as already learned to some extent.

Both teacher student groups describe different pedagogical skills and didactical thinking as their strengths in implementing inclusive education. This is in line with previous research, which has highlighted that Finnish teacher education should produce didactically-thinking teachers (Kansanen, 2014; Toom et al., 2011). The teacher students are expected to base their didactical decisions on academic knowledge (Paksuniemi et al., 2013). We have explored the theme of academic knowledge further in question section 6.2.1. Even though pre-service teachers have practices where their sense of self-efficacy can be strengthened through mastery experiences, the majority of their studies does not offer them mastery experiences in the actual classroom environment. Therethrough, vicarious experiences and verbal persuasion become more prominent, and during their studies the students have more opportunities to develop their competence through, for example, reflectivity or academic skills.

6.4.2 Weaknesses in Implementing Inclusive Education

In this question, the teacher students were asked to describe their weaknesses in implementing inclusive education. The main category that was formed based on the classroom teacher stu-

dents' answers is Incompetencies. Three sub-categories were identified under the main category: Education, Confidence and Experience. As mentioned previously, classroom teacher education is seen to not provide enough knowledge to encounter students with special educational needs (Saloviita, 2009; Seppälä-Päkäläinen, 2009). The teacher students describe their weaknesses related to how they have not received enough knowledge during their studies about special education topics:

“Lack of knowledge”

“Understanding certain diagnosis that I have not encountered before and has not been spoken about at the university.”

The teacher students specifically identify neurodiverse characteristics as something they wish that had been discussed more in teacher education:

“Not having enough knowledge about disabilities and the autism spectrum.”

“Topics related to neurodiversity and special education, which have not been considered [at the university].”

This is in line with previous research, which shows that teachers perceive students with neurodiverse characteristics challenging to include in their classrooms (Desombre et al., 2021; Malinen, 2013; Moberg et al., 2020; Saloviita, 2020; Viljamaa & Takala, 2017) which could influence their sense of self-efficacy to include these students. Despite the discussion here on how the education has been lacking, as described in the previous section, some parts of education, such as cultural issues, were also acknowledged as strengths. Therefore, it can be concluded that the education has also been able to strengthen the perceived competence of the teacher students.

Secondly, the classroom teacher students describe the lack of confidence in implementing inclusive education. One participant even used the words ‘being scared’ when describing their weaknesses to implement inclusive education.

“Lack of confidence”

“Being scared [to implement inclusive education]”

In the questions regarding confidence to teach a diverse group of students, the classroom teacher students had an average value of 6, which is only a little higher than the medium. Therefore, it is understandable that some of them would state confidence as one of their weaknesses.

Lastly, lack of experience was seen as a weakness by some participants even if the participant had some experience in the field:

“Definitely experience. Having had roughly 2 years of teaching experience varying in all levels of the educational system but higher education I still feel that the lack of experience is the biggest factor that prevents me from succeeding on the level that I would like to in implementing inclusive education.”

The issue of experience has been present throughout the findings: lack of experience is seen by the teacher students as contributing to their self-efficacy negatively whereas having experience has contributed to the perceived competence to implement inclusive education positively. Thus, it is not surprising that the teacher students mention the lack of experience in the context of weaknesses. Also literature emphasizes that prior contact with people with disabilities can improve the competence and attitude of the teacher students (Moberg et al., 2020; Takala & Sirkko, 2022). Therefore, it is understandable that some participants see their lack of experience as a weakness to implement inclusive education.

From the answers of the special education teacher students two main categories were formed: Practicality and Differentiation. In the main category Practicality, not being able to implement inclusive education in practice was seen as a weakness as mentioned by one participant, which is fairly similar to the lack of experience perceived as a weakness by classroom teacher students:

“On a practical level, teaching students with special educational needs”

The teacher students describe feelings of uncertainty related to practicality, and one participant discussed how the transition to work life and the practical implementation of the work might come as a shock to recently graduated teachers:

“Especially for young teachers, I believe that the reality of the school world can feel hard if their classroom happens to have a lot of students with challenges and can lead to fatigue, etc.”

This indicates that they have not received sufficient competence through their education if starting job turns out too challenging. However, it should be noted that teacher education cannot provide all the knowledge the teacher students will need in their future work and it should also not be seen as the aim of the education. The competence of a teacher develops over time, and it is never complete. Additionally, starting at a new work place may be exhausting to anyone whether or not they are a teacher. Nonetheless, a strong self-efficacy promotes the wellbeing of teachers (Bandura, 1995; Narkun, 2019; Yada et al., 2021; Zee & Koomen, 2016). This further promotes the fact that self-efficacy must be strengthened in teacher education regarding pre-service teachers as a preventative measure also from the point of view of the teachers' job satisfaction, which in turn positively influences their work performance and thus the implementation of inclusive education.

Two sub-categories were formulated under the second main category, Differentiation consisting of Differentiating up and Physical disabilities. Not knowing how to give students enough challenge was mentioned as one participant's weakness regarding the implementation of inclusive education. Also in the quantitative presentation of the findings regarding the self-efficacy to teach different student groups, differentiation of students with varying skill levels was not ranked among the highest based on the special education teacher students' answers, which reflects the point made here. Nonetheless, it should be mentioned that the mean value for the perceived competence to adapt teaching to students with lower or more advanced skill set was still high among the special education teacher students.

Lastly, not having the knowledge or competence to support students with physical disabilities was seen as their weakness by one participant:

“Supporting students who have motoric challenges or challenges with senses (deaf, blind).”

In previous research, in relation to other student groups, typically teachers have a more positive attitude towards students with physical disabilities (Byra & Domagała-Zyśk, 2021; Moberg et al., 2020). As positive attitude often indicates that the competence is also perceived higher, the answers in our research in this question are not in line with previous research as the special education teacher students find their competence to be insufficient to teach students with physical disabilities. However, it should be noted that in the quantitative section of our research, the

special education teacher students' mean value for perceived competence to teach students with physical disabilities was 4.5 out of 5, which is considerably high.

The categories between the classroom teacher students and special education students mainly do not overlap. However, both teacher student groups mention some specific kinds of special needs they do not have enough knowledge about. The special education teacher students mention physical disabilities in this context whereas the classroom teacher students feel they do not have enough competencies to teach students with challenges related to neurodiversity.

The classroom teacher students felt that they had not received sufficient competence to implement inclusive education through their education. Although the special education teacher students describe feelings of insufficiency, they do not bring up teacher education at all in their answers. In section 6.2.1 the special education teacher students mention their education as a supportive factor of their competence to teach a diverse group of students whereas the classroom teacher students do not mention that their competence stems from teacher education. Also in section 6.2.2 about multi-professionality, special education teacher students feel that their education has provided them with adequate competence to participate in multi-professional cooperation in their future work whereas the classroom teacher students mention that the education has not provided them with adequate competence. In this section, the classroom teacher students see their education negatively regarding their competence to implement inclusive education whereas the special education teacher students do not mention their education in a negative context. This might indicate that where the classroom teacher students see their education as lacking, special education teacher students see their education in a positive light regarding the implementation of inclusive education.

One similar code was present in both of the teacher student groups' answers about practical implementation and experience. The classroom teacher students mentioned their current lack of experience about inclusive education as a negative factor regarding their future implementation of it whereas the special education teacher students expressed feelings of uncertainty towards the practical implementation of inclusive education.

6.5 Teacher Education and Inclusive Education

6.5.1 The Influence of Teacher Education on the Competence to Implement Inclusive Education

Next, the teacher students were asked what they thought had influenced their perceived competence to implement inclusive education the most during their university studies. In this question, the teacher students were given a multiple-choice question where they could choose multiple answers. In addition to the given answer options, there was option ‘other’ where the teacher students could fill in by themselves what they thought had influenced their perceived competence outside of the other answer options.

The most often chosen answer options, by 50% or more participants, among the classroom teacher students were the following: lesson planning and implementation during practices, discussions with peers and others in informal settings, mandatory courses about inclusive and/or special education, discussions with peers in class for example after presentations and during group work and observing of teaching during practices. 70% of the participants felt that lesson planning and implementation during practices had been influential in increasing their perceived competence to implement inclusive education. Similarly, 70% of the participants felt that discussions with peers in informal settings had been meaningful for the development of their perceived competence. The other three aforementioned aspects were chosen by 50% of the participants. The least answers were given to literature of your own choice (10%) and other mandatory courses and their content (0%). In the “other” option, more themes rose that had influenced the participants’ feeling of competence: experience in the field, own interests, informative TV shows, and life experiences and other university studies that were not a part of their teacher studies at the University of Oulu.

	n	Percent
Mandatory courses about inclusive and/or special education	5	50,0%
Other mandatory courses and their content	0	0,0%
Optional or minor courses about inclusive and/or special education	3	30,0%

Other optional or minor courses and their content	3	30,0%
Discussions with the teacher	4	40,0%
Discussions with peers in class for example after presentations and during group work	5	50,0%
Discussions with peers and others in informal settings	7	70,0%
Academic assignments for courses	3	30,0%
Lesson planning related to university courses	4	40,0%
Lesson planning and implementation during practices	7	70,0%
Observing of teaching during practices	5	50,0%
Literature related to the courses	4	40,0%
Literature of your own choice	1	10,0%
Other	5	50,0%

Figure 14: A quantitative presentation of classroom teacher students' answers on what aspects of teacher education have been the most meaningful.

The special education teacher students found the two answer options related to practices the most meaningful as every participant chose them. The answer options are lesson planning and implementation during practices and observing of teaching during practices. Discussions with peers and others in informal settings and mandatory courses about inclusive and/or special education were also seen meaningful with three out of four participants choosing these answer options. Discussions with the teacher and discussions with peers in class were also found important for the development of the perceived competence by two participants. No answers were given to the following answer options: other optional or minor courses and their content, lesson planning related to university courses, literature of your own choice and 'other'.

	n	Percent
Mandatory courses about inclusive and/or special education	3	75,0%
Other mandatory courses and their content	1	25,0%
Optional or minor courses about inclusive and/or special education	1	25,0%
Other optional or minor courses and their content	0	0,0%
Discussions with the teacher	2	50,0%
Discussions with peers in class for example after presentations and during group work	2	50,0%
Discussions with peers and others in informal settings	3	75,0%
Academic assignments for courses	1	25,0%
Lesson planning related to university courses	0	0,0%
Lesson planning and implementation during practices	4	100,0%
Observing of teaching during practices	4	100,0%
Literature related to the courses	1	25,0%
Literature of your own choice	0	0,0%
Other	0	0,0%

Figure 15: A quantitative presentation of special education teacher students' answers on what aspects of teacher education have been the most meaningful..

The classroom teacher students' and special education teacher students' answers were quite similar with both teacher student groups finding practices important to the development of the perceived competence as well as discussions especially with their peers but also with the teacher. The results are in line with Bandura' (1997) theory on how to strengthen self-efficacy through mastery experiences, vicarious experiences and verbal persuasion.

Three aspects of the results specifically relate to Bandura's theory: teaching, observing teaching and discussions which have also been discussed in relation to other question sections. Teaching can be seen as mastery experience (Bandura, 1997) as the teacher student is in charge of the lesson themselves. Observing teaching can be seen as vicarious experience (Bandura, 1997). Lastly, discussions can be considered verbal persuasion (Bandura, 1997). Previous literature has defined all of these to strengthen the sense of self-efficacy.

Mandatory courses about inclusive and/or special education were also found meaningful by both teacher student groups. Studies have shown that participation in courses specifically on inclusive and/or special education increase competence (Crispel & Kasperski, 2021; Lancaster & Bain, 2010; Narkun, 2019; Takala & Sirkko, 2022). Therefore, this finding is in line with previous research. Differences between the teacher student groups can be seen according to how many feel that optional courses have been meaningful. Classroom teacher students see optional and minor courses about special and/or inclusive education as well as other optional courses more meaningful than the special education teacher students. This may indicate that the classroom teacher students have felt the need to complement their knowledge about special educational and inclusive practices through optional studies due to not receiving enough competencies from their mandatory studies.

The biggest difference can be seen in the answer option "lesson planning related to university courses" with the classroom teacher students' percentage being 40% while the special education teacher students' percentage being 0% meaning that no participant chose the option. One possible explanation for this could be that classroom teacher students do more lesson planning during their studies than special education teacher students. However, this is highly speculative as the specific course contents are determined by the course teacher and are not visible in the course descriptions online.

After the multiple-choice question, the teacher students were asked to justify their answers in an open-ended question, which we analysed using qualitative content analysis. From the classroom teacher students' answers, we have identified three main categories: Discussions, Knowledge and Courses. Firstly, discussions were found meaningful as the teacher students felt that they widen up perspectives and help with reflection. The acknowledgement of reflection skills regarding the implementation of inclusive education rose from previous findings to the

perceived strengths of the teacher students to implement inclusive education. This might indicate that the teacher students consider self-reflection a meaningful skill regarding their competence to implement inclusive education.

In the second category, Knowledge, we identified three sub-categories: Practical knowledge, Knowledge through experience and Academic knowledge. Practical knowledge in the studies is something that the teacher students would want more during their studies:

“Concrete examples are memorable especially if the perspective comes from a person who themselves are directly influenced by it for example a person with ADHD has been discussing ADHD.”

“...practical examples are missing.”

It can be argued that as teacher students have a limited number of practices where they can encounter possible examples of implementation of inclusive education, it is crucial that the teacher educators provide them with case examples about how inclusive education is implemented in practice also during other courses. This relates to the second sub-category, Knowledge through experience, where the teacher students again highlight the importance of practical experience:

“Real life situations such as practice and working in the field.”

“While planning lessons and implementing them I have needed to take into consideration for example F2 and differentiation.”

“But most influence has come from practice outside of university-controlled teacher practices. Substituting and working as a resource teacher has given a lot more insight into inclusive education and its implementation.”

“I have a previous degree and work experience with special needs children...Also practical experiences are more valuable to the work in my opinion than formal studies.”

The teacher students discuss that they have received experience both from university practices as well as from work life, which they see meaningful regarding their perceived competence. This confirms that the teacher students see mastery experiences as important for the development of their competence regarding inclusive education.

The last sub-category formed under the main category Knowledge is Academic knowledge. The answers reflect the general research-based nature of Finnish teacher education, where topical research guides teacher education (Aspfors & Eklund, 2017; Toom et al., 2011). The participants describe that the university degree focuses mainly on providing academic knowledge:

“I do not believe that the university has provided us with tools to implement in teaching. And I have during later years realized it is not the aim of the education, but to teach us to be able to implement research ourselves.”

“Because teacher education is a university degree, the emphasis is on scientific knowledge.”

This also relates to the previously discussed topic about concrete examples missing from the education.

The third and final main category we have identified is Courses. We have identified two sub-categories here: Mandatory courses and Minor or optional courses. All the answers in this sub-category refer to the same mandatory course on inclusive education. The students feel this course has provided them with competence regarding the implementation of inclusive education:

“During my practice I had a course, “Inclusive education...”

“One 5-credit course gave an opportunity to dive deep into literature on the matter of inclusive education that gave a good basis for the implementation of it.”

However, from the answers it may also be interpreted that negative feelings are related to the number of mandatory courses directly about inclusive education even though the one course has been successful in enhancing the feeling of competence:

“Well, all the information I got from the university was from a compulsory course (5 ECTS).”

As mentioned before, specific courses on the topic can be seen as meaningful to the development of competence on the matter (Crispel & Kasperski, 2021; Takala & Sirkko, 2022). Therefore, optional and minor courses in addition to mandatory courses also increase the competence as described by the teacher students:

“The minor in gender studies has given a lot in considering and supporting sexual and gender minorities”

“Optional studies”

“The course Cooperation and Professional Interaction was the best regarding inclusive education as it had really good materials related to the topic.”

Cooperation and Professional Interaction is a course that is one of the two course options that master’s level classroom teacher students (ITE) as well as special education teacher students can choose from. For LO programme students it is one of three options they can choose from. Therefore, it is not mandatory, but it is in the curriculum as an option for all programmes. As considered previously, as there are not many mandatory courses on inclusive and/or special education for the classroom teacher students (Opintopolku, 2021; Takala & Sirkko, 2022), the optional courses the teacher students choose, play a greater role in how their perceived competence develops.

From the special education teacher students’ answers, we were able to identify one main category, Special education teacher programme, which consists of three sub-categories: Overall studies, Practices and Discussions. In the sub-category Overall studies, the special education teacher students describe their education programme overall as something that has strengthened their competence to implement inclusive education. They discuss that inclusive education has been present during their studies a lot:

“The whole education has given tools to implement inclusive education in the future.”

“In special education studies, inclusive education has been featured a lot.”

“Inclusive education has been considered a lot during the courses.”

This indicates that the special education teacher students are satisfied with how their studies have considered inclusive education. Similarly to the classroom teacher students, mastery experiences were seen as meaningful by the special education teacher students in the second sub-category Practices. The special education teacher students describe that the practices in their studies have helped them to gain a wider perspective on inclusive education:

“Also practices have given practical experience and perspective.”

“... I have gained perspective on the practical implementation [of inclusive education] through practices.”

This shows that the special education teacher students have possibly had inclusive education and its principles be a part of their practice experiences, whereas classroom teacher students might not have had similar experiences.

Lastly, as also mentioned by classroom teacher students, discussions about inclusive education with peers during but also outside of lessons in informal settings were mentioned as something that had enhanced their feeling of competence by one participant:

“Discussions with peers both during and outside of lessons.”

When comparing the classroom and the special education teacher students' answers, there are some similarities but also differences. The similarities include discussion and practical experiences being viewed positively regarding their feeling of competence to implement inclusive education. The special education teacher students focused more on practices as part of their studies whereas the classroom teacher students included experience outside of the education programme, such as work experience, as well. It might be because the classroom teacher students felt they had not received enough practical experience through their studies. This might have led them to look for possibilities for practical training outside of their studies. On the other hand, the focus on work experience could also be because the classroom teacher students have possibly substituted more than the special education teacher students without any correlation to the feeling of dissatisfaction with their studies.

Overall, based on the answers, the special education teacher students seem satisfied with their studies related to inclusive education. The classroom teacher students seem to find the current number of mandatory courses insufficient although the one mandatory course about inclusive education that has been part of their studies was seen as an enhancing factor of their self-efficacy. They were also unsatisfied with the large amount of and focus on academic knowledge.

6.5.2 Students' Wishes for the Development of Inclusive Education in Teacher Education

In this question, the teacher students were asked what they would have wished that teacher education had offered to increase their confidence in implementing inclusive education in their

future work. Three categories were identified from the classroom teacher students' answers being Inclusive education in teacher education, Practicality and Multi-professionality. The first sub-category under Inclusive education in teacher education is Specific topics. The participants hoped that there would have been more knowledge about specific topics related to inclusive education including sex education, educational psychology and differentiating up as interpreted from the answers:

“There is no sex education, how should one know how to teach it especially taking the heteronormativity into consideration unless one has interest/experience/ critical eye for these matters (in general the focus of the education being sex/scaring students about sex should be something to get rid of).”

“More child psychology and training for how to communicate in specific difficult situations.”

“There is a lot of talk about differentiation downwards, but not differentiating up.”

The teacher students describe how the consideration of these topics would have helped them increase their competence as they find these topics meaningful to inclusive education. This reflects the majority of the teacher students' understanding of inclusive education being about including all students discussed in the first question section.

In the other sub-category Special education, the students wished that there would have been more courses on special education. The teacher students argue that there should be more courses related to special education as they feel that the 5 ECTS of mandatory courses is not sufficient to the development of their competence to implement inclusive education. This was also mentioned in the previous section. Again, courses on specific topics are seen as meaningful to promote competence in the matter, which is in line with previous research. This is how the classroom teacher students expressed their views:

“Actual content for SEN students.”

“Way more special education courses and to the mandatory 5 ECTS there should be more updated data from the field and not from early childhood education or special schools, which would not fit the future work [of a classroom teacher].”

“More mandatory courses on special education that would also be implemented in practice.”

Additionally, one participant discusses inclusive education in higher education in the something to add to the theme of the questionnaire question from the perspective of the teaching at the university.

“The lack of inclusive education in higher education is huge problem that needs to be addressed with a from the bottom-up approach. Because if inclusive education is not happening at the highest level of education, how can we ever hope to achieve it properly on the lowest level.”

The participant argues that it is hypocritical to expect teacher students to implement inclusive education in their future work if they are not provided with inclusive practices during their own university studies. If the university teachers who are expected to be experts in education are not able to implement inclusive education in their teaching, it could negatively affect whether or not the teacher students see inclusive education as implementable. This is due to the fact that teacher educators affect the students’ conceptualizations (Symeonidou, 2017).

The second main category we identified is Practicality. This category is divided into two sub-categories: Concrete real life-examples and Practices about inclusive and/or special education. Firstly, the teacher students discuss how concreteness is missing from the teacher education:

“Concreteness: ... concrete examples are lacking that would be beneficial for real-life work situations”

“More connections made to real practice of the job.”

“Going through examples. More practical examples in addition to the research work”

“More specific knowledge of commonly used methods or tools for implementing inclusive education.”

The teacher students would have wished for there to be more examples on possible situations and how to respond to them during the studies. This indicates that the teacher students find verbal persuasion meaningful and wish for more of it during their studies as going through the examples also includes discussion on the matters. The topic of lack of practicality was highlighted throughout the questionnaire. In the answers to the question about something to add to the theme, the wish for practicality is also present:

“There is no ready-made tool kit for teachers” is a poor excuse for leaving out practical matters.”

“But expecting a theoretical education to do anything else but to inform is unrealistic in my opinion. Research can provide useful data and reflections, but it is not the same as facing it in real life.”

The teacher students mention that the fact that teacher education cannot teach everything about practical matters is used as an excuse for ignoring practicality. They recognise the research-based nature of Finnish teacher education and find it at the moment insufficient in providing them adequate competencies to implement inclusive education.

In the second sub-category Practices about inclusive and/or special education, the teacher students describe the need for focusing more on inclusive education during their practice periods, which is currently missing, in order to increase their feeling of competence:

“A short practice period in a special education classroom.”

“During practices it would be good to see inclusivity at least during some point.”

“Mandatory practice in special education contexts and “regular” classroom contexts. Connected to the study and direct implementation of inclusive practices and theory in the field.”

Inclusive practices could help strengthen the sense of self-efficacy through all four forms described by Bandura (1997). Mastery experiences could be acquired by the teacher students implementing inclusive education by themselves. Observing inclusive teaching of other teachers would give the teacher students vicarious experiences. Through discussions and reflection about inclusive education, there would be verbal persuasion. Additionally, by discussing the teacher students’ possible feelings of stress and other emotions towards the implementation of inclusive education, one could strengthen their psychological and affective conditions. Therefore, the suggestion on inclusive practices would be heavily supported by Bandura’s (1997) theory on self-efficacy and how it can be strengthened.

The last category that was identified is Multi-professionality. After graduating, the teachers will need to cooperate with other professionals as the work in the field requires multi-professionalism as described in previous sections. The classroom teacher students would have wanted to

have collaboration with special education teacher students during their courses as they will work with them in the future:

“Classroom and special education teachers should cooperate more strongly already during the studies through common courses and projects (regardless of scheduling difficulties)”

From the answers of the special education teacher students two categories were identified: Practices and Understanding of inclusive education which both consist of only one sub-category being Practices in diverse schools and Discussions. In the main category, Practices, one participant hoped for the practices to take place also somewhere other than in a teacher training school. Previous research shows that Finnish teacher training schools are more homogenous than other schools (Opetushallitus, 2020). The participant could have felt that the practices they have done in a teacher training school do not reflect the reality of a teacher’s work due to the issue mentioned above. The more diverse students the teacher students meet, the better it is for the development of their competence and the feeling of it being higher (AlMahdi & Bukamal, 2019; Arvelo-Rosales et al., 2021). Additionally, they might have wanted to have practices in a variety of schools instead of just one as schools and their general practices and work environments may differ.

Secondly, in the main category of Understanding of inclusive education, one participant argued that even though they felt that they had received sufficient competence to implement inclusive education, they would have hoped for there to be more discussion about what is understood by the concept of inclusive education as the interpretations can differ as well as more consideration on what kind of implementation of inclusive education is seen as the most desirable. They mention that the understanding of inclusive education is sometimes quite narrow:

“Teacher education has given enough competences. I would have wished that we would have had more discussions on what kind of inclusive education is desirable. Personally, I find flexible inclusive education better (for example having small groups when needed) but it feels like inclusion has been at times defined quite narrowly.”

Previous research shows that today’s teacher education does not fully promote the modern values of inclusive education due to the historical perspective and inclusive education having long roots only considering students with special educational needs (Symeonidou, 2017). Also in the section 6.1 our findings show that some teacher students understand inclusive education rather

narrowly. The wish that inclusive education is considered and discussed more in teacher education is thus justifiable both based on previous literature as well as our findings. Discussions, similarly to experiences, can also weaken the competence of the teacher students. If the discussion is centred negatively around inclusive education, it can potentially weaken the competence of the teacher student. The teacher students' self-efficacy is particularly open to outer influence during their studies and at the beginning of their career (Caires et al., 2012; Narkun, 2019), which is why teacher educators have a great responsibility in how they approach different topics.

In terms of similarities and differences, there are quite a lot of differences in the answers of the teacher student groups. Classroom teacher students seemed to be less satisfied with their education and have more wishes for the development of the education than the special education teacher students. On the other hand, it could also be concluded that the classroom teacher education students reflected their whole education programme more thoroughly and critically than the special education teacher students. It should also be noted that there were 2.5 times as many answers from the classroom teacher students, which might have affected the number of wishes even though the question was mandatory for everyone.

The classroom teacher students wished for more knowledge about students with certain difficulties which was not mentioned by the special education teacher students. The overview of the course contents presented previously in section 4.5 supports this interpretation. The studies offered for the special education teacher students are more specific in terms of different needs the students may have than the courses that the classroom teacher student study that present more of a general view of the implementation of inclusive education. Our research findings show that classroom teacher students hope for more detailed knowledge on how to include and teach different student groups and respond to the diverse needs of the students.

A category related to practicality or teaching practices was identified from both teacher student groups' answers. However, how the category was approached differed greatly. The classroom teacher students would change the content of the practices to focus more on inclusive education, whereas the special education teacher students argued for the diversification of the location. The diversification of the location of the practices during teacher education could be something that would support the perceived competence of the teacher students regarding the implementation of inclusive education as the teacher students would have an opportunity to experience

different types of schools and classrooms.

7 Discussion

7.1 Ethical Issues and Reliability

The data was fully collected before the analysis. Generally in qualitative research, the collection of data and its analysis takes place very simultaneously and thus the research requires continuous interpretation which may, however, cause issues related to interpretation of the data already during the acquisition phase (Hakala, 2007). We have aimed to build a comprehensive theoretical framework to avoid issues related to interpreting the data through a lens that is too narrow. A wide enough theoretical framework allowed us more space to interpret and encounter the data exactly how it was yet still remain within our theoretical framework. Additionally, we tried to maintain the inclusivity of the research by including visual support to the text which contributes to the substance of the theoretical framework. During the analysis phase, we went back to our theoretical framework and reflected on the relation between the data and the theoretical framework. This reflection was presented in the previous section and will be continued in the next sub-chapters.

In this research we have only focused on the feeling of competence of the teacher students, not the actual level of the competence. It should thus be noted that the research does not take a stand on how successful the teacher students will actually be in implementing inclusive education. Even if a participant has described their sense of self-efficacy as lacking, in reality they might still be successful at the implementation. On the contrary, there is also the possibility that in reality the competence to implement inclusive education is lower than they perceive it.

As for objectivity of the study, it is impossible to remain completely objective because previous literature and research guide the preparation of the questionnaire and later the analysis (Tuomi & Sarajärvi, 2009). Additionally, when conducting qualitative research and analysing the findings the researcher is always the one who chooses what is important for the research and what is not. We have added all the qualitative content analysis figures in appendix two. This is so that the process and progress of the chosen analysis method is clear also to the reader, and it allows us to be transparent about the choices we have made during the analysis and while presenting the findings and interpretations.

It is important to be aware of personal biases towards the researched topic. We are teacher students at the university of Oulu and therefore we also had personal opinions on the necessity

of this research in addition to the information read from previous research and literature. We have tried to increase the reliability of the research by remaining open about our background and biases and reflecting effectively on them. As we are teacher students ourselves, some of the participants of the study are possibly our friends. However, strict anonymity has been followed throughout the questionnaire process, and the participants cannot be identified. As the questionnaire was based on voluntary participation, it can be considered to enhance the ethicalness of the research as there was no obligation or pressure to answer the questionnaire (Vanclay, Baines & Taylor, 2013).

Additionally, in order to enhance the reliability of the study, we have conducted the research together. Collaboration in research is defined by Lewis, Ross and Holden (2012, p. 696) as "...where researchers work together on a research project, designing it and/or undertaking the project together, and publishing on its results together". Collaboration can be considered one main ingredient of developing social and human capital in research (Lewis et al., 2012). In the theoretical framework, we divided some of the workload, but always before and after writing independently, we sat together to discuss what should be researched as well as review what had been written by each researcher in order to ensure that we are both experts in all of the topics discussed in the thesis. In the analysis phase, we conducted the analysis of the data together throughout as we felt that it would make the findings more credible. This means we looked for the overarching topics from the answers as well as defined the categories together through mutual discussion. Also, the figures constructed from the conclusions were made together. As qualitative data is rarely measurable, no simple conclusions can be drawn. To prevent this, co-researching can be employed to get meaningful results while simultaneously avoiding over-generalization.

The credibility of the questionnaire was improved by conducting a pilot research prior to the actual questionnaire being published. Through the pilot study, we were able to test out both the data collection method as well as the data analysis method. Based on the pilot study, the chosen analysis method, qualitative content analysis, appeared effective as we were able to analyse and discuss the findings thoroughly and holistically. The pilot also helped us learn how to use Webropol as a data collection tool as well as improve the questionnaire as a whole. In the pilot we needed to disregard some of the questions and their answers since the form of the questions had been misunderstood. After changing the form of the questions from the pilot to the actual research, we were able to receive answers where the question had not been misunderstood,

which meant that we could analyse them. We believe that by conducting the pilot research, we were able to create a better questionnaire and thus improve the credibility of the research.

However, it should be noted that the amount of data we were able to collect is not that extensive. Thus, as we have already previously noted, no overreaching generalizations can be made based on the comparisons between our data and previous research especially in the quantitative parts or solely based on our data due to the low number of answers. We have tried to highlight this issue during the analysis phase as well as while presenting the findings in order to remain transparent about the starting points of our research.

In qualitative research, a small data set or short answers can be seen as negative also regarding the interpretations made from the analysis as it might make it difficult to draw conclusions and make the interpretations, and instead, the analysis remains at a superficial level. However, possibly due to a successful formulation of the questionnaire, we were able to receive profound and well-thought answers that responded to the questions well. The wide and extensive theoretical framework also allowed us to analyse the answers thoroughly. We feel that we have been successful in finding what is important in our data, making interpretations of it and identifying their relation to previous literature. Therethrough, despite the limitations of our data, our findings have provided some additional information on the topic of inclusive education and teacher students' views on it.

7.2 Summary of the Findings and Conclusions

The aim of this research has been to examine and describe Oulu University's teacher students' understanding of inclusive education and gain an in-depth understanding of their sense of self-efficacy to implement inclusive education in their future work and how teacher education has developed their self-efficacy. We have also compared the findings between master's phase classroom and special education teacher students. In this section, we will present a summary of our findings and conclusions to our research questions one at a time as well as other conclusions based on the findings. Case study research does not aim to search for measurable, explicit results but to offer new variables and questions for further research (Saarela-Kinnunen & Eskola, 2007). Thus, instead of generalization, we aim to build a comprehensive understanding of the findings.

Differences in Understanding

First, we will consider how teacher students at the University of Oulu define and understand the concept of inclusive education. Overall, the understanding of teacher students in our study reflects today's prevalent views on inclusive education being about the inclusion of all students, not only the ones who have special educational needs. The teacher students understand the implementation of inclusive education as their responsibility as a future teacher rather than place any demands on the students to adapt to their teaching, which also previous literature acknowledges as one of the starting points for inclusive teaching (Halinen & Järvinen, 2008; Lynch & Irvine, 2009). Out of the inclusive values defined by Booth (2011), the most evident in the answers are equality, rights, participation, community, respect for diversity and love/care. The latter is also seen as a strength of some participants to implement inclusive education. The participants describe inclusive education as being about equal participation, a right for everyone to learn and school culture that accepts and values diversity.

However, the answers show that inclusive education is seen to especially consider students who experience social barriers that affect their participation in education, such as students with different native languages. Difficulties in learning and other special educational needs are also acknowledged as a risk factor for being excluded in education, but the majority of the answers that discuss inclusive education in this way do not limit the understanding of students to be included only to students with special educational needs. Notable is that throughout the questionnaire only the classroom teacher students specifically word cultural issues and issues related to sexual minorities to be considered in the implementation of inclusive education, whereas the special education teacher students only mention the kinds of students to be included either as "all" or "students with special educational needs". Thus, it can be concluded that special education teacher students in this study do not describe who they think inclusive education considers as in detail as the classroom teacher students. However, it should be noted that this additional wording of the classroom teacher students does not necessarily suggest that their understanding would be wider by any means.

Throughout the questionnaire the participants show that they think that the implementation of inclusive education is not the sole responsibility of the teacher, but sufficient support must be available both through financial resources and informal support, and the whole institution of education must be inclusive for the implementation of inclusive education to be successful. The

teacher students recognise that inclusive education is about life-long learning and is not limited to primary education. However, when asked directly about their definitions of inclusive education, it is not specifically mentioned by many. This indicates that the participants are aware of the broad nature of inclusive education also outside of a teacher's work although they do not word it precisely when defining it.

Acknowledgement of different dimensions of inclusive education is also visible in the answers throughout the whole questionnaire, which reflect the theories of Ainscow, Booth and Dyson (2006) and A. Qvortrup and L. Qvortrup (2018) as well as other holistic definitions of inclusive education. The teacher students understand inclusive education to consider the comprehensive participation of students in the school as well as the school community including physical, academic, social and psychological aspects. The importance of inclusive school culture emerges from the answers also when the teacher students describe examples of how they would implement inclusive education. The teacher students see the learning environment, both the social and the physical, to contribute to successful implementation of inclusive education. The learning environment should be shaped to serve the individual needs of the students as this is when the students learn best (Quavang, 2017), which is something the teacher students in our study considered extensively. The teacher students describe the physical dimension through decorating the classroom so that it enhances the feeling of social belonging. However, no answers that consider physical access of the school building or the classroom are identified.

There is also variability in both teacher student groups' answers, and some define inclusive education referring to the placement of students with special educational needs to mainstream education. This reflects the idea of today referred to as integration in education. Finnish special education has been historically segregated (Kivirauma, 2012), which can explain why the integration aspect of inclusive education is still prevalent also in the teacher students' answers. One participant also understands inclusive education as something in between the integration and education for all views. The participant describes inclusive education as being about placing students with special educational needs to mainstream education, but also adapting the learning methods to respond to the needs of the students through the three-tiered support system. The fact that there was only one answer like this is, on the other hand, surprising as the three-tiered support system has been emphasized in Finnish schools and in educational discussions regarding inclusive education over the past years.

However, it should be noted that these narrower views that focus on the placement of the student and mainly or only consider students with special educational needs are not as prevalent in the answers as the broader and more holistic understanding of inclusive education described previously. Nevertheless, when asked about the teacher students' wishes for the development of the contents about inclusive education in teacher education, it is mentioned that more discussion about what inclusive education is and different ways to implement it would be needed as one participant feels that inclusive education is sometimes understood and defined too narrowly in teacher education.

Although the teacher students might have gotten their understanding outside of their education, also teacher education affects their perceptions of inclusive education. One reason why some teacher students relate special education and integration closely to the concept of inclusive education may be due to how teacher education is organized and what kind of values the teacher educators promote regarding inclusive education. Similarly to the school world, also in teacher education there is an ideological issue or a gap between special and inclusive education, which should be considered (Symeonidou, 2017). The move from special educational practices to inclusive educational approach requires that the methods used and the contents taught in many teacher education courses and departments must be challenged and reformed (Delano, Keefe, & Perner, 2008).

Teacher educators greatly affect the students' conceptualizations of inclusive education (Symeonidou, 2017). It has been reported that teacher educators often do not promote inclusive education effectively (Forlin & Nguyet, 2010), for example due to their strong background in special education or contradicting personal ideologies (Symeonidou, 2017). Even teacher educators who are skilled in inclusive educational practices and are committed to advocating the principles of inclusive education tend to contradict those principles in their teaching (Symeonidou, 2017).

In the last question about anything to add to the questionnaire one participant mentioned that they see no difference between the concepts of inclusive education and education overall. This made us wonder for how long the concept of inclusive education will be prevalent in education. When examining the history of the development of the concept of inclusive education, it can be noted that today's understanding of inclusive education stems from the concept of integration, but over the years, educational views have developed and integration is not used that much

in educational discussion anymore, at least not as a desirable aim. Will there be a time in education where there is no need to highlight the importance of education responding to the individual needs of students? Will it automatically be seen as an integral part of the education system by all educational professionals as well as other population and educational structures, and inclusive education as a concept is not needed anymore?

Special Education Teacher Students Have a Higher Sense of Self-efficacy

Secondly, we will discuss the findings related to the second research question about how teacher students perceive their competence in implementing inclusive education in their future work.

The confidence to teach a diverse group of students differs quite much among the classroom teacher students as well as in comparison with the special education teacher students. The confidence of classroom teacher students in this study is considerably lower than that of the special education teacher students in our research. This might indicate that the special education teacher students' sense of self-efficacy in implementing inclusive education overall is stronger than that of the classroom teacher students who answered our questionnaire.

Both teacher student groups are extremely willing to participate in multi-professional cooperation with other educational professionals as it is seen in the best interest of the child. Additionally, the teacher students feel that their competence to implement inclusive education can be complemented by their colleagues' competence through multi-professionalism. However, the classroom teacher students mention that multi-professionality must be considered more and some feel that they do not have adequate competence to actually implement multi-professionality in their future work which in turn was not mentioned by the special education teacher students. This indicates that even though the majority of teacher students are willing to participate in multi-professional cooperation, some feel their self-efficacy is not strong enough in the matter.

The teacher students highlight the importance of support in their answers to the question about their confidence to teach a diverse group of students as well as as an additional thought in the final question about anything to add to the questionnaire. The support can be, for example, in terms of financial support or personnel resources. Sufficient support further helps strengthen the self-efficacy of the teacher students (Desombre et al., 2021; Malinen, 2013; Yada et al.,

2021). The classroom teacher students discuss that they do not think that without sufficient support, they would be able to implement inclusive education. This indicates that at the moment, their sense of self-efficacy to implement inclusive education depends on external matters. However, as previously explored in relation to the understanding of inclusive education, the teacher students believe that teachers should not be required to implement inclusive education solely alone, which also previous literature supports.

Differentiation is described by the teacher students as acknowledgement of the individual needs of the students and adapting both the social and physical environment as well as the teaching methods accordingly. However, especially the classroom teacher students discuss that at the moment they do not feel that they have sufficient competencies to differentiate according to the versatile needs of the children. The special education teacher students discuss they need more knowledge on how to differentiate upwards. In the implementation of inclusive education, it is crucial to meet the individual needs of all students including students with and without special educational needs (Lynch & Irvine, 2009; Ruby, Owiny, Brawand & Josephson, 2017). Thus, it can be concluded the self-efficacy of the teacher students in this study regarding differentiation and through that the implementation of inclusive education should be developed more.

In the answers of the teacher students, there are no answers where the blame for the insufficient self-efficacy regarding the implementation of inclusive education would be put on the child. Sometimes the students are blamed for the unsuccessful implementation of inclusive education when the educators' self-efficacy is low (Crispel & Kasperski, 2021). This is in no way present in our findings.

To conclude, classroom teacher students' sense of self-efficacy in our research is lower than that of special education teacher students. When considering the self-efficacy to teach different student groups, special education teacher students had throughout different student groups higher mean values than classroom teacher students. Both teacher student groups had the highest mean value for teaching students who are POC or belong to the LGBTQIA+ community meaning they feel most competent to teach those students. The competence to teach students with learning difficulties was low in both teacher student groups respectively. Still, it should be mentioned that even though the perceived competence to teach students with learning difficulties was the second lowest of the mean values of the special education teacher students, the mean value itself was still considerably high.

Practical Experience and Discussions

Lastly, we will present the concluding findings to the sub-research question about how teacher education has developed the students' perceived competence to implement inclusive education.

When discussing the effect of teacher education on the development of their competence, teacher students highlight the importance of experience. They argue that the lack of experience has had the biggest effect on their perceived competence to implement inclusive education. Experience is mentioned by the teacher students in relation to many questions in the questionnaire, and it can be concluded that it is one of the main concerns regarding the sense of self-efficacy that arises from their answers. The teacher students argue that experience would positively influence the competence to implement inclusive education overall as well as the development of multi-professional skills. Experience is an important component of Bandura's (1997) theory on strengthening self-efficacy.

Practicality is closely connected to experience, and it is also often mentioned in the teacher students' answers. Both teacher student groups see practical matters as important to the strengthening of their self-efficacy. For example, going through practical examples about real-life situations in school during lectures is viewed positively. Some teacher students expressed concerns for the lack of practicality in their studies. This viewpoint was presented by the classroom teacher students as they felt that practicality had been missing in their studies and the course contents were seen as too academic. The special education teacher students in our study did not mention teacher education as the reason for why they had not yet acquired the practical skills, but rather saw it as something they can further acquire separately from teacher education.

As part of the practicality aspect, university practices are perceived meaningful to the development of self-efficacy to implement inclusive education. Practices are seen as the most meaningful part of the studies by both teacher student groups, and they are closely connected with the views about experience presented previously. This is also in line with previous research, which found that recent graduates considered their teaching practice experiences to have been the most influential part of their studies (Takala et al., 2023). Additionally, the classroom teacher students wish that the practices would consider issues of inclusive education more as

they see that this would increase their competence to implement inclusive education. The viewpoint on practices being insufficient in discussing inclusive education was not shared by the special education teacher students. They felt that it had been discussed a lot during the practices. However, one special education teacher student presented the wish to have practices in other schools than the teacher training school. This way the teacher students would come across different schools as the everyday practices can vary quite much between them.

Discussions are seen as an important component of strengthening the sense of self-efficacy by both teacher student groups. The teacher students feel that discussions have widened their perspectives. Discussions can be seen as a form of verbal persuasion according to Bandura's (1997) theory. Both informal and formal discussions with the teacher, whether that be the supervising teacher at a practice or teacher educator at the university, as well as with peers are seen meaningful by our participants.

Although the majority of the participants in both teacher student groups are highly willing to participate in multi-professional cooperation in the future, some classroom teacher students discuss that they do not feel competent to actually implement multi-professional cooperation as they have not received enough competencies from their education. The special education teacher students, in turn, highlight their education in a positive context regarding multi-professionality. Additionally, in the question regarding the wishes of the teacher students in regards of teacher education and the perceived competence to implement inclusive education in the future, classroom teacher students mention that having cooperation between classroom and special education teacher students during studies would be positive. Thus, it can be concluded, that the classroom teacher students feel that their education has not provided them with enough skills and knowledge to participate in multi-professional cooperation in their future work, whereas the special education teacher students in our study feel that their perceived competence is good.

In the quantitative presentation of the question about what aspects of teacher education have been meaningful regarding the teacher students' self-efficacy to implement inclusive education, both teacher student groups feel that especially mandatory courses specifically about inclusive and/or special education have been significant. Based on this comparison, it may be concluded that both teacher student groups see courses directly related to special and/or inclusive education as highly enhancing their feeling of competence to implement inclusive education, which

also previous literature supports (Crispel & Kasperski, 2021; Lancaster & Bain, 2010; Narkun, 2019; Takala & Sirkko, 2022), but classroom teacher students feel the number of mandatory courses is not sufficient. They list some other aspects related to inclusive education that, in their opinion, are missing from the teacher education that they would have felt beneficial to explore regarding their perceived competence to implement inclusive education in the future, such as sex education and more focus on communication skills.

Despite the critique the classroom teacher students present to the teacher education, in the question that considers factors in teacher education that have affected their perceived competence to implement inclusive education, the classroom teacher students mention that the mandatory course about inclusive education they have studied has been meaningful and optional courses have also provided additional insights to inclusive education. The special education teacher students do not bring up any specific courses that have enhanced their feeling of competence nor mention that courses related to special or inclusive education should be included more in their education. Instead, they feel that overall their studies have provided them with adequate knowledge to implement inclusive education. Additionally, the courses being more specific in their nature, as described section 4.5, might have affected the overall satisfaction as well as the higher sense of self-efficacy.

Classroom teacher students also bring up the meaningfulness of optional and minor studies both directly related to inclusive education as well as other optional courses regarding their feeling of competence to implement inclusive education more than the special education teacher students do. As already argued, this may indicate that as the classroom teacher students are unsatisfied with the number of mandatory courses about inclusive education, they have looked for other opportunities to strengthen their self-efficacy to implement inclusive education.

Based on our findings neither teacher student group feels that other mandatory courses than courses directly about inclusive and/or special education contributed to the strengthening of their self-efficacy. As inclusive education is an important topic of all teachers' work (Takala et al., 2023), it should also be a topic that the overall teacher education highlights throughout the education. These research findings could indicate that teacher education overall does not promote the strengthening of the teacher students' self-efficacy to implement inclusive education in their future work. However, the fact that the teacher students have not felt other mandatory courses meaningful to the development of their sense of self-efficacy to implement inclusive

education could also be due to a narrow understanding of the concept. Alternatively, the teacher students might not realize that a topic not directly related to inclusive education or not worded as something related to it could also have been meaningful regarding the development of their self-efficacy. For example, the overview of the course contents as well as the whole study descriptions shows that self-reflection is promoted throughout the education (Peppi, 2023aa-dd; Peppi, 2023h; 2023z), which is also an important aspect of the effective implementation of inclusive education. This could potentially mean that the teacher students do not see self-reflection as being directly a part of implementing inclusive education. Additionally, the value base of inclusive education including, among others, equality and participation (Booth, 2011), is visible in the overall study descriptions (Peppi, 2023ee; Peppi, 2023x; Peppi, 2023y). Therefore, it might be that these values are part of the courses without direct discussion of them.

When it comes to the overall satisfaction of the teacher students, based on our findings, it can be concluded that the special education teacher students are more satisfied with their studies overall regarding inclusive education whereas the classroom teacher students feel their studies have not provided them with sufficient competence to implement inclusive education in their future work. Where classroom teacher students mention something has been lacking in their education, the special education teacher students often mention it being present in their studies or do not bring it up as something that they feel should be considered more. This stands out, among others, in the context of multi-professionalism, courses about special and/or inclusive education and teaching practices. Additionally, in the question about weaknesses of the participants regarding the implementation of inclusive education, the classroom teacher students highlight the lack of education related to special educational topics. However, as previously argued, this may also indicate that the classroom teacher students are more reflective and critical towards their education and themselves than the special education teacher students. Further research would be needed about the possible differences between the teacher students' reflection skills.

It may be concluded that overall, the classroom teacher students see the biggest need for development regarding their self-efficacy in teacher education as a whole to focus more on inclusive education. The special education teacher students see their own competence to implement inclusive education through experience, however not highlighting the fact that teacher education has not offered opportunities for acquiring it, as in most need of development. The findings

show that there is room for improvement in both teacher education programmes to make inclusive education as successful as possible. The special education teacher students also mention aspects that must be developed in their perceived competence as well as their university education, although not to the same extent as the classroom teacher students. The special education teacher students discuss, among others, the lack of experience and practical skills and certain skill areas, such as differentiating up or encountering students with physical disabilities.

As teacher education has not evolved simultaneously with the policy changes regarding inclusive education in schools (Saloviita, 2020), there is need for adjustments to be made. In the next section we will thus consider possible improvements that could be made in teacher education to better support the teacher students' self-efficacy to implement inclusive education.

7.3 Our Recommendations for the Development of Teacher Education

Similar categories stood out from the data multiple times either as something that had strengthened the participants' self-efficacy to implement inclusive education or as something they felt had been lacking from teacher education even though it would have been beneficial for the development of their self-efficacy. These categories are practicality, experience, teaching practices, specific courses about special and inclusive education, discussions with peers and the teacher both in informal and formal settings and multi-professionality. Overall, the conclusion of our findings show that teacher education could do more in strengthening the self-efficacy of the teacher students to implement inclusive education in their future work. Thus, based on both previous literature presented in this research as well as the answers of the teacher students, we propose the following recommendations for teacher education of classroom and special education teacher students.

Firstly, courses about inclusive education should be added to the teacher education curricula in the case of classroom teacher students. At the moment, many of the inclusive and/or special education courses offered are not mandatory for classroom teacher students. The voluntary nature of the studies can lead to the development of the competence to be based on the student's choices. Inclusive education is something that every teacher will face in their future work (Takala et al., 2023), which is why sufficient competence in implementation of inclusive education is crucial. In addition to curricular content, teacher education could show example by aiming

to make the education at the university as inclusive as possible, for example by offering different options for demonstrating one's knowledge and skills such as a choice between an essay or an exam.

As discussed previously, there is variation and ambiguity in what is meant by the concept of inclusive education and especially who inclusive education considers. Previous literature defines differences in the understanding of inclusive education as negative as it can lead to unsuccessful implementation of inclusive education due to the risk of educational institutions and professionals following practices typical for integration instead of inclusive practices (Lynch & Irvine, 2009). In addition to including more mandatory courses about inclusive education, we propose that during the already existing courses the understanding of inclusive education must be considered more regarding both teacher student groups. In our opinion, no teacher student should confuse the practices of inclusive education and integration after graduation so that they do not harm any student and do not act contrary to the principles of inclusive education.

Our case study shows that teacher students feel more competent teaching students who are POC or come from a different cultural background or belong to the LGBTQIA+ community whereas the feeling of competence to teach students with learning difficulties and physical disabilities is lower. Based on these findings, there should be more focus during the courses about inclusive education on the student groups mentioned, especially where the feeling of competence is lacking. We recognise that as our sample size is quite small, one cannot make direct generalizations based on the findings. Thus, this could be a potential topic for future research.

Secondly, multi-professionality must be included in teacher education. Both in the world and in Finland, teacher education is clearly divided into general and special teacher education (Lakkala, 2008). This means that there is not much collaboration between the degree lines. If special education and general education are held apart in teacher education, it may promote the perception of inclusive education only as a matter of special education teachers (Slee, 2001). As inclusive education becomes more and more common in schools, it cannot be considered to simply be an issue considered by the special education teacher students. Cooperation is an essential part of inclusive education (Devecci & Rouse, 2010; Kykyri, 2020; Malinen, 2013; Savolainen et al., 2012), which is why it should be also practiced during teacher education (Malinen, 2013). This could include having common courses where both classroom teacher students

as well as special education teacher students would collaborate. Our research findings show that although teacher students are willing to cooperate in their future work, they do not feel competent to do it. In order to strengthen teacher students' sense of self-efficacy to implement inclusive education, multi-professionality must be practiced during teacher education (Ladonlahti & Naukkarinen, 2006).

Through collaboration between the degree lines both programmes could learn from each other. At the University of Oulu, there are educational experts specialised in inclusive education and special education, and these people's expertise could be utilized to increase the sense of self-efficacy to implement inclusive education of all teacher students. As special education teacher students did not mention cultural aspects in regards of inclusive education, they could benefit from teacher educators who are experts in cultural matters in education, such as the lecturers of the ITE programme.

Thirdly, teacher education should aim to bring more practicality into the studies. This is by no means a new idea as there has been an increasing call for teacher education to change into more practice oriented (Jenset et al., 2018). As discussed in the sub-chapter 4.4, academic knowledge on its own is not sufficient for the students to learn about inclusive education (Symeonidou, 2017). Our research findings reflect similar views about teacher education being too academic in relation to inclusive education. Practical examples, such as case examples of real-life situations related to the implementation of inclusive education, must be a part of the teaching. This does not mean that academic knowledge should be disregarded but rather that it should intertwine more with practice.

In relation to practicality, the teaching practices should focus more on inclusive education. Even though inclusive education should be present in all teaching, there needs to be focus on it for it to truly have an effect. This could be done by having one week of practice where inclusive education would be the main focus. As practices have often been seen as one of the most influential aspects of teacher education (Takala et al., 2023), it could be considered if the number or length of practices should be increased. The schools where the practices take place should also be more diverse. Teacher training schools often do not have as many students with severe intellectual disabilities as other schools (Opetushallitus, 2020), which means that the student population the teacher students encounter during their practices at teacher training schools is not as

diverse as in other schools. It is crucial for the teacher students to face as large variety of students as possible to practice as well as observe other teachers implement inclusive education (AlMahdi & Bukamal, 2019; Arvelo-Rosales et al., 2021; Opetushallitus, 2020). Additionally, the teacher students should be able to attend different schools as the everyday practices might differ between different schools. This way the teacher students would have a more comprehensive understanding of teaching and inclusive education in practice.

Our research findings show that special education teacher students overall feel more confident teaching diverse groups of students compared to classroom teacher students. The special education teacher students are also more satisfied with their university education regarding the taught skills or knowledge to implement inclusive education. Based on our research, it may be considered whether a common teacher education that combines both teacher education programmes or parts of the programmes would be better for more effective and successful implementation of inclusive education. A combined programme exists for example in the United States (Naukkarinen & Ladonlahti, 2001). It can be debated what would be the best way to organise teacher education so that it promotes the self-efficacy of the teacher students to implement inclusive education the best. Nonetheless, our research emphasizes that the self-efficacy to implement inclusive education must be strengthened regarding all teacher students.

7.4 Final Thoughts

Even though we have proposed some recommendations for the strengthening of teacher students' sense of self-efficacy to implement inclusive education during their teacher education, we recognise that the building of self-efficacy requires time. Teacher students or teachers should not be expected to be completely ready at any point during their studies or career. It should also be emphasized that inclusive education as a concept refers to a process. It is not a simple goal to be reached but rather something that evolves and changes over time. Although our research findings highlight that the teacher students feel they need to receive more practical training to implement inclusive education both through practical examples during university courses as well as teaching practices, due to the ethical nature of inclusive education we think that teacher education should, also in the future, emphasize the kind of competence that allows the teacher students to reflect on their skills and participate in life-long learning.

We are also aware that some things that the participants mention as lacking from their education may actually have been taught and considered during the studies, but the participants themselves have not made the effort to learn and participate in the lectures, for example, because of absences. However, as inclusive education is so prevalent in every teacher's work, gaining sufficient competence should not be dependent on few absences or not fully concentrating on every issue taught but the studies as a whole should promote inclusive values. Additionally, acquiring a high sense of self-efficacy can also help teachers with their job satisfaction as well as prevent burn outs (Bandura, 1995; Narkun, 2019; Yada et al., 2021; Zee & Koomen, 2016). This is why it is essential that teacher education focuses on strengthening it not only in regards of inclusive education but other topics as well.

The point made about the fact that teacher education as a whole should promote the self-efficacy to implement inclusive education also relates to the current issue in teacher education according to which acquiring sufficient special pedagogical knowledge is highly dependent on students' personal choices regarding optional and minor studies. We believe that special educational experts and expertise knowledge are and will also in the future be needed in education as the work of a teacher is so broad. However, it does not eliminate the fact that all teachers must receive adequate knowledge, skills and confidence to implement inclusive education, which necessarily requires the number of courses about inclusive and special educational topics to be increased or the courses to offer more knowledge and competence.

The issue of sufficient support was highlighted in the answers throughout the questionnaire and the findings made from them. The teacher students acknowledge that the effective implementation of inclusive education as well as a strong sense of self-efficacy requires different kinds of resources. It can thus be concluded that skills and resources go hand in hand when it comes to inclusive education. Even though it is important for teachers to be competent and feel confident in their skills regarding inclusive education, sufficient financial and personnel resources are needed. Additionally, previous literature shows that if the teachers do not feel that there are sufficient resources, it influences their attitude towards inclusive education negatively (Desombre et al., 2021). The lack of resources is often described as one reason for why the implementation of inclusive education does not work (Crispel et al., 2021; Desombre et al., 2021; Saloviita, 2020).

However, simply putting money into inclusive education without ensuring that the teachers become competent does not support inclusive education either. Therefore, enough financial resources should be put into the implementation of inclusive education while simultaneously strengthening the self-efficacy of the teachers. Inclusive education should not be encouraged simply as a means to make education more profitable or efficient, such as by ending special education classrooms but not offering the help of a special education teacher for the mainstream classroom teacher. It should be the right of every student to receive quality education and thus the responsibility of all educational professionals.

Our research findings are mainly in line with previous research, of which some is over a decade old. The research showing that inclusive education should be considered more in teacher education has been known for a considerable time. Still, teacher education has not changed to meet the new needs for future teachers' competence, which have resulted from the policy changes regarding inclusive education in schools (Saloviita, 2020). Special educational knowledge was found to have the lowest competence level according to recently graduated teachers (Saloviita & Tolvanen, 2017). There is a clear need for changes to be made so that teacher education can promote the acquisition of competencies of teacher students to implement inclusive education. Our research findings highlight that inclusive education must be considered more in teacher education, especially in the classroom teacher education programme.

Although a larger sample size would be desirable for the reliability of the findings, the answers give direction to what the teacher students find the most meaningful for strengthening their self-efficacy. Thus, even if no conclusions can be drawn from the overall degree of sense of self-efficacy of teacher students, the research can help in decision-making in regards of teacher education. These findings can provide perspective when making possible changes in teacher education so that it would better support the teacher students' self-efficacy to implement inclusive education in the future. For example, the professors in teacher education can adapt their teaching to the wishes of the teacher students, such as adding more discussion and providing practical, concrete examples about the implementation of inclusive education in relation to real-life situations also during more academic courses. However, larger changes, such as to the number of courses about inclusive and special educational topics, must take place as well. Still, it should be acknowledged that teacher education alone should not be held responsible for the

successful implementation of inclusive education. In addition to changes in teacher education, educational policies, attitudes and resources must align with the values of inclusive education.

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Appendices

Appendix One: Questionnaire Sent to the Participants

Inclusive education and teacher students' competence

The survey is targeted at master's level class teacher students and master's level special education students at the University of Oulu. This survey is for a master's thesis about inclusive education, understanding of inclusive education of master level teacher students and their feelings of competence to implement inclusive education in their future work. The research is about teacher students' own perceptions of their competences in regards of inclusive education at the present moment of their studies. Please note that after continuing to the next page, you cannot return to the previous page to edit your answers.

1. I am a master's level student at the University of Oulu and I study in *

- Class teacher programme (LO, ITE, Taika and Tekno)
- Class teacher programme with a minor in special education
- Special education programme

2. How do you define and understand inclusive education? *

3. I feel confident teaching a diverse group of students. *



4. Why, why not? *

5. I am willing to co-operate and have confidence in working with other professionals to implement inclusive education such as speech therapists, school psychologists or preparatory education teachers. *



6. Why, why not? *

Inklusiivinen koulutus ja opettajaopiskelijoiden valmiudet

Kyselyn kohderyhmä on maisterivaiheen luokanopettajaopiskelijat sekä maisterivaiheen erityispedagogiikan opiskelijat Oulun yliopistossa. Kysely toimii aineistona gradututkielmaamme inklusiivisesta koulutuksesta, maisterivaiheen opettajaopiskelijoiden ymmärryksestä inklusiivisesta koulutuksesta ja heidän valmiuksistaan toteuttaa inklusiivisista koulutusta tulevassa työssään. Tutkimus koskee opettajaopiskelijoiden omia näkemyksiä heidän valmiuksistaan toteuttaa inklusiivista kasvatusta tässä vaiheessa opintojaan. Huomaathan, että siirtyessäsi seuraavalle sivulle, et voi enää palata edelliselle sivulle muokkaamaan vastauksiasi.

1. Olen maisterivaiheen opiskelija Oulun yliopistossa ja opiskelen *

- Luokanopettajakoulutuksessa (LO, ITE, Taika ja Tekno)
- Luokanopettajakoulutuksessa, sivuaineena erityispedagogiikka
- Erityisopettajakoulutuksessa

2. Miten määrittelet ja ymmärrät inklusiivisen koulutuksen? *

3. Olen itsevarma monipuolisen oppilasryhmän opettamisesta. *



4. Perustele *

5. Olen itsevarma ja halukas työskentelemään yhteistyössä muiden ammattilaisten kanssa esimerkiksi puheterapeuttien, koulupsykologien tai valmistavan luokan opettajien kanssa inklusiivista koulutusta toteutettaessa. *



6. Perustele *

7. I can differentiate my teaching for example to those who have a more advanced skill set as well as to those whose skills are at a lower level. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

8. I can adjust my teaching to fit the needs of the students who have learning difficulties such as dyslexia or dyscalculia. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

9. I can adjust my teaching to fit the needs of the students who have physical disabilities such as hearing or vision impairment or motor disabilities. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

10. I can adjust my teaching to fit the needs of the students who have neurodiverse characteristics such as ADHD or who are on the spectrum of autism. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

11. I know how to manage behavioural or socioemotional challenges of students in the classroom. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

12. I can teach a classroom where there are multiple native languages and cultures present. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

13. I feel confident in creating a space where minorities are respected for example where racial and LGBTQIA+ related issues are considered. *

- Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

14. Give examples how you would implement inclusive education in your teaching. *

15. What are your strengths in implementing inclusive education? *

7. Osaan eriyttää opetustani sekä niille oppilaille, jotka kaipaavat haastettua sekä niille, jotka tarvitsevat tukea perusasioiden hallinnassa. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

8. Osaan mukauttaa opetustani siten, että se palvelee oppilaita, joilla on oppimisen haasteita esimerkiksi lukihäiriö tai diskalkulia. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

9. Osaan mukauttaa opetustani siten, että se palvelee oppilaita, joilla on fyysisiä vammoja esimerkiksi näkö- tai kuulovamma tai motorisia rajoitteita. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

10. Osaan mukauttaa opetustani siten, että se palvelee oppilaita, joilla on neurologisia erityisvaikeuksia esimerkiksi ADHD tai, jotka ovat autismin kirjolla. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

11. Tiedän, kuinka käsitellä oppilaiden haasteita, jotka liittyvät käyttäytymiseen tai sosioemotionaalisiin vaikeuksiin. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

12. Osaan opettaa oppilasryhmää, jossa on läsnä monikielisyttä ja eri kulttuureita. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

13. Olen itsevarma sellaisen ympäristön luomiseen, jossa vähemmistöjä kunnioitetaan esimerkiksi ottamalla huomioon rasismiin ja sateenkaarivähemmistöihin liittyvät aiheet. *

- Täysin eri mieltä Jotseenkin eri mieltä Ei samaa eikä eri mieltä Jotseenkin samaa mieltä Täysin samaa mieltä

14. Anna esimerkkejä siitä, miten toteuttaisit inklusiivista koulutusta opetuksessasi. *

15. Mitkä ovat vahvuutesi inklusiivisen koulutuksen toteuttamisessa? *

16. What are your weaknesses in implementing inclusive education? *

17. What has influenced your competence to implement inclusive education the most during your university studies? *

- Mandatory courses about inclusive and/or special education
- Other mandatory courses and their content
- Optional or minor courses about inclusive and/or special education
- Other optional or minor courses and their content
- Discussions with the teacher
- Discussions with peers in class for example after presentations and during group work
- Discussions with peers and others in informal settings
- Academic assignments for courses
- Lesson planning related to university courses
- Lesson planning and implementation during practices
- Observing of teaching during practices
- Literature of your own choice
- Other

18. Justify your answer(s) to question number 17. *

19. What do you wish that teacher education would have offered to increase your confidence in implementing inclusive education or aforementioned issues? *

20. Is there something you would like to add considering inclusive education and its role in teacher education based on your experiences?

16. Mitkä ovat heikkoutesi inklusiivisen koulutuksen toteuttamisessa? *

17. Mikä yliopisto-opintojesi aikana on eniten vaikuttanut valmiuksiisi toteuttaa inklusiivista koulutusta? *

- Pakolliset kurssit inklusiivisesta koulutuksesta ja/tai erityispedagogiikasta
- Muut pakolliset kurssit ja niiden sisältö
- Vapaaehtoiset kurssit tai sivuaineopinnot inklusiivisesta koulutuksesta ja/tai erityispedagogiikasta
- Muut vapaaehtoiset kurssit tai sivuaineopinnot ja niiden sisältö
- Keskustelut opettajan kanssa
- Keskustelut muiden opiskelijoiden kanssa oppitunneilla esimerkiksi esitelmien jälkeen ja ryhmätöiden aikana
- Keskustelut muiden opiskelijoiden tai henkilöiden kanssa opiskelun ulkopuolella
- Akateemiset kirjalliset tehtävät kurseille
- Oppituntien suunnittelu yliopistokursseille
- Oppituntien toteuttaminen ja suunnittelu harjoittelun aikana
- Opetuksen havainnointi harjoitteluiden aikana
- Kurssikirjallisuus
- Vapaaehtoinen kirjallisuus
- Muu

18. Perustele vastauksesi kysymykseen 17. *

19. Mitä toivoisit, että opettajakoulutus olisi tarjonnut valmiuksiesi vahvistamiseen inklusiiviseen koulutukseen ja yllämainittuihin aiheisiin liittyen? *

20. Onko sinulla jotain lisättävää inklusiiviseen koulutukseen tai sen käsittelyyn liittyen opettajaopintojesi aikana kokemuksiesi perusteella?

By ticking the box below, I agree to send my answers and them being used in this research. Anonymity is guaranteed.

Rakittamalla alla olevan laatikon, suostun lähettämään vastaukseni sekä niiden käyttämiseen tutkimuksessa. Anonymiteetti taataan.

Appendix Two: Qualitative Content Analysis Tables

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
“Placing SEN students in mainstream classrooms.”	Placement of students with SEN to mainstream classrooms	Integration of SEN students in mainstream education	Placement of students	Integration
“Inclusive education meets the needs of all students.” “...aims to ensure that everyone has a chance to participate and learn.”	Education that considers and caters to all students’ individual differences.	Equality of education	Equality	Education for all
“Adapting the environment to the needs of the student.” “Inclusive education takes into account different learners and their competences.” “...school, where they [students] are given sufficient support.”	The school environment is adapted to the needs of the child, not the other way around.	Finding the best support methods to the individual needs	Differentiation	
“...school culture that aims to ensure that everyone has a chance to participate and learn.”	School culture that accepts and values diversity.	Diversity in school culture	School culture	

Figure 16: Special education teacher students’ definitions and understanding of inclusive education.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
“I feel that I don’t have enough practical skills.”	Lack of practical skills contributes to the feeling of confidence negatively.	Lack of practical skills perceived to have a negative effect	Lack of practical skills	Practicality

<p>“Experience teaches.”</p> <p>“I still am not experienced.”</p> <p>“... have gained useful tools from substituting, practice and work in the field.”</p>	<p>Lack of experience contributes to the feeling of confidence negatively, or that having experience has contributed to the perceived confidence positively.</p>	<p>The amount of experience influences the perceived confidence</p>	<p>Experience</p>	
<p>“I am confident in teaching a diverse group if I get necessary support.”</p> <p>“The necessary support means, for example, counselors, the help of a special education teacher, and continuous training.”</p> <p>“Classroom teachers shouldn’t automatically be able to do special education teachers’ work, if there is need for special support.”</p>	<p>The confidence to teach a diverse group increases when the teacher receives enough support.</p>	<p>Support for the classroom teacher</p>	<p>Resources</p>	<p>Support</p>

Figure 17: Classroom teacher students’ confidence in teaching a diverse group of students presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“I have previous experience with students with SEN.”</p> <p>“I have only a little experience from teaching in practice.”</p>	<p>Lack of experience contributing to the feeling of confidence negatively, or that having experi-</p>	<p>The amount of experience influences the perceived confidence</p>	<p>Experience</p>	<p>Confidence</p>

“During practices I have encountered different groups.”	ence has contributed to the perceived confidence positively.			
“I have received good tools from my education to meet and teach diverse groups of students.”	Teacher education has given the necessary skills and knowledge to implement teaching for different learners.	Teacher education provides necessary skills	Teacher education	

Figure 18: Special education teacher students’ confidence in teaching a diverse group of students presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“Collaboration is vital.”</p> <p>“Inclusive education cannot be implemented properly without cooperation.”</p> <p>“Teachers have a big workload anyway, so any support ... is welcome.”</p> <p>“Everyone's skills are combined and thus their own skills and knowledge about inclusive education improves.”</p>	Collaboration is perceived to be an important part of a teacher’s work regarding inclusive education.	Vital for the success of inclusive education	Collaboration as a tool to implement inclusive education	Collaboration in inclusive education

<p>“Working in a team is great because it adds perspective and more specific knowledge to support a student's needs.”</p> <p>“These professionals work for the student and the student deserves the best help they can get which means that I as a teacher has the responsibility to cooperate.”</p> <p>“When the teacher receives more support, the child receives more support.”</p>	<p>Collaboration is in the child's interest as it supports them the best.</p>	<p>Multi-professionality is the best for the child</p>	<p>Best for the child</p>	
<p>“Very much so [willing to collaborate], the competence from my studies is not enough.”</p>	<p>Studies have not included enough about multi-professionality.</p>	<p>Lack of multi-professionality during teacher education</p>	<p>Teacher education and multi-professionality</p>	

Figure 19: Classroom teacher students' willingness to cooperate with other professionals presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“Multi-professional cooperation is a necessary part of inclusive education”</p> <p>“There is power in collaboration.”</p> <p>“The importance of collaboration should not be underestimated.”</p>	<p>Collaboration is perceived important in education and a necessary part of inclusive education.</p>	<p>Vital for the success of inclusive education</p>	<p>Collaboration as a tool to implement inclusive education</p>	<p>Collaboration in inclusive education</p>

<p>“SEN student needs all the possible support in their life and learning.”</p> <p>“Multi-professional cooperation best supports the student themselves, which is most important about it.”</p> <p>“Cooperation with different parties provides such information that the teacher does not necessarily get, which is valuable.”</p>	<p>Collaboration is in the child’s interest as it supports them the best.</p>	<p>Multi-professionalism is the best for the child</p>	<p>Best for the child</p>	
<p>“My studies have provided me with good competences to cooperate.”</p>	<p>Studies have provided competence for cooperation.</p>	<p>Competence for multi-professionalism during teacher education</p>	<p>Teacher education and multi-professionalism</p>	

Figure 20: Special education teacher students’ willingness to cooperate with other professionals presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“Classroom rules where there is a common understanding that racism, homophobia transphobia or any other form of discrimination is not allowed and why.”</p> <p>“Creating an environment in the classroom where we don’t judge for our differences.”</p> <p>“Trying to rid any exclusive behaviour.”</p>	<p>Classroom environment supports the differences of students, the atmosphere is accepting of diversity and discrimination of any kind is not allowed.</p>	<p>Diversity is valued in the social environment of the classroom</p>	<p>Social environment</p>	<p>Environment</p>

<p>“By creating a space where all differences are allowed and natural”</p>				
<p>“I would make students’ identities visible in the classroom such as decorating with rainbow flags, writing greetings in different languages on the walls.”</p> <p>“In the case of an ADHD student open classrooms can be a poor choice, which is why for example different space dividers, different chair options, activation toys/stress toys, headphones can help the concentration.”</p>	<p>Classroom environment supports the differences of students by creating a physical space that values diversity.</p>	<p>Diversity valued in the physical environment of the classroom</p>	<p>Physical environment</p>	
<p>“Always having differentiation in my lesson plans.”</p> <p>“Give options of activities without specifying level of difficulty. Offer options of working methods (with limitations).”</p> <p>“...different challenges require different support as the children are not copies of each other...”</p> <p>“I believe that I will ... a lot of functional tasks where differentiation is smooth and easy.”</p>	<p>Improving the learning environment according to the students’ needs.</p>	<p>Differentiating teaching based on the students’ needs</p>	<p>Teaching methods</p>	<p>Differentiation</p>
<p>“I would present diverse situations and identities in the teaching material.”</p>	<p>Teaching material should be diverse,</p>	<p>Diverse teaching material</p>	<p>Teaching material</p>	

<p>“For example, I would offer the students reading book options that would be in their native tongue.”</p> <p>“I would also make versions of different tasks marked with different color codes and I would tell the student which colored tasks they are going to make”</p> <p>“By differentiating the same task into different levels while taking different groups [of students] into account.”</p>	<p>and it should support the children and their identity.</p>			
<p>“Use of visual and written instructions.”</p> <p>“The structure of the lesson is clear, so going through the timetable of the day.”</p> <p>“Visual illustration for students who study Finnish as a second language.”</p>	<p>Using visual instruction so that the structure of the lesson or instruction of an assignment is clear.</p>	<p>Structure supports learning</p>	<p>Structure</p>	

Figure 21: Classroom teacher students’ examples of how to implement inclusive education in teaching.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“By practicing interaction skills...”</p> <p>“A positive attitude towards all students, encouraging them and strengthening their self-esteem, encountering students with respect...”</p>	<p>Emphasizing respective communication and having a positive attitude towards all students.</p>	<p>Teacher’s communication and attitude towards students</p>	<p>Social environment</p>	<p>Environment</p>

<p>“Dividing children into groups where they can support each other. Of course, this should be done so that the students aren’t aware of the basis on which they have been divided into different groups. By planning teaching so that it serves all students (differentiation up and down) as well as using different senses in teaching (seeing, hearing etc.).”</p> <p>“Differentiating teaching individually to fit the needs of the student.”</p>	<p>Improving the learning environment according to the students’ needs.</p>	<p>Differentiating teaching based on the students’ needs</p>	<p>Teaching methods</p>	<p>Differentiation</p>
<p>“Differentiating different tasks for example so that the student can choose from three different options the one matching their own skill level.”</p>	<p>Teaching material should be diverse, and it should support the children and their identity.</p>	<p>Diverse teaching material</p>	<p>Teaching material</p>	
<p>“I will use illustrated routines.”</p> <p>“Maintaining the structure is an effective means of support for many students. Clear speech, clear instructions and visual support as well. ”</p>	<p>Emphasizing the structure of the lessons through visual and clear instruction.</p>	<p>Structure supports learning</p>	<p>Structure</p>	

Figure 22: Special education teacher students’ examples of how to implement inclusive education in teaching.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“My openness and genuine love and respect towards everyone.”</p> <p>“I am empathetic and genuinely care about them [students] as individuals ”</p>	<p>Being empathetic and caring for students.</p>	<p>Empathy perceived as a strength</p>	<p>Love and empathy</p>	<p>Personal attributes</p>

<p>“Personally, belonging to the rainbow community helps with topics related to it.”</p> <p>“I also have ADHD. I think I can work and sympathize with students with ADHD better.”</p>	<p>Belonging to a minority helps the teacher to emphasize students.</p>	<p>Similarities between teachers and students</p>	<p>Similarities with the students</p>	
<p>“Flexibility - adapt to a new situation fast.”</p> <p>“Reflectivity - I tend to reflect over what happened, why, and how I can improve/change.”</p> <p>“My curiosity and willingness to develop my own professionalism. I like to challenge myself and want to increase my know how on inclusive education.”</p> <p>“Children first –thinking and innovative thinking. To put it into other words, I don’t yet have any routines which is why adopting new things is easy and part of the professional development.”</p> <p>“From the ITE programme I have learnt to acknowledge and respect diversity. From the gender studies minor I have learnt about the themes of gender, sexuality and equality.”</p>	<p>Acknowledgement of the current situation in education, being able to reflect and to want to improve as a teacher.</p>	<p>Adaptability, reflection and will to improve</p>	<p>Pedagogical skills</p>	<p>Skills</p>

Figure 23: Classroom teacher students’ strengths in implementing inclusive education.

Meaning units	Condensed meaning unit	Codes	Sub-categories	Categories
<p>“Cooperation and interaction skills”</p> <p>“Encountering students equally.”</p>	<p>Cooperation and interaction skills as well as encountering students are seen as</p>	<p>Different skillsets in the profession are seen as a strength</p>	<p>Pedagogical skills</p>	<p>Skills</p>

<p>“Encountering students with socio-emotional challenges”</p> <p>“I know how to encounter students and think about the support methods that are suitable for them”</p>	<p>a strength to implement inclusive education.</p>			
<p>“I have previous experience with different support needs.”</p>	<p>Previous experience seen as a strength regarding implementation of inclusive education.</p>	<p>Previous experience</p>	<p>Practical skills</p>	

Figure 24: Special education teacher students’ strengths in implementing inclusive education.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“Education”</p> <p>“Lack of knowledge”</p> <p>“Understanding certain diagnosis that I have not encountered before and has not been spoken about at the university.”</p> <p>“Not having enough knowledge about disabilities and the autism spectrum.”</p> <p>“I am not an expert in every othering aspect that students might have.”</p> <p>“Topics related to neurodiversity and special education, which have not been considered [at the university].”</p>	<p>Teacher students feel they have not received enough knowledge related to the attributes of the students with special educational needs.</p>	<p>Lack of knowledge and education related to special educational topics</p>	<p>Education</p>	<p>Incompetencies</p>

<p>“Lack of confidence”</p> <p>“Being scared [to implement inclusive education]”</p>	<p>Lack of confidence to implement inclusive education.</p>	<p>Lack of confidence</p>	<p>Confidence</p>	
<p>“Lack of experience”</p> <p>“Definitely experience. Having had roughly 2 years of teaching experience varying in all levels of the educational system but higher education I still feel that the lack of experience is the biggest factor that prevents me from succeeding on the level that I would like to in implementing inclusive education.”</p>	<p>Lack of experience seen as a prohibiting factor to successful implementation of inclusive education.</p>	<p>Lack of experience seen as a negative factor</p>	<p>Experience</p>	

Figure 25: Classroom teacher students’ weaknesses in implementing inclusive education.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“On a practical level, teaching students with special educational needs”</p> <p>“Especially for young teachers, I believe that the reality of the school world can feel hard if their classroom happens to have a lot of students with challenges and can lead to fatigue, etc.”</p> <p>“I don’t have the answers to everything and I am sure there will be difficult situations.”</p>	<p>The competence for practical implementation of inclusive education in future work is seen as a weakness.</p>	<p>Feelings of uncertainty towards the practical implementation</p>	<p>Transition from teacher education to work life</p>	<p>Practicality</p>
<p>“Differentiating up”</p>	<p>Being able to give students</p>	<p>Giving students enough challenge</p>	<p>Differentiating up</p>	<p>Differentiation</p>

	enough challenge.			
“Supporting students who have motoric challenges or challenges with senses (deaf, blind).”	Supporting students with motoric challenges or who have challenges with senses.	Supporting students with physical disabilities	Physical disabilities	

Figure 26: Special education teacher students’ weaknesses in implementing inclusive education.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
“Conversations always open up interesting reflection on the topic and expand my own viewpoint.”	Discussions widen perspectives.	Discussions are meaningful	Reflection	Discussions
“Concrete examples are memorable especially if the perspective comes from a person who themselves are directly influenced by it for example a person with ADHD has been discussing ADHD.” “...practical examples are missing.”	Having somebody who has special educational needs sharing concrete examples.	Concrete examples on different situation in the studies	Practical knowledge	Knowledge
“Real life situations such as practice and working in the field.” “While planning lessons and implementing them I have	Experience on the field is seen as a positive influence on competence.	Practices and real-life experiences	Knowledge through experience	

<p>needed to take into consideration for example F2 and differentiation.”</p> <p>“But most influence has come from practice outside of university-controlled teacher practices. Substituting and working as a resource teacher has given a lot more insight into inclusive education and its implementation.”</p> <p>“I have a previous degree and work experience with special needs children...Also practical experiences are more valuable to the work in my opinion than formal studies.”</p> <p>“Real practice...”</p>				
<p>“I do not believe that the university has provided us with tools to implement in teaching. And I have during later years realized it is not the aim of the education, but to teach us to be able to implement research ourselves.”</p> <p>“Because teacher education is a university degree, the emphasis is on scientific knowledge.”</p>	<p>The research-oriented nature of teacher education does not support the perceived competence to implement inclusive education</p>	<p>Academic knowledge is not sufficient on its own</p>	<p>Academic knowledge</p>	
<p>“During my practice I had a course, "Inclusive education...”</p> <p>“One 5-credit course gave an opportunity to dive deep into</p>	<p>There is a mandatory course in teacher education regarding inclusive education</p>	<p>Mandatory course about inclusive education</p>	<p>Mandatory courses</p>	<p>Courses</p>

<p>literature on the matter of inclusive education that gave a good basis for the implementation of it.”</p> <p>“Well, all the information I got from the university was from a compulsory course (5 ECTS).”</p>	<p>which is seen as meaningful.</p>			
<p>“The minor in gender studies has given a lot in considering and supporting sexual and gender minorities”</p> <p>“Optional studies”</p> <p>“The course Cooperation and Professional Interaction was the best regarding inclusive education as it had really good materials related to the topic.”</p>	<p>Different minor and optional studies, although they do not directly relate to inclusive education, are seen as meaningful in terms of implementation of inclusive education.</p>	<p>Optional studies give students knowledge about inclusive education</p>	<p>Minor and optional courses</p>	

Figure 27: Factors in teacher education that have influenced classroom teacher students’ perceived competence to implement inclusive education presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“The whole education has given tools to implement inclusive education in the future.”</p> <p>“In special education studies, inclusive education has been featured a lot.”</p> <p>“Inclusive education has been considered a lot during the courses.”</p>	<p>Overall, inclusive education has been considered a lot during the studies.</p>	<p>Inclusive education as an integral part of the studies</p>	<p>Overall studies</p>	<p>Special education teacher programme</p>

<p>“Also practices have given practical experience and perspective.”</p> <p>“...inclusive education...has been discussed during practices a lot.”</p> <p>“... I have gained perspective on the practical implementation [of inclusive education] through practices.”</p>	<p>Inclusive education is present during practices.</p>	<p>Inclusive education during practices</p>	<p>Practices</p>	
<p>“Discussions with peers both during and outside of lessons.”</p>	<p>Discussions in formal and informal settings promote the competence to implement inclusive education.</p>	<p>Discussions about inclusive education</p>	<p>Discussions</p>	

Figure 28: Factors in teacher education that have influenced special education teacher students’ perceived competence to implement inclusive education presented qualitatively.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“There is no sex education, how should one know how to teach it especially taking the heteronormativity into consideration unless one has interest/experience/ critical eye for these matters (in general the focus of the education being sex/scaring students about sex should be something to get rid of).”</p> <p>“More child psychology and training for how to communicate in specific difficult situations.”</p> <p>“There is a lot of talk about differentiation downwards, but not differentiating up.”</p>	<p>Sex education, differentiating up and educational psychology should be discussed more.</p>	<p>Sex education, differentiation and educational psychology</p>	<p>Specific topics</p>	<p>Inclusive education in teacher education</p>
<p>“Actual content for SEN students.”</p> <p>“Way more special education courses and to the mandatory 5 ECTS there should be more updated data from the field and not from early childhood education or special schools, which would not fit the future work [of a classroom teacher].”</p> <p>“More mandatory courses on special education that would also be implemented in practice.”</p>	<p>There should be more special education courses where the context is on primary school, and the data used would be updated.</p>	<p>More special education courses</p>	<p>Special education</p>	

<p>“Concreteness: ... concrete examples are lacking that would be beneficial for real-life work situations”</p> <p>“More connections made to real practice of the job.”</p> <p>“Going through examples. More practical examples in addition to the research work”</p> <p>“More specific knowledge of commonly used methods or tools for implementing inclusive education.”</p>	<p>Teacher students feel that concrete, real-life examples during their studies are important regarding their future implementation of inclusive education.</p>	<p>Concrete, real-life examples are lacking from the education</p>	<p>Concrete real-life examples</p>	<p>Practicality</p>
<p>“A short practice period in a special education classroom.”</p> <p>“During practices it would be good to see inclusivity at least during some point.”</p> <p>“Mandatory practice in special education contexts and "regular" classroom contexts. Connected to the study and direct implementation of inclusive practices and theory in the field.”</p>	<p>More focus on inclusive procedures during practice periods where one could directly implement inclusive and/or special education.</p>	<p>Practices directly related to additional educational needs</p>	<p>Practices about inclusive and/or special education</p>	
<p>“Classroom and special education teachers should cooperate more strongly already during the studies through common courses and projects (regardless of scheduling difficulties)”</p>	<p>Students feel that having cooperation between classroom and special education teacher students during studies would be positive.</p>	<p>Cooperation between classroom and special education teacher students</p>	<p>Cooperation</p>	<p>Multi-professionality</p>

Figure 29: The wishes of classroom teacher education students in regards of teacher education and the perceived competence to implement inclusive education in future.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
“Practices somewhere else than in teacher training school”	Having practices only in a teacher training school is seen as negative.	Practices in other schools than teacher training schools	Practices in diverse schools	Practices
“Teacher education has given enough competences. I would have wished that we would have had more discussions on what kind of inclusive education is desirable. Personally, I find flexible inclusive education better (for example having small groups when needed) but it feels like inclusion has been at times defined quite narrowly.	More discussion on what is understood by the term inclusion as the interpretations can differ.	The multi-faceted nature of the term inclusive education	Discussions	Understanding of inclusive education

Figure 30: The wishes of special education teacher students in regards of teacher education and the perceived competence to implement inclusive education in future.

Meaning units	Condensed meaning units	Codes	Sub-categories	Categories
<p>“There is no ready-made tool kit for teachers” is a poor excuse for leaving out practical matters.”</p> <p>“But expecting a theoretical education to do anything else but to inform is unrealistic in my opinion. Research can provide useful data and reflections, but it is not the same as facing it in real life.”</p>	<p>Practicality should still be present even if the degree itself is a university degree.</p>	<p>Research-based teacher education is not sufficient on its own</p>	<p>Practicality</p>	<p>Education</p>
<p>“The lack of inclusive education in higher education is a huge problem that needs to be addressed with a from the bottom-up approach. Because if inclusive education is not happening at the highest level of education, how can we ever hope to achieve it properly on the lowest level.”</p>	<p>As teacher education itself is not inclusive, how should the teacher students be expected to learn to implement inclusive education.</p>	<p>Teacher education is not inclusive</p>	<p>Teacher education</p>	
<p>“It should just be called education and normalized that way. Most students have unique needs.”</p>	<p>All education should be inclusive therefore there should not be a need for a separate term.</p>	<p>Definition and understanding of inclusive education</p>	<p>Inclusive education</p>	
<p>“More resources are needed for effective implementation of inclusive education. Good competences of a teacher are not enough... Smaller group sizes,</p>	<p>Competences in themselves are not sufficient if enough financial support is not given.</p>	<p>There needs to be sufficient resources for the implementation of inclusive education</p>	<p>Economics of education</p>	<p>Resources</p>

<p>assistants, and multi-professional collaboration is needed in addition to teacher's competence”</p> <p>“Current inclusive education does not reflect the true nature of it but under the decision of the municipalities it has been reduced to everyone in the same classroom, which saves a lot of money as one classroom teacher can teach everyone, and assistants or small group teachers are not needed.”</p>				
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Figure 31: Teacher students' answers to something to add to the theme of the questionnaire.