To date, most Dutch schoolchildren have been pretty well served by the education system. The Netherlands is among the top five countries for child wellbeing (Adamson, 2013) and the educational performance of Dutch students are in the international sub top of best performers (The Dutch Inspectorate of Education, 2017). However, this high level of educational performance does not apply across the spectrum of students. A group of students suffers from such severe cognitive, emotional or behavioural problems that it negatively affects their wellbeing in their home environment as well as at school. These students, commonly recognized as having special educational needs (SEN), require additional support or adaptations in order to benefit from education. In recent decades, particularly the number of students identified with serious behavioural problems stands out, and has become a major concern for teachers (Goei & Kleijnen, 2009). In my career as a practising psychologist specialised in students with special educational needs, I have noticed an increase in requests for help from teachers concerning their students’ behavioural problems. Where at the start of my career, about 30 years ago, teachers mainly requested help regarding their students’ learning disabilities, during the last twenty years there has been an increase in requests for help related to students with severe behavioural or emotional problems in their classrooms. These students’ disruptive and often unmanageable behaviour not only hinders their own academic learning, but also has an impact on the learning environment in their classes. These problems increasingly lead to feelings of incompetence, helplessness, uncertainty and stress in their teachers (Goei & Kleijnen, 2009). There is a growing tension between the desire of schools and teachers to have their students achieve the highest possible performance levels, and the desire to provide the best possible care to children who need it (Onderwijsraad, 2010).

Correspondingly, since the turn of the century, the influence of psychiatry, psychology and special educational science has increasingly found its way into education, along with knowledge about behavioural disorders. The kind of disorder a student with behavioural problems is diagnosed with has become increasingly important because psychiatric disorders are often seen as the cause as well as the explanation for behavioural problems. To date, this focus on mental disorders has led to an increase in formal diagnoses and classifications as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Dekker, 2009). Although multiple causes can be designated for this growth, e.g. political, medical market forces and increased clinical insight (Batstra, Hadders-Algra, Nieweg, Van Tol, Pijl, & Frances, 2012; Pijl, 2016), teachers feel themselves increasingly unable to handle the growing group of students formally diagnosed with
severe emotional and/or behavioural disorders (EBD). Consequently, teachers confronted by multiple students with different special needs in their classrooms have increasingly sought to simplify their tasks by referring them to special education for behavioural problems (SE-Cluster 4). In the period 2003-2014, this led to an increase in references to special education, which has in turn led to a rapid growth in this type of education. (Pijl, 2016). The implementation of the Inclusive Education Act (Wet Passend Onderwijs) in 2014, however, discouraged referrals and made it financially unattractive. This resulted in more students diagnosed with special educational needs (SEN) remaining in mainstream education, which in turn has led to more feelings of inadequacy in teachers. A recent report has shown that 74% of teachers in mainstream education indicate that one or more of their students would be better off in a special education school (Van der Woud, van Grinsven, & Hootsen, 2017).

However, in special education (SE) these students also appear to be a great challenge for their teachers. Because schools and teachers traditionally presumed that academic deficits can best be addressed once the behavioural problems are under control, their focus primarily concentrated on the students’ unruliness and problematic behaviour, often at the expense of academic instruction (Reid, Gonzales, Nordess, Trout, & Epstein, 2004; Hodge, Riccomini, Buford, & Herbst, 2006; Pianta & Hamra, 2009; Hagaman, 2012). According to Gunter, Denny, Jack, Shores and Nelson (1993), this line of thinking even led to a curriculum of ‘non-instruction’. Consequently, while the pedagogic approach of SE-Cluster 4 was evaluated positively by the Dutch Educational Inspectorate (2005), the quality of their academic approach appeared to fall short. The Inspectorate ascertained a lack of appropriate learning materials and insufficient systematic academic instruction in special education (Inspectie van het onderwijs, 2005).

Recently, schools for SE-Cluster 4 have increasingly turned from this line of reasoning, paying more attention to an academic curriculum. As an implication of the UNESCO Salamanca Agreement of 1994, in which ninety-two governments and twenty-five international organizations committed to making schools educationally more effective for all students, international politics have played an important role in this switch in reasoning. The No Child Left Behind Act (NCLB) of 2001 in the USA is a good example of this. In order to improve the academic outcomes of all students, including those with severe behavioural problems, the NCLB drew up performance standards based on adequate yearly progress. Likewise, in 2010 the ‘Reference levels for Dutch language and arithmetic’ law was enacted in the Netherlands. Accordingly, all students in mainstream
and in special education must attend a full academic curriculum to meet certain performance standards and reference levels. In line with these developments, a growing body of international literature has emphasized the importance of teaching basic academic skills (e.g. reading and maths) to EBD students (Hagaman, 2012). Moreover, the Inspectorate increasingly underlines the importance of academic development for these students.

In the Netherlands, the Regional expertise centre for the northern Netherlands (Regionaal Expertisecentrum Noord Nederland, RENN4) was one of the first special education organizations to meet this challenge. Seeking to revise their approach, in 2006 they presented their ‘Richting en Houvast’ [Guidance and Support] vision document (Doornenbal, Jonker, Bijstra, & Minnaert, 2006) in which they argued for a systematic improvement in academic instruction in the RENN4 schools. Their basic aim became improving the educational effectiveness of their schools in order to identify and develop their students’ potential; or as the vision document put it: “students with limitations in their behaviour should have the educational attention they need. RENN4 has to develop the knowledge necessary to realize effective education concerning students with severe behavioural disabilities” (page 3). Other special education schools followed, this being stimulated by the Inspectorate’s increased attention to the didactic aspects of the education offered. The importance of a focus on instruction in these basic academic skills is widely recognised by teachers and administrators in SE and paves the way for a decline in behavioural problems and in increase in academic learning however, it is still unknown whether this focus has led to the aforementioned outcomes, and if so, to what extent.

To date, students in SE-Cluster 4 score poorly in core areas such as mathematics, reading and spelling, according to nationwide academic norms (Ledoux, Roeleveld, van Langen, & Smeets, 2012). This pattern of underachievement has obvious, serious implications. Research has shown that when these students leave primary SE, the average level of secondary education they will attain is ‘too low’ relative to their average IQ (Bijstra, 2016). Moreover, many students leave SE-Cluster 4 without a school certificate to enter the job market. As a result of a lack of this basic qualification, these young people simply fail to obtain work. As a consequence, the majority of eighteen-year-olds who left secondary special education has no job or education, and are often on benefits (De Roos & Bloem, 2014).
Clearly, providing students in SE-Cluster 4 with academic instruction while their behavioural disorder interferes with their academic learning is one of the greatest challenges confronting teachers. Moreover, students diagnosed with mental disorders often experience processing deficits, which impede their academic performance. This concerns, for example, efficient visual processing, working memory, long-term memory and executive functions, such as planning and organizing (Benner, Allor, & Mooney, 2008; Benner, Nelson, Allor, Mooney, & Dai, 2008). Moreover, these deficits are also related to problem behaviour such as inattention and impulsivity, which further hinder students from academic attainment (Hinshaw, 1992). To improve these students’ academic development, it is important that the curriculum and instruction fit these students’ various capabilities and limitations. Accordingly, if the curriculum and/or instruction is not tailored to students’ strengths and weaknesses, behavioural problems might emerge or might be triggered even more than usual. Here we touch the major theme of this thesis, which is that problem behaviour as observed in classrooms often seems to be the result of a mismatch between the tasks offered to students and their skills, strengths or preferences (Lewis, Hudson, Richter & Johnson, 2004; Umbreit, Ferro, Liaupsin, & Lane, 2007; Kern & Clemens 2007). As students face an educational environment they cannot control, disruptive behaviour can be viewed as a rejection of tasks which are inconsistent with an individual student’s capacities (Jull, 2008). The developmental research of Patterson and colleagues concerning transactional processes over time is highly relevant in this context (Patterson, Reid, & Dishion, 1992). His ‘coercion theory’ explains how students react with problem behaviour when their teacher directs or requests something the students are disinclined to do. With problematic behaviour, students try to ‘coerce’ their teachers into terminating the undesired task (Gunter & Coutinho, 1997; Gunter, Denny, Jack, Shores, & Nelson, 1993; Walker, Colvin, & Ramsey, 1995; Long & Fecser, 2001). Accordingly, in addition to addressing behavioural problems to pave the way for learning, it is equally important to adapt academic instruction to tackle at least part of the behavioural problems. Therefore, providing students with a suitable academic curriculum and instruction is not only important to improve their academic outcomes, but it could be an effective way to handle or prevent problem behaviour. Doing so would kill two birds with one stone.

For decades, research has predominantly considered interventions and curricula to support the behaviour and social skills of these students (Gresham, 2015), and it is without doubt that these students’ behaviour and social deficits require ongoing research.
and attention. After all, the behavioural deficit or disorder is the primary reason why these students find themselves in a school for Special Education. However, compared to the behavioural and social domains, we know far less about these students’ effective academic approaches (Lane, 2007; Lane, Gresham, & O’Shaunasay, 2002; Nelson, Lane, Benner, & Kim, 2011), an alarming deficiency, especially considering the long-term impacts on these students. Fortunately, given the importance of the development of basic academic skills, there has been an increase in studies investigating the effect of academic instruction on the academic outcomes achieved by these students. Hagaman (2012) concludes there is increasing scientific evidence suggesting that there are common instructional components leading to academic gains in EBD students. However, to date there is little evidence concerning the effect of academic instruction on the behaviour of these students. While teachers seldom focus on the curriculum as a tactic to prevent or handle problem behaviour (Gunter, Denny, & Venn, 2000; Anderson, Kutash, & Duchnowski, 2001; Wehby, Lane, & Falk, 2003; Van der Wolf & Van Beukering, 2009), it could be an effective approach. Given its potential importance, this is an unsatisfactory omission in educational research.

To summarize, in recent decades we have seen increased attention to approaches concerning the social and emotional problems that EBD students suffer from in mainstream and special education. However, it is now also important to focus on approaches concerning the academic difficulties of EBD students. In the first place, this is necessary to increase these students’ academic progress. Secondly, this is important to handle or – even better – to prevent behavioural problems. Therefore, to tackle the assumption that problem behaviour needs to be addressed before academic learning can be realised, this thesis focuses on the reversed idea that problem behaviour needs to be addressed before learning gains can be realised. To date, too little is known about the actual effect of such an approach. This thesis endeavours to fill a gap in the literature concerning the implications of academic instruction on the occurrence of problem behaviour in classes of special education for EBD students (SE-Cluster 4). The goal of this research is to determine whether offering academic instruction to students positively affects their behaviour and their academic outcomes. If so, this study could provide a major contribution to our knowledge of teaching EBD students by demonstrating the dual benefits of an academic approach for these students. If common instructional components lead to academic gains for EBD students (Hagaman, 2012), they might also lead to a decrease in behavioural problems. Since many teachers feel a lack of expertise in handling
the problematic behaviour of EBD students, this thesis could help them find strategies to cope.

We hope to investigate with this exploratory thesis whether academic instruction for EBD students not only affects their academic learning, but is also able to affect their problematic behaviour in a positive way, diminishing the need for behavioural instruction. This thesis is not primarily targeted at the development of a new intervention, but aims to shed fresh light on existing interventions concerning teaching academic subjects to EBD students. The research has therefore been divided into five studies, described in chapters 2 to 6.

Chapter 2 primarily concerns a literature review of research investigating the current state of knowledge about the effect of academic instruction on the behaviour of EBD students. Although statements concerning the latter effect are found increasingly often in the literature, to date we have seen little research demonstrating the effect itself. Therefore, the first study focuses on research where academic interventions for EBD students are the independent variable and the effect on behaviour the dependent variable.

Chapters 3 and 4 concern the systematic academic instruction teachers provide to EBD students in special education and its effect on the students' academic and behavioural outcomes. Since no existing tool could be found to measure the amount of systematic academic instruction, an instrument had to be developed. The development of such an instrument, along with the theory behind it, is explained thoroughly in Chapter 3. Chapter 4 then describes the impact of systematic academic instruction as measured using the instrument developed on academic progress and the behavioural problems of students with EBD in special education.

Since teachers have to divide their attention when instructing across several students, the amount of academic instruction provided by teachers probably differs from the amount of academic instruction received by each student. Chapter 5 describes an observational study to measure the amount of instruction teachers provide to EBD students in special education classes, as well as the amount of instruction students actually receive, individually or as part of a group or subgroup.

Along with a growing focus on teaching academic subjects, the use of assessments in SE-Cluster 4 has also increased. This is an important development, as assessments are the cornerstone of teaching academic subjects to EBD students (Shriner, Ardoin, Yell, &
Carty, 2014). However, it is doubtful whether assessments as used in special education are suitable for EBD students. Some problems concerning the use and reliability of these assessments are described in Chapter 6.

Chapter 7 entails the integration of the five studies leading to a description of systematic and academic teaching in the reality of daily special education in the Netherlands. Finally, we aim to shed some light on the art of teaching students with special educational needs (SEN).