

**Identifying expert teachers  
of students with emotional and behavioral difficulties**

Does personality contribute to a teacher's X-Factor?

**Svenja Büttner**

Printing Ridderprint BV | [www.ridderprint.nl](http://www.ridderprint.nl)

Layout Nikki Vermeulen | Ridderprint BV

Cover Jozefien Harten

Copyright © S. A. Büttner

For all published articles, the copyright has been transferred to the respective publisher. No part of this dissertation may be reproduced, stored in a retrieval system, or transmitted – in any form or by any means – without written permission of the author or, when appropriate, from the copyright-owning publisher.

**Identifying expert teachers  
of students with emotional and behavioral difficulties**

Does personality contribute to a teacher's X-Factor?

**Het herkennen van expertleraren  
van leerlingen met emotionele en gedragsproblemen**

Draagt persoonlijkheid bij aan de X-Factor van een leraar?

(met een samenvatting in het Nederlands)

**Proefschrift**

ter verkrijging van de graad van doctor  
aan de Universiteit Utrecht

op gezag van de rector magnificus,

prof. dr. H. R. B. M. Kummeling,  
ingevolge het besluit van het college voor promoties  
in het openbaar te verdedigen op

vrijdag 19 oktober 2018  
des middags te 12.45 uur

door

**Svenja Aïmee Büttner**

geboren op 23 juli 1975 te Arnhem

**Promotor** : Prof. dr. B. Orobio de Castro

**Copromotoren:** Dr. J. O. Bijstra  
Dr. E. J. Van den Bosch †

Dit proefschrift werd mede mogelijk gemaakt met financiële steun van de Hanzehogeschool Groningen en de Rijksuniversiteit Groningen.

**Beoordelingscommissie:**

Prof. dr. M. A. G. van Aken

Dr. H. E. Bakker

Prof. dr. J. W. F. van Tartwijk

Prof. dr. S. C. E. Thomaes

Prof. drs. D. van Veen

Universiteit Utrecht (voorzitter)

Universiteit Utrecht

Universiteit Utrecht

Universiteit Utrecht

Hogeschool Windesheim Zwolle

University of Nottingham, Engeland



## Contents

<b>Chapter 1</b>	General introduction	9
<b>Chapter 2</b>	Personality traits of expert teachers of students with EBD: Reviewing and classifying the literature	31
<b>Chapter 3</b>	Triangulating measures of teacher quality in teaching students with EBD	57
<b>Chapter 4</b>	Observing the teaching skills of alleged expert teachers of students with EBD	85
<b>Chapter 5</b>	Exploring the relationship between teacher personality and teacher quality among teachers of students with EBD	105
<b>Chapter 6</b>	General discussion	125
	Samenvatting Summary in Dutch	143
	About the author	157



# GENERAL INTRODUCTION





## General introduction

This dissertation was prompted by my interest in the expertise of teachers who are able to bring out the best in students with emotional and behavioral difficulties (EBD). During the time I served as a special needs support coordinator in primary and secondary education, both regular and special, I coached many teachers who experienced feelings of professional inadequacy in the classroom in their attempts to provide students with EBD with good education. Conversely, I met a handful of teachers who were able to let students with EBD achieve conform their potentials by preventing their difficulties from becoming dominant. Ever since, I wonder on what grounds expert teachers of students with EBD can be distinguished from their less effective colleagues for whom teaching students with EBD is a daily struggle.

A growing body of literature focusses on the qualities of expert teachers of students with EBD (Almog & Shechtman, 2007; Reumerman, 2010). This research topic has gained interest as a consequence of the global trend towards more inclusive types of education. As a result of this trend, teachers in regular schools are increasingly confronted with students with special educational needs (SEN) in their classrooms (Tomlinson, 2012). Although not exclusively, a substantial part of the group of students with SEN consists of students with EBD (Pijl, 2015). This shift in educational practice requires other and more extensive skills from teachers (Goei & Kleijnen, 2009). By means of implementing the knowledge gained on the expertise of teachers of students with EBD, teacher training aims to adequately equip future teachers with these skills.

In addition to the increased notion of their skills, there is evidence indicating that personality plays a role in a teacher's quality in teaching students with EBD (Prather-Jones, 2011). For many, a relationship between teacher personality and teacher quality is logical, as one can instantly come up with a number of characteristics of a great teacher when recalling the teachers who have made a difference to one's own life. Great teachers are often described as individuals who are enthusiastic, passionate, responsive, trustworthy, emotionally stable, empathic, excited, dedicated, warm, patient, friendly, engaged, flexible, creative, and committed (MacDonald Grieve, 2010). As personality reflects how one works, approaches problems, and deals with emotions (Connor-Smith & Flachsbart, 2009), it may reflect the 'special' aspect of the teachers who rise above the crowd and make a lasting impression.

The supposed link between teacher personality and teacher quality raises questions such as: 'Can one rely on one's gut feelings about a teacher's expertise while teaching students with EBD?', and 'Does personality contribute to a teacher's ability to teach students with EBD?' When these questions could be answered in the affirmative, subsequent questions would be: 'Which traits contribute to a teacher's expertise in teaching students with EBD?', 'Can expert teachers and/or aspiring teacher trainees be identified on the basis

of these traits?', and, in turn, 'Can those with undesired personality traits be recommended against a career in education?' It could also be attempted to equip (aspiring) teachers with the relevant personality traits as meta-analysis indicated significant possibilities to change personality traits by intervention (Roberts, Luo, Briley, Chow, Su, & Hill, 2017).

The relationship between teacher personality and teacher quality has been explored in a number of educational settings, which mainly include secondary education (Jugović, Marušić, Pavin, & Vizek, 2012; Pertegal-Felicesa, Castejón-Costaa, & Jimeno-Morenillab, 2014) and teacher quality in general (Tok & Morali, 2009). A fundamental limitation of these studies concerns the unilaterally assessments of teacher quality by students. Assessments by students may be influenced by factors such as a dependency relationship and pleasant personality traits. Students who fear a negative evaluation of their own work because of expressing negative assessments of the qualities of their teacher may be inclined to overrate a teacher's quality. Also, students who appreciate a teacher purely because of his/her personal skills may overestimate the teaching qualities of this teacher.

Furthermore, the insights yielded from studies on the relationship between teacher personality and teacher quality in educational settings are not readily applicable to inclusive primary education for a number of reasons. First, teachers in inclusive primary education need to teach more topics compared to teachers in secondary education, who have a content specialism. It is therefore not possible to draw general conclusions about a teacher's quality because this concept has a different meaning in different educational settings. Second, primary school teachers need to teach students of a younger age, who demonstrate more variation in both social emotional and cognitive behaviors and (special) educational needs. Third, the teacher-student relationship is different because a teacher in primary education spends more time with students.

Overall, the empirical evidence on the relationship between teacher personality and teacher quality in general does not provide distinctive insight in a teacher's quality in teaching students with EBD. This particular teaching task comprehensively needs ample consideration. Focusing directly on the teachers who master the skills to provide students with EBD with education that is adjusted to their needs is important because more and more teachers in inclusive primary education report feelings of professional inadequacy while teaching students with EBD. Insight into the qualities of teachers who are able to teach students with EBD effectively may contribute to the development of methods to prepare future teachers for their teaching jobs and strengthen the teachers for whom teaching this specific group of students is a daily struggle in the classroom.

The main research question is: 'Does a relationship exist between teacher quality in teaching students with EBD and teacher personality?' To answer this question, the concept of teacher quality in teaching students with EBD and its relationship with teacher personality is first reviewed (Chapter 2). Then, a method to select the intended teachers is

developed (Chapter 3). The idea that there seems to be a general prevailing consent among professionals in educational practice on which teachers are doing an excellent job is used as a starting point. The agreement between head teachers, special needs support teachers, fellow-teachers, and teachers themselves on who are expert in teaching students with EBD is studied. To test whether judgments by internal professionals are accurate to identify the intended experts, these judgments are compared to structured observations by external assessors (Chapter 4).

In the final study of this dissertation, the relationship between teacher quality in teaching students with EBD and teacher personality is examined (Chapter 5). Knowing that students with EBD are particularly at risk for developing more difficulties as well as more severe difficulties, underachieving, and leaving school without a qualification, with all that this implies (Roos & Bloem, 2014; Siperstein, Wiley, & Forness, 2011), this research may indirectly contribute to the educational achievements of students with EBD. In an attempt to respond to every child's right to be provided with education, which is adapted to their social emotional and didactic needs in order to contribute to paving the way to a happy and successful future, the focus of this dissertation is put on those who face this complex task: their teachers, both present and future.

To provide a context for the research, the following topics are theoretically outlined in this introduction: the global trend towards inclusive education; the Dutch education situation; the concepts of EBD and teacher quality, the Five Factor theory and the Five Factor Model of personality, and the relationship between teacher personality and teacher quality. Subsequently, the more popular intuitive than scientific theoretical concept of a teacher's X-Factor in teaching students with EBD is introduced. Wondering whether the proficiency of expert teachers of students with EBD is related to personality traits, the concept is used to explore the contribution of personality to a teacher's X-Factor in teaching students with EBD. The introduction concludes with the research questions and an outline of the content of the dissertation.

## **The global trend towards inclusive education**

Since the 1990s, the ideology of inclusive education has been adopted and implemented virtually worldwide. This educational trend, which is principally based on international agreements, such as the Salamanca Statement (UNESCO, 1994) and the No Child Left Behind Act (NCLB, 2001), calls for integrating students with SEN into a regular school environment. It invites all signatories to adopt the principle of inclusive education, so that every child should be enabled to attend a regular school, unless urgent reasons make this otherwise impossible. In educational practice, this means that all students are enabled to attend and welcomed by their neighbourhood schools in age-appropriate, regular school classes. In such a regular school environment surrounded by their peers, all students are supported

to undergo an optimal learning development and to contribute to and participate in all aspects of the life of the school.

The trend towards inclusive education has been endorsed on two bases: 1) the right of all students to be included in mainstream education and 2) the proposition that inclusive education is more effective for students with SEN than special education (Lindsay, 2007). The first basis concerns the principle of valuing diversity and maximizing quality of life (Tomko, 1996). All students need to feel they belong, are valued, and relate to others to enhance motivation and achieve their fullest potential (Deci & Ryan, 1985). The needs are reported to be met best in inclusive settings (Unesco, 1994). The second basis of inclusion concerns its effectiveness. The literature reports many benefits of inclusion for students with SEN, such as social relationships, acceptance, integration, and learning opportunities (Lipsky & Gartner, 1996; Pijl, Meijer, & Hegarty, 1997). Both bases result in many parents invoking the right of their child to attend a regular school in the belief that this is best for their child.

Little is, however, known about the tangible improvements of students with SEN in inclusive settings compared to special education settings (Ledoux & Roeleveld, 2010; Stoutjesdijk & Scholte, 2009; Zweers, 2018). There even is an emerging view emphasizing that some students with EBD are better off in special education because their SEN need to be individualized to such an extent that these can be met only in special education (Kauffman, Anastasiou, Badar, Travers, & Wiley, 2016). Being taught in a classroom surrounded by peers with similar SEN may be less confrontational for them (De Boer, Pijl, Minnaert, & Post, 2014). Support for this idea comes from Useche, Sullivan, Merk, and Orobio de Castro (2014) who showed that students with EBD are being accepted more in special education, and Zweers (2018), who showed that such students perform better socially and academically in special education.

In line with this perspective, there are also parents of students with SEN who prefer a special school for their child in the belief that this is the best choice because of three reasons: 1) the teachers have had additional SEN training; 2) support of SEN specialists is available; and 3) class sizes are smaller (De Boer, Pijl, & Minnaert, 2010; Pijl, 2015; Smeets & Rispens, 2008). In addition to the advantages and disadvantages of inclusive and special education, a regular school teacher's quality can also be considered a factor of influence on the decision which educational setting provides the best educational possibilities for a student with EBD (Van der Wolf & Van Beukering, 2009). As a teacher's effectiveness is influenced by both individual competencies and environmental circumstances of both the teacher and the student, the limits of possibility can differ. Hence, each teacher's unique level of ability to teach students with EBD can be considered a barrier to inclusion as well as a precondition.

## **The Dutch educational context**

In line with the global trend, the Dutch educational system aims to include students with SEN in a regular school environment. However, the Netherlands has always had a rather segregated educational system compared to many other countries. This system included a wide variety of special schools for students with differing special needs (e.g. visual, physical, auditory, educational, emotional, behavioral). Since the nineties of the last century, a number of policy changes have been made to create a more inclusive educational system that enables students with SEN to attend regular education. A first step comprised the 'To School Together Again' act (Tweede Kamer der Staten Generaal, 1990), which grouped all regular primary and special schools for students with mild learning disabilities into regional clusters. This act should allow schools to provide education to students with various SEN.

The introduction of this act in 2003 resulted in regular and special schools cooperating, employing special needs coordinators in regular schools, launching training programmes, and drawing up new funding regulations. For students with sensory, physical, and mental impairments or behavioral disorders, a separate policy was introduced (MinOCW, 2011). This policy stipulated that students with these types of SEN could take the funding, termed 'Backpack', with them to the school of their and/or their parents' choice. When a student met the criteria for this budget, he/she could attend either a regular or a special school. Directly linked to this funding system was the reorganization of all special education into centres of expertise (e.g. visual impairment, communication disorders, physical and mental impairment, behavioral problems).

Since the introduction of 'Backpack', the numbers of students with SEN attending special education have steadily increased and finally stabilized at 34,000 in 2012 (i.e. 2% of the total student population). During that same period, the percentage of students with a SEN diagnosis attending regular education increased to 1.26% in 2012, compared to .67% in 2004 (Koopman & Ledoux, 2013). Evaluations of these policies point out that, despite a good support structure at school level, the fine-tuning to students' individual needs is inadequate (Ledoux, Vergeer, & Elshof, 2013). From then on, the Dutch government has changed course again in its endeavors for more inclusive types of education. With the so-called 'Appropriate Education' law (Onderwijsraad, 2011; 2012), it seeks to return to its original premise: every student has a right to education that meets his or her individual needs (CPB, 2009).

This change of course was implemented in 2014. It is in fact the third stage in the development towards more inclusive types of education. The fundamental difference with the previous stage is that regular schools no longer receive support from special education professionals to provide students with SEN with appropriate education, but need to arrange this themselves (Pijl, 2015). The regular schools have a budget to provide students with proper support in school and need to provide a support profile specifying what kind of support they can and cannot offer students so that parents can choose a school for

their child. When a school is unable to arrange an appropriate educational setting for a student, regardless of whether the student has been diagnosed with SEN or not, the school is responsible to find a school that is (Van der Meer, 2011).

Placing the responsibility on the regular schools has the aims to provide more clarity about what support a school can and cannot provide, reduce bureaucracy, employ teachers equipped for the job, and improve the collaboration between education and care. This responsibility puts more pressure on regular primary school teachers. The balance between what is required of teachers and what they are capable of has become shaky (Onderwijsraad, 2011). Hence, Walraven, Kieft, and Van der Vegt (2013) call on to invest in extended teacher training to enhance an awareness process in teachers. Teachers should be taught to examine their own attributions (Goei & Kleijnen, 2009) to the emergence of students' behavioral problems by asking what students need rather than what is wrong with them to have a positive effect on their students' overall educational development (Hofstetter & Bijstra, 2014).

### **Emotional and behavioral difficulties**

The concept of EBD is hard to define (Hunt & Marshal, 1998) because it reflects a variety of social and/or emotional difficulties, which range from being internalizing to externalizing, vary in frequency, duration, extent, and consequence (Van der Ploeg, 1990), and are relative, relational, and dependent on circumstances at all times (Van der Wolf & Van Beukering, 2009). Based on definitions of Van der Ploeg (1990) and Van der Wolf and Van Beukering (2009), the following definition has been used: "Emotional and behavioral difficulties result from interactions between the student, home, and school environment and are disturbing and restrictive for all parties since they are contrary to normal standards and values." Students with EBD ought to be considered an at risk population (Gijzen & Pameijer, 2009; Siperstein, Wiley, & Forness, 2011) and should be taught by expert teachers, who are able to help them achieve their fullest potential.

Apart from their students, teachers of students with EBD need to be considered a risk population as well. As a result of being confronted with a growing number of students with SEN, teachers are increasingly experiencing the limitations of their abilities and gradually report more feelings of professional inadequacy (Hofstetter & Bijstra, 2014). Such feelings are said to occur when a teacher lacks the pedagogic and/or didactic skills to act adequately in difficult classroom situations (Edelenbos, Meijer, & Harms, 2002; Meijer, 2003). Teachers feel least competent in teaching students with EBD (Cooper, 2011; Smeets & Rispen, 2007), specifically those who demonstrate aggressive and hyperactive behaviors and lack concentration (Goei & Kleijnen, 2009). Persistently being opposed to students' disturbing behaviors, teachers experience stress in the classroom, risk burnout, and are likely to leave the profession early (Adera & Bullock, 2010; Nelson, Maculan, Roberts, &

Ohlund, 2001).

## Teacher quality

As teachers are found to make a significant difference in the classroom ((Hattie, 2003; Marzano, Marzano, & Pickering, 2003)), it is vital to know what they know and are capable of. The qualities of expert teachers have been studied in detail. Regarding their attitudes, expert teachers are reported to have democratic and epistemological beliefs about teaching (Almog & Shechtman, 2007; Jordan & Stanovich, 2003). They also experience personal efficacy and general efficacy in their classrooms (Gibson & Dembo, 1984; Poulou, 2007). Moreover, expert teachers have a positive attitude towards students with SEN and inclusive education (Jordan, Glenn, & McGhie-Richmond, 2010; Kyriakides, Campbell, & Christofidou, 2002).

Regarding their knowledge, expert teachers are reported to have substantive content knowledge and high levels of verbal competence (Darling-Hammond, 1999). Regarding their skills, expert teachers are reported to engage in close, learner-centred, teacher-student relationships (Cornelius-White, 2007; Martin & Dowson, 2009). In addition, they are able to enhance the flow of classroom activity, which is defined as a state of full immersion in a task most beneficial to learning (Csikszentmihalyi, 2000). Moreover, expert teachers demonstrate a broad range of teaching strategies and interaction styles (e.g. instruction, feedback) to meet students' differing needs (Hattie & Timperley, 2007; MacDonald Grieve, 2010).

The value of these characteristics may be explained by the Self Determination Theory (Deci & Ryan, 1985), which identifies three human basic psychological needs: competence (i.e. control the outcome and experience mastery); autonomy (i.e. be causal agents of one's own life); and relatedness (i.e. interact with and be connected to others). In education, competence refers to both students and teachers experiencing efficacy while completing a task, autonomy to experiencing choice and psychological freedom regarding activities, and relatedness to feeling connected to others (e.g. for students: classmates and teachers, for teachers: fellow-teachers and students) (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009).

Within the self-determination theory, a distinction is prompted between three different dimensions of need support teaching. Each of these need supporting teaching dimensions is associated with a specific need in a way that they complement each other in their effects on students' satisfaction of each of the basic needs (Stroet, Opdenenakker, & Minnaert, 2013). Providing students with structure allows for the satisfaction of the need for competence, while providing students with autonomy allows for the satisfaction of the need for autonomy, and providing students with a context of respect for students' perspectives allows for the need for relatedness.

Satisfaction of the basic psychological needs is reported to represent a necessary

condition for optimal student learning (Deci & Ryan, 1985). Basic need satisfaction is also found to predict a variety of positive learning outcomes, such as higher intrinsic motivation and more self-regulated learning (Reeve, Deci, & Ryan, 2004). In addition, the contribution of instructors' teaching styles to students' basic need satisfaction has been established in various studies (e.g. Soenens & Vansteenkiste, 2005). As a consequence, the degree to which a teacher uses these evident needs supportive teaching styles in their classrooms can be considered an aspect of a teacher's quality.

Either in addition to the mastery of specific skills or as an underlying explanatory factor, personality is argued to contribute to a teacher's excellence in teaching students with EBD (Mertens, 2010; Prather-Jones, 2011; Reumerman, 2010; Timmering, Snoek, & Dietze, 2009). Establishment of a relationship between teacher personality and teacher quality in teaching students with EBD may add to the profile of such expert teachers. Moreover, it may generate new research directions towards the development of evident personality traits during teacher education, which is established to be possible by meta-analysis of the literature by Roberts, Luo, Briley, Chow, Su, and Hill (2017).

### **The Five Factor theory and Five Factor Model of personality**

The Five Factor Theory by McCrae and Costa (1987) and their Five Factor Model of Personality (FFM) are globally used to assess the relationship between personality and job performance. Compared to other models, the FFM has the highest status in personality research. Over the years, psychologists have gradually reached consensus on five universal core dimensions of human personality. The Five Factor theory is an explanatory account of the role of five factors/dimensions/domains in personality. The five personality factors or domains are: Extraversion; Agreeableness; Conscientiousness; Openness to Experience; and Neuroticism.

Each personality factor represents a range between two extremes (e.g. introvert versus extravert, neuroticism versus emotional stability). Underlying each factor are six clusters of correlated traits, termed facets (e.g. warmth, gregariousness, assertiveness, activity, excitement seeking, positive emotions). Evidence for the Five Factor theory came from Fiske (1949), followed by other researchers including Tupes and Christal (1961) and Goldberg (1981). The FFM, often referred to as the 'Big Five', characterizes individuals in terms of relatively enduring patterns of thoughts, feelings, and actions (McCrae & Costa, 1987; McCrae & John, 1992).

The FFM is found to be consistent in interviews, self-reports, and observations. The model is also found to be reliable across a wide range of participants of different ages and from different cultures, and to have high, real-life validity (McCrae, 2009; Schacter, Gilbert, & Wegner, 2013). Reported less strong features concern that it is an empirical finding based on factor analysis rather than a theory-driven model (Block, 2010; Eysenck, 1992), that its five

factors are not independent of one another (Musek, 2007; Van der Linden, Te Nijenhuis, & Bakker, 2010), and that it does not explain all of personality (Paunonen, Haddock, Forsterling, & Keinonen, 2003).

There is, however, ample evidence legitimizing the use of the model as framework in the present research. In addition to the evidence in support of its reliability and validity, more and more traits like religiosity (Jorm & Chistensen, 2004), risk-taking (McGhee, Ehrler, Buckhalt, & Philips, 2012), honesty (Hilbig, Hilbig, Zettler, Leist, & Heydasch, 2013), and sense of humor (Johnson & McCord, 2010) have been linked to the FFM.

### **The relationship between teacher personality and teacher quality**

The relationship between personality and job performance has been established in various fields of work in which interaction between people is required. Strong correlations between each of the personality factors of the FFM and job performance are reported in the literature (Barrick & Mount, 2006; Connor-Smith & Flachsbart, 2007). Of all five factors, the Conscientiousness factor demonstrates the most consistent relationship with job performance. This factor indicates the degree to which a person demonstrates directed, organized behavior, and a good impulse control (Barrick & Mount, 2006; Costa & McCrae, 2008; Hurtz & Donovan, 2000). In addition, Conscientiousness predicts problem solving and cognitive restructuring strategies (Mount & Barrick, 1998; Salgado, 1997). Conversely, Neuroticism predicts less problem solving and cognitive restructuring. All factors except Neuroticism are valid predictors of training proficiency (Connor-Smith & Flachsbart, 2007; Salgado, 1997).

The nature of the relationship between personality and job performance may differ between work settings (Hurtz & Donovan, 2000). To find out whether the FFM works the same way in the field of education, the focus of an increasing amount of literature has been put on exploration of this relationship in various education settings which mainly involve secondary and higher education. Examples of insights yielded from this research include that the Agreeableness factor positively correlates with student evaluations of instructors in higher education (Kneip, Kelly, Biscoe, & Richard, 2010), that teachers in higher education have positive traits at their disposals, such as friendliness, approachability, patience and enthusiasm (Voss & Gruber, 2006), and that the factors of Extraversion, Openness, Agreeableness and Conscientiousness are personality traits favoured in instructors, whereas Neuroticism was not (Patrick, 2011).

Regarding the relationship between personality and job performance in teacher training, research has indicated that pre-service teachers demonstrate significantly lower levels of all the personality factors compared to in-service teachers, except for the Neuroticism factor (Pertegal-Felicesa, Castejón-Costaa, & Jimeno-Morenillab, 2014). Further, the factors of Extraversion and Agreeableness are found to predict intrinsic career value and

job satisfaction (Jugović, Marušić, Pavin, & Vizek, 2012). Moreover, the academic success of teacher trainees in physical education positively relates with the factors of Openness to Experience, while Conscientiousness negatively correlates with the Neuroticism factor (Tok & Morali, 2009). Despite the relevance of these research findings, these are not applicable to primary education nor to the characteristics of expert teachers of students with EBD for a number of reasons.

To start, comparison and interpretation of scores on personality traits between pre-service and in-service teachers does not provide information about the actual quality of their teaching performance. This limitation concerns teacher quality in general as well as specifically teaching students with EBD. Furthermore, insight in variables such as career value and job satisfaction does neither provide conclusive information about the actual impact and/or effectiveness of either pre-service or in-service teachers. Lastly, findings about the educational success of teacher trainees in physical education do not say anything about the educational success of teacher trainees in teacher education, nor about their competencies in teaching students with EBD. Based on the above, there is clearly a need for more empirical research on the relationship between teacher personality and teacher quality in teaching students with EBD.

The importance of study of the relationship between teacher personality and teacher quality in teaching students with EBD can be illustrated by emerging literature reporting on the personality traits of expert teachers of students with EBD (e.g. Berry & O'Connor, 2010; Prather-Jones, 2011). Although this literature provides insight in the characteristics of such teachers to a certain degree (Chapter 2), the results can only be used for drawing up a rough sketch of their personality profiles. The explanation for this statement lies in the fact that studies on the topic so far report evident thoughts, feelings, and behaviors of expert teachers of students with EBD, which are based on other research methodologies than data derived by means of taking actual comprehensive personality tests. Hence, it is plausible to explore to what extent the five personality dimensions contribute to a teacher's classroom performance when teaching students with EBD.

## **X-Factor**

The inspiring nature of expert teachers of students with EBD is commonly worded as a teacher's 'X-Factor' nowadays (Mertens, 2010; Smits, 2006). Originally, the term came from the equestrian world, where it was found that a single mutation within a gene located on the X-chromosome of horses caused a larger-than-average-sized heart (Haun, 1997). This gene is carried out on the X-chromosome (Lightowler, Piccione, Guidice, & Del Olmo, 2004). At the time, the term X-Factor was used to describe the personality trait that made a horse do its utmost during a race and not to give up until having crossed the finish line. Since a horse's heart size predicts its athletic ability, horses with the X-Factor are highly

sought after.

These days, the term X-Factor is used to express a hard to describe aptitude that is of influence on one's recognized expertise in his/her field. In this dissertation, the use of the concept of the X-Factor reflects the complexity of defining the concept of teacher quality in relation to teaching students with EBD. There is a certain mystique around it, since it seems as if people instantly agree on whether a person has the X-Factor or not, without providing a clear definition. Thus, the term X-Factor refers to the exploration of the enigmatic ability of expert teachers to teach students with EBD of which personality may be an aspect rather than the further identification of the renowned competencies of expert teachers.

## **Research questions and outline of the dissertation**

This dissertation poses two main research questions: 'Can expert teachers of students with EBD be identified by professionals from their daily working environment?' and 'Does a relationship between teacher personality and teacher quality in teaching students with EBD exist?'. These main research questions are addressed in four studies and respectively reported in four chapters.

As a prelude to answer the main research questions, the question of 'What is known about the personality traits of expert teachers of students with EBD?' is first addressed. Chapter 2 comprises a review of studies on the personality traits of such teachers. Their thoughts, feelings, and behaviors stemming from personality, were extracted from the literature and classified according to the dimensions of the FFM.

The main research questions are answered in Chapters 3 to 5. To examine the personality traits of expert teachers of students with EBD later on, a method for identifying the intended teachers was first developed in Chapter 3. The reliability and validity of three measures of teacher quality in teaching students with EBD based on judgments by professionals from the daily working environment were explored.

These measures included an observation form, which was developed for the benefit of the present study and completed by special needs support teachers, a nomination procedure attended by fellow-teachers, and a self-efficacy scale filled out by teachers themselves. Cluster analyses were performed to explore whether a group of expert teachers of students with EBD could be found among the participants.

Chapter 4 examines whether the alleged expert teachers of students with EBD actually showed more and or better teaching skills than their peers. Other than in the previous study, in which fellow teachers and teachers themselves rated a teacher's quality in teaching students with EBD, external independent observers who are no member of the teaching team served as raters of a teacher's quality in teaching students with EBD.

In addition to observations of the alleged expert teachers of students with EBD, the

teaching skills of a control group were observed in this study. The control group consisted of teachers who also participated in the previous study. However, the teachers in the control group had not been indicated as alleged expert teachers of students with EBD by means of the cluster analyses.

Chapter 5 addresses the relationship between teacher personality and teacher quality in teaching students with EBD. The personality traits of a representative population of regular primary school teachers were correlated with the professional judgments from teachers themselves, as well as special needs support teachers and fellow-teachers from their teaching team using the FFM.

The main findings of the four studies respectively reported in Chapters 2 to 5 are discussed in Chapter 6. Hereafter, suggestions for future research are outlined. The dissertation closes with a summary in both English and Dutch. Since the chapters are written in such a way that they can be read independently for the benefit of publication in peer-reviewed journals, several sections show some overlap.

## References

- Adera, B. A., & Bullock, L. M. (2010). Job stressors and teacher job satisfaction in program serving students with emotional and behavioral disorders. *Emotional and Behavioural Difficulties*, 15(1), 5–14.
- Almog, O., & Shechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education*, 22(2), 115–129.
- Barrick, M. R., & Mount, M. K. (2006). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26.
- Berry, D., & O'Connor, E. (2010). Behavioral risk, teacher-child relationships, and social skill development across middle childhood: A child-by-environment analysis of change. *Journal of Applied Developmental Psychology*, 31(1), 1–14.
- Block, J. (2010). The Five-Factor framing of personality and beyond: Some ruminations. *Psychological Inquiry*, 21(1), 2–25.
- Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, 93(6), 1080–1107.
- Costa, P. T. Jr., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO PI-R). In: G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Cooper, P. (2011). Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: An international review. *European Journal of Special Needs Education*, 26(1), 71–86.
- Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research*, 77(1), 113–143.
- CPB (2009). *Centraal Economisch Plan*. Retrieved October 2014 from <http://www.cpb.nl/publicatie/centraal-economisch-plan-2009.nl>.
- Csikszentmihalyi, M. (2000). *The way to flow*. Amsterdam: Boom.
- Darling-Hammond, L. (1999). *Teacher quality and student achievement: A review of state policy evidence*. Seattle: Centre for the Study of Teaching and Policy.
- De Boer, A. A., Pijl, S. J., & Minnaert, A. E. M. G. (2010). Attitudes of parents towards inclusive education: A review of the literature. *European Journal of Special Needs Education*, 25(2), 165–181.
- De Boer, A. A., Pijl, S. J., Minnaert, A. E. M. G., & Post, W. J. (2014). The long-term effects of an intervention to promote attitudes of students towards children with disabilities. *Journal of Autism and Developmental Disorders*, 44(3), 572–583.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Edelenbos, P., Meijer, W., & Harms, T. (2002). *Depedagogisch-didactische consequenties van diagnostiseren [The pedagogic-didactic consequences of diagnoses]*. Groningen, the Netherlands: GION.
- Eysenck, H. J. (1992). Four ways why the five factors are not basis. *Personality and Individual Differences*, 13(6), 667–673.
- Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal and Social Psychology*, 44(3), 329–344.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy. *Journal of Educational Psychology*, 76(4), 569–582.

- Gijzen, W., & Pameijer, N. (2009). Integraal indiceren: Toewijzen van onderwijs- en zorgarrangementen op basis van de behoeften van kind en opvoeders [Integrally indicating: Assigning special education on the basis of the needs of the child and the educators]. *Tijdschrift voor Orthopedagogiek [Journal of Special Needs Education]*, 48, 415–430.
- Goei, S. L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad 'Omgang met zorgleerlingen met gedragsproblemen'* [Final report study of literature by the Education council 'Coping with students with EBD']. Zwolle, the Netherlands: Hogeschool Windesheim.
- Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In: L. Wheeler (Ed.), *Review of personality and social psychology* (pp. 141–165). Beverly Hills: Sage.
- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers' experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties*, 15(3), 223–237.
- Hattie, J. (2003). *Teachers make a Difference. What is the Research Evidence?* Paper presented at the Australian Council for Educational Research conference (ACER), Melbourne (October).
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- Haun, M. (1997). *The X-Factor, what it is & how to find it: The relationship between inherited heart size and racing performance*. Neenah: Russell Meerdink Co.
- Hilbig, B. E., Zettler, J., Leist, F., & Heydasch, T. (2013). It takes two: Honesty-humility and agreeableness differentially predict active versus reactive cooperation. *Personality and Individual Differences*, 54(5), 598–603.
- Hofstetter, W., & Bijstra, J. O. (2014). Passend Onderwijs: Zijn we er klaar voor [Appropriate Education: Are We Ready]? *Kind en Adolescent Praktijk [Child and Adolescent Practice]*, 3, 132–139.
- Hunt, N., & Marshall, K. F. (1998). Children with behavior and emotional disorders. In: N. Hunt, & K. F. Marshall (Eds.), *Exceptional children and youth: An introduction to Special Education*. Boston: Houghton Mifflin.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology*, 85(6), 869–879.
- Johnson, A., & McCord, D. M. (2010). Relating sense of humour to the Five Factor theory personality domains and facets. *American Journal of Psychological Research*, 6(1), 32–40.
- Jordan, A., & Stanovich, P. (2003). Teachers' personal epistemological beliefs about students with disabilities as indicators of effective teaching practices. *Journal of Research in Special Educational Needs*, 3(1), 1–12.
- Jordan, A., Glenn, C., & McGhie-Richmond, D. (2010). The Supporting Effective Teaching (SET) project: The relationship of inclusive teaching practices to teachers' beliefs about disability and ability, and about their roles as teachers. *Teaching and Teacher Education*, 26(2), 259–266.
- Jorm, A. F., & Christensen, H. (2004). Religiosity and personality: Evidence for non-linear associations. *Personality and Individual Differences*, 36(6), 1433–1441.
- Jugović, I., Marušić, I., Pavin, I. T., & Vizek (2012). Motivation and personality of preservice teachers in Croatia. *Asia-Pacific Journal of Teacher Education*, 40(3), 271–287.
- Kauffman, J. M., Anastasiou, D., Badar, J., Travers, J. C., & Wiley, A. L. (2016). Inclusive education moving forward. In: J. P. Bakken, F. E. Obiakor, & A. Rotatori (Eds.) *General and Special Education in an Age of Change: Roles of Professionals Involved* (pp. 153–178). Bingley, UK: Emerald Group Publishing Limited.

- Kneipp, L. B., Kelly, K. E., Biscoe, J. D., & Richard, B. (2010). The impact of instructors' personality characteristics on quality of instruction. *College Student Journal*, 44(4), 901–905.
- Koopman, P., & Ledoux, G. (2013). *Kengetallen Passend Onderwijs [Key figures Appropriate Education]*. Amsterdam: Kohnstamm Instituut.
- Kyriakides, L., Campbell, R. J., & Christofidou, E. (2002). Generating criteria for measuring teacher effectiveness through a self-evaluation approach: A complementary way of measuring teacher effectiveness. *School Effectiveness and School Improvement*, 13(3), 291–325.
- Ledoux, G., & Roeleveld, J. (2010). *Resultaten van de pilot COOL Speciaal [Results of the Cool Special Pilot]*. Nijmegen/Amsterdam: ITS/Kohnstamm Instituut.
- Ledoux, G., Vergeer, M. M., Elshof, D. (2013). *Nieuwe paden. Samenwerkingsverbanden Passend Onderwijs op weg naar nieuwe procedures voor toewijzing [New paths. Appropriate Education Collaborations on the way to new indication procedures]*. Amsterdam: Kohnstamm Instituut.
- Lightowler, C., Piccione, G., Guidice, E., & Del Olmo, R. G. (2004). Echocardiography and electrocardiography as means to evaluate potential performance in horses. *Journal of Veterinary Science*, 5(3), 259–262.
- Lindsay, G. (2007). Educational psychology and the effectiveness of inclusion/mainstreaming. *British Journal of Educational Psychology*, 77(1), 1–24.
- Lipsky, D. K., & Gartner, A. (1996). Inclusion, school restructuring, and the remaking of American society. *Harvard Educational Review*, 66(4), 762–796.
- MacDonald Grieve, A. (2010). Exploring the characteristics of 'teachers for excellence': Teachers' own perceptions. *European Journal of Teacher Education*, 33(3), 265–277.
- Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79(1), 327–365.
- Marzano, R., Marzano, J., & Pickering, D. (2003). *Classroom management that works. Research-based strategies for every teacher*. Alexandria: Association for Supervision and Curriculum Development.
- McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81–90.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, 60(2), 175–215.
- McCrae, R. R. (2009). The Five Factor Model of personality traits: Consensus and controversy. In: J. J. Corr, & G. Matthews. (Eds.), *The Cambridge handbook of personality* (pp. 148–161). New York: Cambridge University Press.
- McGhee, R. L., Ehrler, D. J., Buckhalt, J. A., & Philips, C. (2012). The relation between five-factor personality traits and risk-taking behaviour in preadolescents. *Psychology*, 3(8), 558–561.
- Meijer, C. (2003). *Special Education across Europe in 2003. Trends in provision in 18 European countries*. Middelfart, Denmark: European Agency for Development in Special Needs Education.
- Mertens, N. (2010). *De X-Factor van de leraar [A teacher's X-Factor]*. Naarden, the Netherlands: Zet & Print.
- Ministerie van Onderwijs, Cultuur en Wetenschap (MinOCW) (2011). *Naar Passend Onderwijs [To Appropriate Education]*. Den Haag, the Netherlands.
- Mount, M. K., & Barrick, M. R. (1998). Five-Factor Model of personality and performance in jobs involving interpersonal interactions. *Human Performance*, 11(2), 145–165.

- Musek, J. (2007). A general factor of personality: Evidence for the Big One in the five-factor model. *Journal of Research in Personality, 41*(6), 1213–1233.
- NCLB (2001). *No Child Left Behind Act*. Nelson, J. R., Maculan, A., Roberts, M. L., & Ohlund, B. J. (2001). Sources of occupational stress for teachers of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 9*(2), 123–130.
- Onderwijsraad (2011). *Passend Onderwijs voor leerlingen met een extra ondersteuningsbehoefte. Overwegingen bij het concept wetsvoorstel Passend Onderwijs [Appropriate Education for students with special educational needs. Considerations regarding the legislation Appropriate Education]*. Den Haag, the Netherlands: Onderwijsraad.
- Onderwijsraad (2012). *Referentiekader Passend Onderwijs [Frame of reference Appropriate Education]*. Utrecht, the Netherlands: PO-Raad, VO-raad, AOC Raad, MBO Raad.
- Patrick, C. L. (2011). Student evaluations of teaching: effects of the Big Five personality traits, grades and the validity hypothesis. *Assessment & Evaluation in Higher Education, 36*(2), 239–249.
- Paunonen, S. V., Haddock, G., Forsterling, F., & Keinonen, M. (2003). Broad versus narrow personality measures and the prediction of behaviour across cultures. *European Journal of Personality, 17*(6), 413–433.
- Portegal-Felicesa, M. L., Juan L. Castejón-Costaa, J. L., & Jimeno-Morenillab, A. (2014). Differences between the personal, social and emotional profiles of teaching and computer engineering professionals and students. *Studies in Higher Education, 39*(7), 1185–1201.
- Pijl, S. J., Meijer, C. J. W., & Hegarty, S. (1997). *Inclusive Education: A global agenda*. London: Routledge.
- Pijl, S. J. (2015). Fighting segregation in special needs education in the Netherlands: The effects of different funding models. *Discourse: Studies in the Cultural Politics of Education 37*(4), 553–562.
- Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology, 27*(2), 191–218.
- Prather-Jones, B. (2011). Some people aren't cut out for it: The role of personality factors in the careers of teachers of students with EBD. *Remedial and Special Education, 32*(3), 179–191.
- Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding socio-cultural influences on student motivation. In: D. M. McInerney, & S. Van Etten (Eds.), *Big theories revisited* (pp. 31–60). Greenwich: Information Age Press.
- Reumerman, R. (2010). *Expertleerkrachten in de omgang met probleemgedrag [Expert teachers dealing with problem behavior]*. Proefschrift [Dissertation]. University of Amsterdam.
- Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin, 143*(2), 117–141.
- Roos, M., & Bloem, M. (2014). *Uit het voortgezet speciaal onderwijs, en wat dan? [Done with secondary special education, and then what?]*. Centraal bureau voor de statistiek.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology, 82*(1), 30–43.
- Schacter, D. L., Gilbert, D. T., & Wegner, D. M. (2013). *Introducing psychology*. New York: Worth.
- Sierens, E., Vansteenkiste, M., Goossens, L., Soenens, B., & Dochy, R. (2009). The synergistic relationship of perceived autonomy support and structure in the prediction of self-regulated learning. *British Journal of Educational Psychology, 79*(1), 57–68.
- Siperstein, G. N., Wiley, A. L., & Forness, S. R. (2011). *Academic and behavioral progress of students with ED served in low income versus high income schools*. Paper presented at the Teacher Educators for Children with Behavior Disorders conference (TECBD), Tempe (October).

- Smeets, E. F. L., & Rispens, J. (2008). *Op zoek naar Passend Onderwijs. Overzichtsstudie van de samenhang tussen Regulier en Speciaal (Basis) Onderwijs* [Looking for Appropriate Education. Outline Study on the Relation between Regular and Special (Primary) Education]. Nijmegen, the Netherlands: ITS.
- Smits, H. J. (2006). *Ontdek je X-Factor* [Discover your X-Factor]! Vianen, the Netherlands: House of Books.
- Soenens, B., & Vansteenkiste, M. (2005). Antecedents and outcomes of self-determination in three life-domains: The role of parents' and teachers' autonomy support. *Journal of Youth and Adolescence*, 34(6), 589–604.
- Stoutjesdijk, R., & Scholte, E. M. (2009). Cluster 4 speciaal onderwijs: een vergelijking tussen leerlingen op cluster 4 scholen en cluster 4 rugzakleerlingen [Cluster 4 Special Education: A Comparison between students in Cluster 4 Schools and students with Cluster 4 Back Pack Funding in Regular Education]. *Tijdschrift voor Orthopedagogiek*, 48, 161–169.
- Stroet, K., Opendakker, M., & Minnaert, A. (2013). Effects of need supportive teaching on early adolescents' motivation and engagement: A review of the literature. *Educational Research Review*, 9, 65–87.
- Timmering, L., Snoek, M., & Dietze, A. (2009). *Identifying teacher quality: Structuring elements of teacher quality*. Paper presented at the Association for Teacher Education Europe conference (ATEE), Mallorca (August).
- Tomko, C. F. (1996). *What is Inclusion? Kids Together Inc.* Retrieved February 2015 from <http://www.kidstogether.org/inclusion.htm>.
- Tomlinson, S. (2012). The irresistible rise of the SEN industry. *Oxford Review of Education*, 38(3), 267–286.
- Tok, S., & Morali, S. L. (2009). Academic Success in Physical Education Teacher Candidates. *Social Behavior & Personality: An International Journal*, 37(7), 921–931.
- Tupes, E. C., & Christal, R. E. (1961). *Recurrent personality factors based on trait ratings. Technical report ASD-TR-61-97*. Lackland: US Air Force.
- Tweede Kamer der Staten Generaal (1990). *Weer Samen Naar School (WSNS) [Together to School Again]*. Den Haag, The Netherlands.
- UNESCO (1994). *The Salamanca statement and framework for action on special needs education*. Paris: UNESCO.
- Useche, A. C., Sullivan, A. L., Merk, W., & Orobio de Castro, B. (2014). Relationships of aggression subtypes and peer status among aggressive boys in general education and Emotional/ Behavioral Disorder (EBD) classrooms. *Exceptionality: A Special Education Journal*, 22(2), 111–128.
- Van der Linden, D., Te Nijenhuis, J., & Bakker, A. B. (2010). The general factor of personality: A meta-analysis of Big Five intercorrelations and a criterion-related validity study. *Journal of Research in Personality*, 44(3), 315–327.
- Van der Meer, J. (2011). *Over de grenzen van de leerkracht: Passend Onderwijs in de Praktijk* [Across a teacher's borders: Appropriate Education in practice]. Den Haag, the Netherlands: ECPO.
- Van der Ploeg, J. D. (1990). *Gedragsproblemen. Ontwikkelingen en risico's* [Behavioral problems. Development and risks]. Rotterdam, the Netherlands: Lemniscaat.
- Van der Wolf, K., & Van Beukering, T. (2009). *Gedragsproblemen in scholen. Het denken en handelen van leraren* [Behavioural problems in schools. Teacher beliefs and actions]. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Voss, R., & Gruber, T. (2006). The desired teaching qualities of lecturers in higher education: A means end analysis. *Quality Assurance in Education*, 14(3), 217–242.

Walraven, M., Kieft, M. & Van der Vegt, A. L. (2013). *Passend Onderwijs en opvattingen over de toerusting van VO-docenten en –scholen [Appropriate Education and perceptions on the equipment of secondary school teachers and secondary schools]*. Utrecht, the Netherlands: Oberon & ECPO.

Zweers, I. (2018). *Shape sorting students for special education services? A study on placement choices and social-emotional and academic functioning of students with SEBD in inclusive and exclusive settings*. Dissertation. University of Utrecht, the Netherlands.





# PERSONALITY TRAITS OF EXPERT TEACHERS OF STUDENTS WITH EBD: REVIEWING AND CLASSIFYING THE LITERATURE

S.A. Büttner  
S.J. Pijl  
J.O. Bijstra  
E.J. Van den Bosch

*An adapted version of this chapter was published as:*

Büttner, S. A., Pijl, S. J., Bijstra, J., & Van den Bosch, E.J. (2015). Personality traits of expert teachers of students with behavioral problems: A review and classification of the literature. *The Australian Educational Researcher*, 42(2), 461–481.

*S.A. Büttner developed the study concept and design, and S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch gave advice and feedback. S.A. Büttner did the main literature search. S.A. Büttner, S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch performed interpretation. S.A. Büttner drafted the manuscript, and S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch provided critical revisions.*

---



## **Abstract**

Teaching students with emotional and behavioral difficulties (EBD) is a challenge for many teachers but other teachers are able to bring out the best in these students. Much research has been done to find out what differentiates expert teachers from their less skilled colleagues. Recent evidence points to personality as a factor of influence on teacher performance. This study reviewed the literature on the personality traits of expert teachers of students with EBD. No studies were found that have based their conclusions on actual personality tests. The studies selected report their key thoughts, feelings, and behaviors, which according to trait theory stem from personality. Two independent raters classified the personality variables according to the dimensions of the Five Factor Model of personality: Extraversion; Agreeableness; Conscientiousness; Neuroticism; and Openness to Experience. The evidence indicates that a teacher's ability to teach students with EBD increases with his/her levels in four of the five personality factors. No variables relating to Neuroticism were reported in the literature. Implications for follow-up research are discussed.

## Introduction

The trend towards inclusive education (UNESCO, 1994), whereby students with special educational needs are educated in a local school, has been associated with an increase in the complexity of teaching (Gijzen & Pameijer, 2009; Goei Kleijnen, 2009). More and more teachers experience feelings of professional inadequacy (Hofstetter & Bijstra, 2014), which are said to occur when a teacher lacks the pedagogic and/or didactic skills to act adequately in difficult classroom situations (Edelenbos, Meijer, & Harms, 2002; Meijer, 2003).

A specific challenge for teachers is the growing number of students with emotional and behavioral difficulties (EBD) (Goei & Kleijnen, 2009; Kokkinos, Panayiotou, & Davazoglou, 2005; Smeets & Rispens, 2007). Teachers of students with EBD experience more job stress (Kokkinos et al., 2005; Miller, Brownell, & Smith, 1999) and are more likely to end their career in education earlier than other teachers (Adera & Bullock, 2010; Nelson, Maculan, Roberts, & Ohlund, 2001).

The literature shows that the concept of EBD is hard to define. It is often used as an umbrella term for a variety of social and/or emotional difficulties, which range from being internalizing to externalizing, and vary in frequency, duration, extent, and consequence (Van der Ploeg, 2007). In addition to this, emotional and behavioral difficulties fluctuate, are relative and relational, and dependent on circumstance at all times (Van der Wolf & Van Beukering, 2009).

Peterson (1996) and Hunt and Marshal (1998) present various options to define and treat emotional and behavioral difficulties. In this article, the following definition of EBD has been used: "Emotional and behavioral difficulties result from interactions between the student, the home, and school environment, and are disturbing and restrictive for all parties since they are contrary to normal standards and values." (Van der Ploeg, 2007; Van der Wolf & Van Beukering, 2009).

Many evidence-based teaching methods are available to bring about changes in student behavior (Chaplain, 2003; Cooper, 2011; Niesyn, 2009). These programs, however, are not often widely used or are used inadequately (Goei & Kleijnen, 2009; Van der Wolf & Van Beukering, 2009). Most teachers rely on restrictive rather than helpful approaches (Almog & Shechtman, 2007). They respond according to common sense rather than theory (Van der Wolf & Van Beukering, 2009).

Despite the many teachers who experience feelings of professional inadequacy while teaching students with EBD, some are able to bring out the best in such students. These teachers positively affect and inspire their students, meet their differing needs, prevent their emotional and behavioural difficulties from being dominant, and increase their potential. Teaching with both their head and their heart, they are considered to be experts in teaching students with EBD.

In order to define a teacher's ability to teach, the attitudes, knowledge, and skills of expert teachers have been studied in detail. Expert teachers are reported to have democratic and epistemological teaching beliefs (Jordan & Stanovich, 2003), as well as positive attitudes towards inclusive education (Jordan, Glenn, & McGhie-Richmond, 2010; Kyriakides, Campbell, & Christofidou, 2002). They also engage in close teacher-student relationships (Cornelius-White, 2007; Martin & Dowson, 2009).

Furthermore, expert teachers demonstrate content knowledge, verbal competence, and various teaching strategies and interaction styles (e.g. instruction, feedback) (Hattie, 2003; Hattie & Timperley, 2007; MacDonald Grieve, 2010; Marzano, Marzano, & Pickering, 2003) in order to meet students' needs for competence, autonomy, and relatedness (Deci & Ryan, 1985). As a result, expert teachers experience personal and general efficacy (Poulou, 2007; Soodak & Podell, 1993).

While a teacher's ability to teach evidently comprises the characteristics mentioned above, it has been argued that personality may also be related to a teacher's excellence (Prather-Jones, 2011; Smits, 2006; Timmering, Snoek, & Dietze, 2009). For instance, expert teachers are reported to be genuine, honest, trustworthy, empathic, respectful, sensitive, responsive, patient, disciplined, enthusiastic, committed, emotionally stable, and engaged, (Liu & Meng, 2009; Mertens, 2010).

The concept of personality is defined as relatively enduring patterns of thoughts, feelings, and behaviors (McCrae & John, 1992). The nature of the relationships between variables associated with personality is difficult to study and results in unclear discussions about interventions (Billingsley, 1993). Personality research on twin subjects suggests that heritability and environmental factors equally influence human personality (Bouchard & McGue, 2003; Riemann, Angleitner, & Strelau, 1997).

Many studies have established that personality has a biological basis (Cobb-Clark & Schurer, 2012) that matures (Srivastava, John, Gosling, & Potter, 2003) and stabilizes (Roberts & Mroczek, 2008). However, the situation that a person finds him- or herself in also plays a role in how he/she reacts (Paunonen & Ashton, 2001). Emerging evidence suggests that personality traits are dynamic and should be conceived as continua that change with circumstances in life (Boyce, Wood, & Powdthavee, 2013).

A large volume of literature has been published on personality traits in relation to job performance. Virtually all studies report strong correlations between the Five Factor Model of personality (FFM) (Tupes & Christal, 1961) and job performance (Barrick & Mount, 1991; Connor-Smith & Flachsbart, 2007; Hurtz & Donovan, 2000). The FFM characterizes individuals in terms of relatively enduring patterns of thoughts, feelings, and behaviors (McCrae & John, 1992).

Psychologists have gradually reached consensus on five broad dimensions to describe personality (Costa & McCrae, 1985; 1987; Goldberg, 1990): Extraversion; Agreeableness;

Conscientiousness; Neuroticism; and Openness to Experience. The five factor structure is found to be a highly reliable, valid, and predictive tool in a variety of contexts and cultures (Costa & McCrae, 1992; Ostendorf, 1990; Saucier & Goldberg, 1998; Saulsman & Page, 2004; Trull & Geary, 1997).

Except for Neuroticism, all the personality factors are positively related to job performance. In addition, all factors except for Neuroticism are valid predictors of training proficiency (Connor-Smith & Flachsbart, 2007; Salgado, 1997). Conscientiousness is found to be the most predictive of job performance. This factor indicates the degree to which a person demonstrates directed, organized behavior, restructuring strategies, and good impulse control (Barrick & Mount, 1991; Costa & McCrae, 2008; Hurtz & Donovan, 2000).

It should be noted that almost all studies on the FFM are performed in the field of marketing and other job sectors where interaction with people is required. Differences in the nature of the workplace have been suggested (Hurtz & Donovan, 2000). To find out whether the FFM works the same way in the field of education, the focus of an increasing amount of literature has been put on exploration of this relationship in education. Such education settings mainly involve secondary and higher education.

Examples of insights yielded from such research include that Agreeableness is positively correlated with student evaluations of instructors in higher education (Kneip, Kelly, Biscoe, & Richard, 2010), that teachers in higher education have positive traits at their disposals, such as friendliness, approachability, patience and enthusiasm (Voss & Gruber, 2006), and that the factors of Extraversion, Openness, Agreeableness and Conscientiousness are personality traits favored in instructors, whereas Neuroticism is not (Patrick, 2011).

Insights derived from research performed in teacher training include that pre-service teachers have significantly lower levels of all the personality factors at their disposals compared to in-service teachers except in the case of Neuroticism (Pertegal-Felicesa, Castejón-Costaa, & Jimeno-Morenillab, 2014) and that Extraversion and Agreeableness predict intrinsic career value, as well as satisfaction with the choice of the teaching profession (Jugović, Marušić, Pavin, & Vizek, 2012).

Despite their relevance, these findings are not necessarily applicable to the characteristics of expert teachers of students with EBD nor to the primary education setting. Comparison of personality traits between pre-service and in-service teachers does not provide information about the quality of their teaching performances regarding students with EBD. This also accounts for insight in the career value, job satisfaction, and educational success of teacher trainees in physical education or teacher training.

Regarding the education setting, primary school teachers need to teach more, if not all, topics than secondary school teachers, who have a content specialism and need to teach students of a younger age, who demonstrate more variation in behaviors and educational needs. Furthermore, the teacher-student relationship is of a different kind because a primary

school teacher spends more time with students compared to secondary school teachers, who teach several classes throughout the day.

Taking into consideration the limitations of the available research evidence, there clearly is a need for research in which the focus is on the personalities of expert teachers of students with EBD. In addition to the competencies that have been found to be associated with a teacher's ability to teach students with EBD, it is considered worthwhile attempting to define this type of ability further by exploring to what extent the five personality dimensions contribute to a teacher's classroom performance when teaching students with EBD.

Finding support for a relationship between teacher personality and the ability to teach students with EBD may provide tools for selecting expert teachers of students with EBD on the basis of relevant personality traits. Furthermore, the relevant personality traits may be further operationalized into teacher behaviors for the benefit of initial or extended teacher education. Cogently, a first step is to gather the empirical evidence on the personality traits of expert teachers of students with EBD.

## **Method**

A literature review was conducted to present a complete overview of relevant studies. The procedure used to search, select, and analyse studies is described below, including the classification of the results.

## **Search**

The search was performed using the 'EBSCOhost Complete' browser, which includes many databases (e.g. ERIC, MEDLINE, PsycARTICLES, PsychINFO, SocINDEX). Two categories of keywords were used: Teacher personality (A) and Emotional and behavioral difficulties (B). The search focused on (aspects of) teacher personality in relation to teaching students with EBD (A x B). In order to reflect the variety of terms that appear in global literature, a broad range of keywords was used for each category. Regarding teacher personality, keywords included teacher quality, teacher thoughts, feelings, and behaviors, as well as synonyms for these terms. The following keywords were used to search for papers:

### ***Teacher personality (A)***

five factor model; teach\* personal\* / character\* / qualit\* / efficacy / effective\* / behavio\* / communic\* / method\* / instructi\* / feedback / strategies / coping / perceptions / beliefs / virtue\* / moral\* /attitude\* / feel\* / experience\* / sens\* / satisf\*; good / talented / excellent / expert / extraordinary / successful / highly rated / exceptional / competent teach\*; teacher-child / student relati\* / interacti\*.

### ***Emotional and behavioral difficulties (B)***

EBD; SED; SEBD; BESD; Behavio\* problems / disorders / needs / difficulties; disrupt\*; disaffect\*; disengag\*; troublesome; emotion\*; misbehav\*; and challeng\*.

### **Selection**

The search for variations on the keywords (A x B) resulted in more than 4,000 references. The suitability of each reference found was evaluated step by step by reading through the title, then the abstract, key words, and finally the complete text. The following criteria were used to select the relevant studies:

- published between 2000 and 2013;
- published as an article in an international academic journal or as a PhD study;
- peer-reviewed;
- focused on regular, special or inclusive education;
- focused on core qualities of teachers of students with behavioral difficulties;
- generated empirical data;
- based on studies that fully matched the selection criteria, in the case of a review study;
- written in English or Dutch.

With the aim of only including studies in which the focus was on the personal qualities of expert teachers of students with EBD, studies in which the following topics were addressed were excluded from the literature search: the personality traits of less effective teachers; the effectiveness of pre-selected behavioral interventions; and the exploration of problem situations in the classroom.

Thirteen studies met the selection criteria. A considerable number of studies were rejected because they were not directly related to education. However, most were rejected for evaluating the effectiveness of interventions rather than the basic abilities of expert teachers of students with EBD. Further studies were rejected because they focused on exploring problems rather than good practice.

The search for PhD studies was conducted using the 'Dissertation Abstracts International' browser and the Dutch 'Narcis' databank of dissertations. This search resulted in one Dutch PhD study. Finally, the reference lists of the selected studies were examined to make sure no relevant studies had been missed but without results. Thus, thirteen journal articles and one PhD study were selected for this study.

### **Analysis**

Studies addressing personality traits of expert teachers of students with EBD base their conclusions either on personality tests or on variables related to personality. The latter

comprise patterns of thoughts, feelings, and behaviors, which according to Tupes and Christal (1961) stem from personality. Since no studies were found that have based their conclusions on actual personality tests, the following descriptions of the personality dimensions of the FFM (Costa & McCrae, 2008) were used to classify the variables related to personality reported in the literature:

1. Extraversion: excitability; sociability; talkativeness; assertiveness; and emotional expressiveness. People who score low on this dimension prefer being alone and focus on their own thoughts, feelings, and interests, while high scorers appreciate group work, are typically excitable, optimistic, and energetic, and have a sense of humor.
2. Agreeableness: trust; altruism; kindness; affection; and other pro-social behaviors. People who score low on this dimension are antagonistic, egocentric, and competitive, rather than cooperative, while high scorers often allow others be the focus of their relationships with them and are helpful, modest, friendly, and willing to cooperate.
3. Conscientiousness: good impulse control; goal-directed; mindful; and organized behaviors. People who score low on this dimension show relaxed, messy on-task behavior, easily accept failure, and tend to make external attributions, while high scorers are eager, ambitious, reliable, and see life in terms of tasks to be fulfilled.
4. Neuroticism: emotional instability; anxiety; moodiness; irritability; and sadness. People who score low on this dimension are emotionally balanced individuals who usually have an even temper, are calm and relaxed, even in stressful situations, while high scorers are often worried, and feel relatively unhappy and unsafe.
5. Openness to experience: imagination; insight; and a broad range of interests. People who score low on this dimension tend to show conventional views and behaviors, and prefer the tried and trusted above the innovative, while high scorers are curious and flexible, and do not conform to the available frameworks in advance.

The FFM does not describe all aspects of personality (Paunonen, Haddock, Forsterling, & Keinonen, 2003; Paunonen & Jackson, 2000). Since the missing trait 'sense of humor' appears to be relevant in teaching students with EBD in relation to the Extraversion factor (Johnson & McCord, 2010; Sarglou & Scariot, 2002), it was added to the overview.

A general overview of the studies reviewed ( $N = 14$ ) is presented in author alphabetical order in Table 2.1. The studies are listed according to the authors' terminology and sorted by country, educational setting, number of participating teachers and students, and age of students, plus measures and variables related to teacher personality.

In order to provide a substantial classification of the variables relating to personality reported in the literature, two independent raters classified these variables according to the personality dimensions of the FFM. Both raters were experienced educational psychologists

specialized in coaching teachers of students with special educational needs.

To reach a consensus, a simplified version of the Quaker Based model (Quaker Foundation on Leadership, 1999) was used in the classification process. The model involved four steps: independent classification by both raters; identification of inversely classified variables; discussion of the independent classification; and adjustment of the classification.

In line with this procedure, after their initial independent classification, the two raters discussed with each other about the variables they had classified differently with each other. On the basis of these discussions, both the raters were then given the opportunity to change their classification.

The level of agreement between both classifications was then determined. Finally, having incorporated the changes into the two classifications, the variables on which the raters had not reached consensus were removed from the Results section, the Table, and all subsequent sections.

The five personality factors are discussed one by one in the Results section. First, the total number of studies found in relation to the relevant personality factor is given. Next, the purpose, method, results, and constraints of each study reviewed are described. The studies are arranged by date of publication.

In some cases, a study is reviewed in more than one section because different personality variables are classified under different personality dimensions. The work reviewed in other sections is referred to in these cases. For example: Almog and Shechtman (2007) (see also Agreeableness and Openness to Experience) measured efficacy beliefs with a questionnaire.

In line with the general literature on the relationship between personality and job performance, the evidence found in the present study was weighted in terms of the nature of the relationship. For example: the evidence reviewed indicated that a teacher's ability to teach students with behavioral difficulties increases with his/her level in Extraversion.

## Results

A total number of 34 variables relating to personality were derived from the literature. Table 2.1 presents an overview of the studies selected. Based on the two independent classifications, consensus between the raters was instantly reached on 24 variables. Subsequently, a further meeting between the two independent raters yielded a consensus on all the variables. For instance, the variable 'neutral attitude' was then classified as a different personality dimension altogether (i.e. Agreeableness) than the two different dimensions it was initially classified as (i.e. Conscientiousness, Openness to Experience). As a result of the consensus reached, no variables were eliminated from further analysis.

**Table 2.1** Overview of the selected studies ( $N = 14$ )

Study	Country	Education setting <sup>1</sup>	N teachers	N students	Age students	Measures <sup>2</sup>	Variables related to teacher personality
Almog & Shechtman (2007)	Israel	I	33		5-9	O & I & Q	democratic beliefs; helpful strategies; efficacy beliefs
Berry & O'Connor (2010)	USA	R	1168		4-12	Q	teacher-child relationship quality
Fovet (2009)	UK	S	20	19	10-12	O & I & Q	humor
	Canada	R					
Gadayne et al. (2006)	Belgium	R	22	281	4-7	Q	perceptions of intelligence as fixed; differentiation techniques
Goodman & Burton (2010)	UK	R	9		12-18	I	positive feedback; humor; teacher-student relationship quality; negotiation; flexibility; providing opportunities for achievement; responsiveness; effective lesson planning; giving responsibility for own behavior; primary school strategies; peer teacher observation positive incentives; quiet praising and reprimanding
Infantino & Little (2007)	Australia	R		350	12-19	Q	teacher-child closeness
Ladd & Burgess (2001)	USA	R	151	396	4-7	Q	teacher-student relationship quality
Meehan et al. (2003)	USA	R	39	140	7-11	Q	teacher-student interaction quality
Merrit et al. (2012)	USA	R	36	178	6-7	O & Q	teacher-student interaction quality
Poulou & Norwich (2002)	Greece	R	391			Q	helpful intentions; perceptions of remediable nature; perceptions of the efficacy of positive incentives, cooperation with professionals, social provision, and self; responsibility; interest in own professional development
Prather-Jones (2011)	USA	R	13		5-19	I	sincere interest in students; intrinsic motivation; flexibility; acceptance of limitations; not taking things personally
Reurmerman (2010)	NL	R	36		4-11	I	humor
			170			Q	neutral attitude; behavior regulation strategies; reflective; focused on context of students' lives
Rimm-Kaufman et al. (2002)	USA	R	97		1-6	O	sensitivity
Silver et al. (2005)	USA	R	283		4-11	I & Q	teacher-student relationship quality

<sup>1</sup> Education setting: I = inclusive; R = regular; S = special; <sup>2</sup> Measures: O = observation; I = interview; Q = questionnaire.

## Extraversion

Five of the studies selected reported on teacher personality variables that are related to the Extraversion aspect of a teacher's ability to teach students with EBD.

Prather-Jones (2011) (see also Conscientiousness and Openness to Experience) explored the role of personality in long-serving teachers ( $n = 13$ ) of students with emotional and behavioral disorders via interviews. A genuine interest their students is reported as a key characteristic of such teachers, who were all highly motivated to make a difference to their students' lives. The use of snowball sampling techniques may be a limitation of this study.

Reumerman (2010) (see also Agreeableness and Conscientiousness) examined the coping strategies of expert teachers of students with behavioral problems. Special needs support teachers ( $n = 36$ ) took part in a concept mapping procedure. Expert teachers were reported to understand the nature of their students' lives and to use humor as a successful strategy. The non-randomized selection of participants and possibly biased individual responses are limitations of the study.

Goodman and Burton (2010) (see also Agreeableness, Conscientiousness, and Openness to Experience) examined teachers' ( $n = 9$ ) approaches towards students with EBD in secondary education via semi-structured interviews. Participants agreed on the importance of providing students with positive feedback and that humor served as a tool for managing disruptive behavior in class. The small sample-size may be a limitation of the study.

Fovet (2009) measured the perceptions of the learning and behavioral outcomes of teachers ( $n = 20$ ) using humor in the classroom. Data were collected using observations, as well as semi-directive teacher and student questionnaires. Most participants considered humor as a tool for renegotiating power and position. Using humor made students feel comfortable and willing to learn. No limitations were noted for this study.

Infantino and Little (2007) (see also Conscientiousness) examined secondary school student perception of the effectiveness of two disciplinary methods: deterrents and incentives. No teachers participated in this study. The questionnaires completed by the students showed that they perceived achieving good marks for written work, receiving a favourable letter or academic report, and being given free time as the most effective incentives.

The evidence reviewed indicates that a teacher's ability to teach students with EBD increases with his/her level in Extraversion.

## Agreeableness

Ten of the studies selected reported on teacher personality variables that are related to the Agreeableness aspect of a teacher's ability to teach students with EBD.

Merrit, Wanless, Rimm-Kaufman, Cameron, and Peugh (2012) examined predictors of children's social behaviours in first grade. To do this, teacher-child interaction quality was

assessed by means of observation, while teachers ( $n = 36$ ) also completed questionnaires. The results indicate that greater emotional support predicted lower aggression. A possible teacher bias must be accounted for, however, since a teacher-reported measure of child behavior was used.

Goodman and Burton (2010) (see also Extraversion, Conscientiousness, and Openness to Experience) reported a general consensus among the participating teachers of the valuable impact of establishing a respectful teacher-student relationship through knowing about students' interests and problems in life by working collaboratively and both parties also being willing to negotiate. Moreover, participants agreed that teachers must be responsive to the mood of the class.

Berry and O'Connor (2010) examined the roles of early behavioral problems and teacher-child relationships in the development of children's social skills. The number of participating teachers was not reported. Data were used from a longitudinal study of early child care and youth development. Behavioral problems were rated by mothers via questionnaires. The quality of the teacher-child relationship and children's social skills were also rated by teachers in a questionnaire.

The results showed that children with higher-quality teacher-child relationships demonstrated greater social skills from nursery school to sixth grade than their peers with lower-quality ones. Limitations here may be a lack of correlation between teacher and student perceptions, as well as children's behavioral problems and social skills only being rated by mothers. Further, it is unclear whether teacher-child relationships cause changes in social skills or the reverse.

On the basis of classroom observations, Reumerman (2010) (see also Extraversion and Conscientiousness) found in the second study of his PhD project that expert teachers of students with behavioral problems ( $n = 4$ ) adopt a more neutral attitude towards their students. They are more patient and take time to observe the situation in which problem behavior occurs, in comparison to non-expert teachers ( $n = 4$ ). However, the small sample-size may be a limitation of the study.

Almog and Shechtman (2007) (see also Conscientiousness and Openness to Experience) examined the coping strategies of first to third grade teachers of students with behavioral problems ( $n = 31$ ). Data were gathered via classroom observations and interviews in which teachers responded to vignettes. Helpful responses were found to be evident in relation to passive-aggressive, impulsive, and disobedient students. Because all the teachers served as mentors, the sample may be not representative.

Silver, Measelle, Armstrong, and Essex (2005) examined the contribution of teacher-child relationship quality ( $n = 283$ ) on externalising behavior, which were rated by teachers from nursery school to third grade. Teacher-child closeness was found to be most strongly associated with decreases in high levels of externalising behavior. However, that teachers

rated the relationship quality could imply a lack of correlation between teacher and student perceptions.

Meehan, Hughes, and Cavell (2003) assessed the link between teacher-student relationship quality and aggressive behavior in second and third grade students. Students rated the teacher-student relationship in a structured interview. Teachers ( $n = 39$ ) rated students' aggressive behaviors via a questionnaire. Positive teacher-student relationships were found to decrease aggressive behavior but again there might be a lack of correlation between student and teacher perceptions of the relationship quality.

Poulou and Norwich (2002) (see also Conscientiousness and Openness to Experience) measured teachers' cognitive, emotional, and behavioral responses to students with EBD. Teachers ( $n = 391$ ) responded to vignettes comprising different types and degrees of behavioral difficulties. Helpful intentions were found to be evident in all of their responses towards students. The study's restriction to predictive relationships may not produce causal associations between variables.

Using observations, Rimm-Kaufman, Early, Cox, Saluja, Pianta, Bradley, and Payne (2002) studied the link between the social boldness ( $n = 60$ ) and wariness ( $n = 37$ ) of nursery school children and their behavior in class, as well as the relationship between nursery school teachers' sensitivity and their pupils' behavior. Socially bold children with more sensitive teachers were found to show fewer negative behaviors than those with less sensitive ones. The largely middle-class sample of the study might restrict generalization of the findings.

Ladd and Burgess (2001) longitudinally assessed teacher-child relationships to predict changes in school adjustment and psychological functioning of children from nursery school to first grade. Child behavior and teacher-child closeness were rated by teachers ( $n = 151$ ) via a questionnaire. Close teacher-child relationships were found to act as a protective factor. Account should be taken of a possible lack of correlation between teacher and student perceptions of the relationship quality.

The evidence reviewed indicates that a teacher's ability to teach students with EBD increases with his/her level in Agreeableness.

## **Conscientiousness**

Six of the studies selected reported on teacher personality variables that are related to the Conscientiousness aspect of a teacher's ability to teach students with EBD.

Prather-Jones (2011) (see also Extraversion and Openness to Experience) reported a general agreement amongst participants on accepting the limitations when working with students with emotional and behavioral disorders. Participants agreed that teachers need to come to terms with what they realistically can and cannot accomplish with their students, knowing that not all problems can be solved. This view is also related to not taking things personally.

Reumerman (2010) (see also Extraversion and Agreeableness) found that expert teachers of students with behavioral problems regularly reflected on their own actions and discussed their teaching performance with students and parents. Their teaching approach was also ranked by supervising teachers ( $n = 170$ ). The use of behavior regulation strategies (e.g. rejecting misbehavior rather than personality, emphasising positive behaviors) was reported as a key quality of these teachers.

Goodman and Burton (2010) (see also Extraversion, Agreeableness, and Openness to Experience) reported consensus among participants on the importance of providing multiple opportunities for achievement so that students could receive positive feedback, as well as the positive impact of teachers assigning responsibility to students for their own behavior. This enables teachers to prevent certain behavior from occurring through a perceived influence on risk situations.

In addition to these reported skills of expert teachers of students with EBD, the relevance of effective lesson planning in keeping disruption in class to a minimum was reported. This finding suggests that students with EBD demonstrate more on-task behavior during well-organized lessons. The strategies used in primary education were also reported as effective for secondary school students with EBD because they often have an underdeveloped theory of mind.

Infantino and Little (2007) (see also Extraversion) found that students preferred being spoken to quietly rather than loudly when being praised for good work, as well as when being reprimanded for inappropriate behavior. A considerable limitation of this study is the small number of male participants, which might have produced gender bias in the data. A responder bias also needs to be considered because the method of data collection involved questionnaires which may reflect socially desirable responses.

Almog and Shechtman (2007) (see also Agreeableness and Openness to Experience) measured teachers' efficacy beliefs via a questionnaire. Positive relationships were established between teachers' efficacy beliefs and helpful responses for all types of behavioral problems except failure syndrome in hypothetical classroom situations, as well as in authentic situations related to social rejection, shyness, passive-aggressive behavior, and low achievement.

Poulou and Norwich (2002) (see also Agreeableness and Openness to Experience) found that the more effective teachers perceived their strategies (positive, helpful incentives, social provision, cooperation with professionals), the more they thought students' emotional and behavioral difficulties could be remediated. Effective teachers also expressed more interest in gaining further professional training in teaching students with EBD than less effective teachers.

The evidence reviewed indicates that a teacher's ability to teach students with EBD increases with his/her level in Conscientiousness.

## Neuroticism

None of the studies selected reported on teacher personality variables relating to the Neuroticism aspect of a teacher's ability to teach students with EBD.

## Openness to experience

Five of the studies selected reported on teacher personality variables that are related to the Openness to Experience aspect of a teacher's ability to teach students with EBD.

Prather-Jones (2011) (see also Extraversion and Conscientiousness) concluded that flexibility, taking pleasure in the variety of work offered, and intrinsic motivation were key characteristics in teaching students with emotional and behavioral disorders, since it involves unpredictability, continuous adjustment, and reorganisation of plans to accommodate student behaviors and needs.

Goodman and Burton (2010) (see also Extraversion, Agreeableness, and Conscientiousness) reported a general consensus among participants that teachers of students with EBD tend to be flexible. In addition, the participants unanimously reported the benefits of observing the teachers who have an ability to include students with EBD effectively in the classroom.

Almog and Shechtman (2007) (see also Agreeableness and Conscientiousness) studied the democratic beliefs (i.e. freedom, equality, justice) of teachers of students with behavioral problems ( $n = 33$ ) via a hypothetical incident questionnaire. Positive links were found between these beliefs and helpful responses towards passive-aggressive, impulsive, and disobedient students.

Gadeyne, Ghesquière, and Onghena (2006) studied longitudinally the link between different elements of teaching and the psychosocial functioning of primary school children. Questionnaires were used to assess children's behavioral problems, teachers' ( $n = 22$ ) behaviors, and the perceptions of their influence on students' academic achievement, motivation, and behavior, with intelligence as a fixed or malleable quality.

Teachers who perceived intelligence as fixed rated fewer behavioral problems than those who perceived intelligence as malleable. Teachers who used fewer differentiation techniques also reported fewer behavioral problems in students than those who used more differentiation techniques. A report bias may have occurred here since the behavioral problems were rated solely by teachers.

Poulou and Norwich (2002) (see also Agreeableness and Conscientiousness) established in their study that the more teachers of students with EBD attributed the causes of the emotional and behavioral difficulties of their students to themselves rather than the environment, such as student factors or curriculum factors, the more teachers felt responsible for their students' well-being.

The evidence reviewed indicates that a teacher's ability to teach students with EBD increases with his/her level in Openness to Experience.

## **Conclusion**

This study reviewed the literature on the personality traits of expert teachers of students with EBD. There was complete consensus among the independent raters who classified the teacher personality variables according to the personality dimensions of the FFM. Although personality was not measured directly via a personality test in any of the studies found, all those selected focused on teachers' thoughts, feelings, and/or behaviors, which according to trait theory stem from personality.

A number of conclusions can be drawn from this study. Firstly, the teacher personality traits that were found appear to be relevant for all the personality dimensions, apart from the Neuroticism dimension. The evidence also indicated that a teacher's ability to teach students with EBD increases with his/her levels in Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. Moreover, no contradicting data were found between any of the studies reviewed.

The studies reviewed were conducted across different continents in various types of school, and among teachers and students from different cultural backgrounds. Additionally, in most of the studies, no distinction was made between different types of behavioral difficulties. As a final point, the fact that the results were derived from a mix of research settings and populations points in the direction of a universal personality profile of an expert teacher in teaching students with EBD.

## **Discussion**

This study has yielded a rough portrait of the personalities of expert teachers of students with EBD. It is, however, still impossible to make a blue print or a decisive personality profile of such teachers traits in relation to the FFM. Putting the focus directly on the personality traits of expert teachers of students with EBD is obviously an unexplored research area. Consequently, this pioneering study provides a first theoretical basis for further research on the subject.

The evidence found regarding the Extraversion factor is in line with general findings on the relation between personality and job performance (Barrick & Mount, 1991; Hertz & Donovan, 2000). A teacher's ability to teach students with EBD tended to increase with his/her level of Extraversion. Expert teachers of students with EBD are reported to be interested in their students and to use humor as a method of breaking down the barriers between teacher and student.

The conclusions on the Agreeableness dimension are in line with general findings as well (Costa & McCrae, 2008; Hurtz & Donovan, 2000). A teacher's ability to teach students with EBD tended to increase with his/her level of this personality trait. Expert teachers of students with EBD are reported as team players who want the best for their students, establish close teacher-student relationships, demonstrate a high degree of pro-social behavior, and are affective.

As regards Conscientiousness, the factor most positively related with job performance (Barrick & Mount, 1991), the findings are again in line with the literature in general. A teacher's ability to teach students with EBD tended to increase with his/her level of this trait. Expert teachers of students with EBD are eager to make a difference to their students' lives, have strong self-efficacy beliefs, and a range of pedagogic-didactic teaching skills at their fingertips.

No variables relating to teacher personality were found regarding the Neuroticism personality dimension. This was an unexpected finding, since expert teachers are generally reported as emotionally stable individuals, who remain calm and relaxed, even in stressful situations. Perhaps, this was due to the fact that the Neuroticism dimension is worded negatively, unlike the other dimensions, which are more likely to be associated with good practices of teachers.

Regarding the Openness to Experience dimension, a teacher's ability to teach students with EBD tended to increase with his/her level of this personality trait. This is in line with findings by Barrick and Mount (1991), who found that Openness to Experience is a valid predictor of training proficiency. Expert teachers of students with EBD are reported as open minded and flexible individuals, who reflect on their own professional development on a regular basis.

The findings stress the importance of recruiting appropriate candidates to teach students with EBD. Furthermore, the findings raise the question whether the demands on competence in teacher education lack an evident aspect of a teacher's ability to teach such students. This thinking is in line with Korthagen (2004), who argues for a more holistic approach to teacher education, in which also paying attention to personality might be more appropriate.

In addition, the dynamic systems theory (Ewen, 2009) claims that personality is dynamic and changeable and that it is possible to develop certain core qualities or traits involving particular thoughts, feelings, and behaviors. However, how exactly these personality patterns can be developed has yet to be explored. Clearly, the issue of personality research is a complicated one and it would be unrealistic to expect complete clarity on the subject.

In addition to the previous, it must be noted that, conversely, teachers could develop personality traits unfavourable to teaching. Arguably, constant changes to the schooling system due to pressure to meet standards and cutbacks in budgets might lead to reduced

levels in the Agreeableness dimension and increased levels in the Neuroticism dimension in teaching. This could perhaps emphasize the transience of a teacher's personality as part of his/her expertise.

Searching for ways to educate students with EBD successfully in inclusive education settings by exploration of the core abilities of expert teachers of students with EBD is in line with the goals of positive psychology (Csikszentmihalyi, 2000; Seligman & Csikszentmihalyi, 2000). In this emerging branch of psychology, the strengths and virtues that enable individuals to thrive are studied in order to find and nurture genius and to make everyday life more fulfilling.

### **Limitations of the study**

There are five reasons why it is difficult to draw firm conclusions from this study. Firstly, none of the participating teachers actually took a personality test. Extracting teacher personality variables from the literature and classifying these according to the dimensions of the FFM was clearly a 'back-to-front' method, which highlights the need for further research on the subject. Actual personality tests are necessary to be able to confirm the provisional conclusions of this study of the literature.

Secondly, due to differences in students' age, educational settings, and countries, it is difficult to discuss the results in depth. Studies conducted with pre-school children are reviewed alongside those with much older children and no information is provided about the nature of their difficulties. However, since no contradicting evidence was found despite the broad scope, the results might suggest that certain personality traits of expert teachers of student with EBD are universal.

Thirdly, the focus of this review study of the literature has been put exclusively on teachers at the top end of the scale. The review results are therefore only applicable to such teachers. It is not possible transfer to conclusions of this study to teachers who perform less well by simply turning these around. The study merely indicates that expert teachers of students with EBD tend to have certain personality traits at their disposals without establishing that teachers who are less competent in teaching students with EBD do not.

A fourth limitation is that in a considerable number of the studies reviewed, the quality of the teacher-student relationship was solely rated by the teacher. This is understandable, since it is difficult to measure how students rate their relationships with their teachers in a reliable and valid way, especially in the case of younger children, who at their age do not know many other teachers with whom they can compare their own class teacher and are highly dependent on their teacher's praise and approval.

Finally, in order to evaluate the results of the present study appropriately, it must be noted that some studies relied on teachers' perceptions about students' emotional and behavioral difficulties, rather than on teachers' actual experiences with students with EBD.

## Recommendations for future research

Since the literature has not provided an empirically convincing personality profile of expert teachers of students with EBD, the findings may serve as a basis for follow-up research. Further work is required to test the hypothesis that a teacher's ability to teach students with EBD problems increases with his/her levels in Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, and to explore the relationship with the Neuroticism factor.

To examine the relationship between teacher personality and a teacher's ability to teach students with EBD, a first step would be to develop a valid and reliable instrument for identifying expert teachers of students with these difficulties. If the personalities of such teachers were to show similarities with and/or differed markedly from those of less effective teachers, this would have implications for our views on teacher quality, as well as for teacher recruitment and teacher education.

Timmering et al. (2009) concluded that a teacher's generic teaching abilities are commonly categorized into knowledge, skills, attitude, and personality. Apart from personality, this categorization is used in teacher education nowadays. While personality has been recognized as relating to a teacher's teaching abilities, it still has to be explored in-depth. Further research may contribute to completing the puzzle of defining the teaching abilities of expert teachers of students with EBD.

Regarding teacher recruitment, the first step set in this study could be followed by attempts to search for teacher trainees with a potential talent for teaching students with EBD prior to their in-service teacher education, on the basis of their personality profiles. These trainees could serve as role models for their peers in teacher education. This thinking is in keeping with the upcoming view on stimulating and rewarding excellence in higher education and beyond.

Finally, as regards implications for teacher education, it would be useful to explore whether teacher trainees who are not experts in teaching students with EBD could emulate the thoughts, feelings, and behaviors stemming from the personalities of those who are experts. Possibilities include peer-tutoring, providing visual examples of good practice, and coaching (through an ear-phone for example) by an expert teacher of students with EBD in real classroom situations.

## References

- Adera, B. A., & Bullock, L. M. (2010). Job stressors and teacher job satisfaction in programs serving students with emotional and behavioural disorders. *Emotional and Behavioural Difficulties, 15*(1), 5–14.
- Almog, O., & Shechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education, 22*(2), 115–129.
- Barrick, M. R., & Mount, M. K. (2006). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1–26.
- Berry, D., & O'Connor, E. (2010). Behavioral risk, teacher-child relationships, and social skill development across middle childhood: A child-by-environment analysis of change. *Journal of Applied Developmental Psychology, 31*(1), 1–14.
- Billingsley, B. S. (1993). Teacher retention and attrition in special and general education: A critical review of the literature. *Journal of Special Education, 27*(2), 137–174.
- Bouchard, T. J., & McGue, M. (2003). Genetic and environmental influences on human psychological differences. *Journal of Neurobiology, 54*(1), 4–45.
- Boyce, C. J., Wood, A. M., & Powdthavee, N. (2013). Is personality fixed? Personality changes as much as 'variable' economic factor and more strongly predicts changes to life satisfaction. *Social Indicators, 111*(1), 287–305.
- Chaplain, R. (2003). *A multi-level model for managing pupil behaviour in primary schools*. London: Routledge.
- Csikszentmihalyi, M. (2000). *The way to flow*. Amsterdam: Boom.
- Cobb-Clark, D. A., & Schurer, S. (2012). The stability of big-five personality traits. *Economics Letters, 115*(1), 11–15.
- Connor-Smith, J. K., & Flachsbarth, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology, 93*(6), 1080–1107.
- Cooper, P. (2011). Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: An international review. *European Journal of Special Needs Education, 26*(1), 71–86.
- Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113–143.
- Costa, P. T., & McCrae, R. R. (1985). *The NEO Personality Inventory manual*. Odessa: Psychological Assessment Resources.
- Costa, P. T., & McCrae, R. R. (1987). Validation of the Five-Factor Model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*(1), 81–90.
- Costa, P. T., & McCrae, R. R. (1992). Reply to Eysenck. *Personality and Individual Differences, 13*(8), 861–865.
- Costa, P. T., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO-PI-R). In: G.J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.

- Edelenbos, P., Meijer, W., & Harms, T. (2002). *De pedagogisch-didactische consequenties van Diagnostiseren [The pedagogic-didactic consequences of diagnoses]*. Groningen, the Netherlands: GION.
- Ewen, R. (2009). *An introduction to theories of personality*. Mahwah: Erlbaum.
- Fovet, F. (2009). The use of humour in classroom interventions with students with social, emotional and behavioural difficulties. *Emotional and Behavioural Difficulties*, 14(4), 275–289.
- Gadeyne, E., Ghesquière, P., & Onghena, P. (2006). Psychosocial educational effectiveness criteria and their relation to teaching in primary education. *School Effectiveness and School Improvement*, 17(1), 63–85.
- Gijzen, W., & Pameijer, N. (2009). Integraal indiceren: Toewijzen van onderwijs- en zorgarrangementen op basis van de behoeften van kind en opvoeders [Integrally indicating: Assigning special education on the basis of the needs of the child and the educators]. *Tijdschrift voor Orthopedagogiek [Journal of Special Educational Needs]*, 48, 415–430.
- Goei, S.L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad 'Omgang met zorgleerlingen met gedragsproblemen' [Final report study of literature by the Education Council 'Coping with students with EBD']*. Zwolle, the Netherlands: Hogeschool Windesheim.
- Goldberg, L. R. (1990). An alternative description of personality: The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216–1229.
- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers' experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties*, 15(3), 223–237.
- Hattie, J. (2003). *Teachers make a difference. What is the research evidence?* Paper presented at the Australian Council for Educational Research conference (ACER), Melbourne (October).
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112.
- Hofstetter, W., & Bijstra, J. O. (2014). Passend Onderwijs: Zijn we er klaar voor [Appropriate Education: Are We Ready]? *Kind en Adolescent Praktijk [Child and Adolescent Practice]*, 3, 132–139.
- Hunt, N., & Marshall, K. F. (1998). Children with behavior and emotional disorders. In: N. Hunt, & K. F. Marshall (Eds.), *Exceptional children and youth: An introduction to special education*. Boston: Houghton Mifflin.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology*, 85(6), 869–879.
- Infantino, J., & Little, E. (2007). Students' perceptions of classroom behaviour problems and the effectiveness of different disciplinary methods. *Educational Psychology*, 25(5), 491–508.
- Jackson, J. J., Hill, P. L., & Roberts, B. W. (2010). Interactionism in personality and social psychology: A whole that is less than the sum of its parts. *European Journal of Personality*, 24(5), 495–497.
- Johnson, A., & McCord, D. M. (2010). Relating sense of humour to the Five Factor theory personality domains and facets. *American Journal of Psychological Research*, 6(1), 32–40.
- Jordan, A., & Stanovich, P. (2003). Teachers' personal epistemological beliefs about students with disabilities as indicators of effective teaching practices. *Journal of Research in Special Educational Needs*, 3(1), 1–12.
- Jordan, A., Glenn, C., & McGhie-Richmond, D. (2010). The Supporting Effective Teaching (SET) project: The relationship of inclusive teaching practices to teachers' beliefs about disability and ability, and about their roles as teachers. *Teaching and Teacher Education*, 26(2), 259–266.

- Jugović, I., Marušić, I., Pavin, I. T., & Vizek (2012). Motivation and personality of preservice teachers in Croatia. *Asia-Pacific Journal of Teacher Education*, 40(3), 271–287.
- Kneipp, L. B., Kelly, K. E., Biscoe, J. D., & Richard, B. (2010). The impact of instructors' personality characteristics on quality of instruction. *College Student Journal*, 44(4), 901–905.
- Kokkinos, C. M., Panayiotou, G., & Davazoglou, G. M. (2005). Appraisals of student behavior. *Psychology in the Schools*, 42(1), 79–89.
- Korthagen, F. (2004). In search of the essence of a good teacher: Towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20(1), 77–97.
- Kyriakides, L., Campbell, R. J., & Christofidou, E. (2002). Generating criteria for measuring teacher effectiveness through a self-evaluation approach: A complementary way of measuring teacher effectiveness. *School Effectiveness and School Improvement*, 13(3), 291–325.
- Ladd, G. W., & Burgess, K. B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child Development*, 72(5), 1579–1601.
- Liu, S., & Meng, L. (2009). Perceptions of teachers, students and parents of the characteristics of good teachers: A cross-cultural comparison of China and the United States. *Educational Assessment, Evaluation and Accountability*, 21(4), 313–328.
- MacDonald Grieve, A. (2010). Exploring the characteristics of 'teachers for excellence': Teachers' own perceptions. *European Journal of Teacher Education*, 33(3), 265–277.
- Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research*, 79(1), 327–365.
- Marzano, R., Marzano, J., & Pickering, D. (2003). *Classroom management that works. Research-based strategies for every teacher*. Alexandria: Association for Supervision and Curriculum Development.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, 60(2), 175–215.
- Meehan, B. T., Hughes, J. N., & Cavell, T. A. (2003). Teacher-student relationships as compensatory resources for aggressive children. *Child Development*, 74(4), 1145–1157.
- Meijer, C. (2003). *Special Education across Europe in 2003. Trends in provision in 18 European countries*. Middelfart, Denmark: European Agency for Development in Special Needs Education.
- Merrit, E. G., Wanless, S. B., Rimm-Kaufman, S. E., Cameron, C., & Peugh, J. L. (2012). The contributions of teachers' emotional support to children's social behaviors and self-regulatory skills in first grade. *School Psychology Review*, 41(2), 141–159.
- Mertens, N. (2010). *De X-Factor van de leraar [A teacher's X-Factor]*. Naarden, the Netherlands: Zet & Print.
- Miller, D., Brownell, M., & Smith, S. (1999). Factors that predict teachers staying in, leaving, or transferring from the special education classroom. *Exceptional Children*, 65(2), 201–218.
- Nelson, J. R., Maculan, A., Roberts, M. L., & Ohlund, B. J. (2001). Sources of occupational stress for teachers of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 9(2), 123–130.
- Niesyn, M. (2009). Strategies for success: Evidence-based instructional practices for students with emotional and behavioral disorders. *Preventing School Failure*, 53(4), 227–233.
- Ostendorf, F. (1990). *Sprache und persönlichkeitsstruktur: Zur validität des Funf-Factoren-Modells der persönlichkeitsstruktur [Speech and personality structure: Validating the Five-Factor-Model of personality]*. Regensburg, Germany: Roderer Verlag.

- Patrick, C. L. (2011). Student evaluations of teaching: effects of the Big Five personality traits, grades and the validity hypothesis. *Assessment & Evaluation in Higher Education*, 36(2), 239–249.
- Paunonen, S. V., & Jackson, D. N. (2000). What is beyond the Big Five? Plenty! *Journal of Personality*, 68(5), 821–835.
- Paunonen, S. V., & Ashton, M. S. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology*, 81(3), 524–539.
- Paunonen, S. V., Haddock, G., Forsterling, F., & Keinonen, M. (2003). Broad versus narrow personality measures and the prediction of behaviour across cultures. *European Journal of Personality*, 17(6), 413–433.
- Pertegal-Felicesa, M. L., Juan L. Castejón-Costaa, J. L., & Jimeno-Morenillab, A. (2014). Differences between the personal, social and emotional profiles of teaching and computer engineering professionals and students. *Studies in Higher Education*, 39(7), 1185–1201.
- Peterson, R. L. (1996). Learners with emotional or behavioral difficulties. In: M. C. Wang, M. C. Reynolds, & H. J. Walberg (Eds.), *Handbook of special and remedial education* (pp. 244–280). Oxford/New York: Pergamon.
- Poulou, M., & Norwich, B. (2002). Cognitive, emotional and behavioural responses to students with emotional and behavioural difficulties: A model of decision-making. *British Educational Research Journal*, 28(1), 111–138.
- Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology*, 27(2), 191–218.
- Prather-Jones, B. (2011). Some people aren't cut out for it: The role of personality factors in the careers of teachers of students with EBD. *Remedial and Special Education*, 32(3), 179–191.
- Quaker Foundation on Leadership (1999). *Comparison between Roberts rule of order and Quaker-based consensus methods*. Retrieved, February 2015 from [http://www.earlham.edu/\\_consense/rrocomp.shtml](http://www.earlham.edu/_consense/rrocomp.shtml).
- Reumerman, R. (2010). *Expertleerkrachten in de omgang met probleemgedrag [Expert teachers dealing with problem behavior]*. Proefschrift [Dissertation]. Universiteit van Amsterdam.
- Riemann, R., Angleitner, A., & Strelau, J. (1997). Genetic and environmental influences on personality: A study of twins reared together using the self- and peer report NEO FFI scales. *Journal of Personality*, 65(3), 449–475.
- Rimm-Kaufman, S. E., Early, D. M., Cox, M. J., Saluja, G., Pianta, R. C., Bradley, R. H., & Payne, C. (2002). Early behavioural attributes and teachers' sensitivity as predictors of competent behavior in the kindergarten classroom. *Journal of Applied Developmental Psychology*, 23(4), 451–470.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82(1), 30–43.
- Saroglou, V., & Scariot, C. (2002). Humor Styles Questionnaire: Personality and educational correlates in Belgian high school and college students. *European Journal of Personality*, 16(1), 43–54.
- Saucier, G., & Goldberg, L. R. (1998). What is beyond the Big Five? *Journal of Personality*, 66(4), 495–524.
- Saulsman, L. M., & Page, A. C. (2004). The Five-Factor Model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review*, 23(8), 1055–1085.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14.
- Silver, R. B., Measelle, J. R., Armstrong, J. M., & Essex, M. J. (2005). Trajectories of classroom externalizing behavior: Contributions of child characteristics, family characteristics and the teacher-child relationship during the school transition. *Journal of School Psychology*, 43(1), 39–60.

- Smeets, E. F. L., & Rispens, J. (2007). *Op zoek naar passend onderwijs. Overzichtsstudie van de samenhang tussen Regulier en Speciaal (Basis)Onderwijs [Looking for Appropriate Education. Outline study on the relation between regular and special (primary) education]*. Nijmegen, the Netherlands: Radboud Universiteit.
- Smits, H. J. (2006). *Ontdek je X-Factor [Discover your X-Factor]!* Vianen, the Netherlands: House of Books.
- Soodak, L. C., & Podell, D. M. (1993). Teacher efficacy and student problem as factors in special education referral. *Journal of Special Education, 27*(1), 66–81.
- Srivastava, S., John, O. P., Gosling, S. D. & Potter, J. (2003). Development of personality in early and middle adulthood: Set like plaster or persistent change? *Journal of Personality and Social Psychology, 84*(5), 1041–1053.
- Roberts, B. W., & Mroczek, D. (2008). Personality Trait Change in Adulthood. *Current Directions in Psychological Science, 17*(1), 31–35.
- Timmering, L., Snoek, M., & Dietze, A. (2009). *Identifying teacher quality: Structuring elements of teacher quality*. Paper presented at the Association for Teacher Education Europe conference (ATEE), Mallorca (October).
- Trull, T. J., & Geary, D. C. (1997). Comparison of the Big-Five factor structure across samples of Chinese and American adults. *Journal of Personality Assessment, 69*(4), 324–341.
- Tupes, E. C., & Christal, R. E. (1961). *Recurrent personality factors based on trait ratings. Technical report ASD-TR-61-97*. Lackland: US Air Force.
- UNESCO (1994). *The Salamanca statement and framework for action on special needs education*. Paris: UNESCO.
- Van der Ploeg, J. D. (2007). *Gedragsproblemen. Ontwikkelingen en risico's [Behavioral problems. Development and risks]*. Rotterdam, the Netherlands: Lemniscaat.
- Van der Wolf, K., & Van Beukering, T. (2009). *Gedragsproblemen in scholen. Het denken en handelen van leraren [Behavioral problems in schools. Teacher beliefs and actions]*. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Voss, R., & Gruber, T. (2006). The desired teaching qualities of lecturers in higher education: A means end analysis. *Quality Assurance in Education, 14*(3), 217–242.





# TRIANGULATING MEASURES OF TEACHER QUALITY IN TEACHING STUDENTS WITH EBD

S.A. Büttner  
S.J. Pijl  
J.O. Bijstra  
E.J. Van den Bosch

*An adapted version of this Chapter was published as:*

Büttner, S. A., Pijl, S. J., Bijstra, J., & Van den Bosch, E. J. (2015). Triangulating measures of teacher quality in teaching students with behavioral problems. *Journal of Cognitive Education and Psychology*, 14(1), 294–313.

*S.A. Büttner developed the study concept and design, and S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch gave advice and feedback. S.A. Büttner did the main literature search. S.A. Büttner coded the study. S.A. Büttner performed the data-analysis. S.A. Büttner, S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch performed interpretation. S.A. Büttner drafted the manuscript, and S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch provided critical revisions.*

---



## **Abstract**

Teaching students with emotional and behavioral difficulties (EBD) is a challenge for many teachers in inclusive education. To assess a teacher's quality in teaching students with EBD and to explore what differentiates expert teachers from less effective ones, this study aimed to validate a method for measuring teacher quality in teaching students with EBD. The extent to which different informants and measures converge in indicating which teachers of students with EBD are perceived as experts was tested. Judgments by professionals working in the primary education environment on teacher quality were examined using three sources of information. Special needs support teachers ( $n = 12$ ) rated indicators of need supporting teaching based on classroom observations. Primary school teachers ( $n = 137$ ) completed a self-efficacy questionnaire related to teaching students with EBD. The same teachers and head teachers ( $n = 12$ ) participated as fellow-teachers in a nomination procedure. Factor, reliability, descriptive, correlation, and cluster analyses were performed. The measures showed moderate, significant positive correlations. A group of 10-15 expert teachers of students with EBD were selected with cluster analysis. A number of restrictions with regard to the validity of the applied measures remain. Future directions for research are discussed.

## Introduction

The aim of inclusive education is to bring out the best in all students, including those with special educational needs (SEN). Many studies have pointed out that teachers are the ones who by far can make a difference in student achievement (Hattie, 2003; Marzano, Marzano, & Pickering, 2003; Sanders & Rivers, 1996). Therefore, inclusive education requires expert teachers, who positively affect and inspire all their students, meet their differing pedagogical and/or didactical needs, and increase their potential.

Much research has been done to find out what characterizes expert teachers. Hattie (2009) identified five major competencies of expert teachers: they identify essential representations of their subject; guide learning through classroom interaction; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes. Being taught by an expert teacher can make a difference of a full year's growth in learning (Goldhaber & Anthony, 2007).

In this respect, students with emotional and behavioral difficulties (EBD) are a population at risk since they make less academic progress compared to students with other SEN (Siperstein, Wiley, & Forness, 2011). Their difficulties either undermine their academic development due to reduced learning opportunities or function as an escape from tasks that are too difficult for them (Gest & Gest, 2005). Precious instruction time is lost when teachers pay attention to controlling student behavior (Goei & Kleijnen, 2009; Pianta & Hamre, 2009).

Understandably, the concept of EBD is hard to define. It is often used as an umbrella term for a variety of social and/or emotional difficulties, which range from being internalizing to externalizing (Van der Ploeg, 2007). Further, emotional and behavioral difficulties are relative, fluctuating, relational, and dependent on circumstance (Van der Wolf & Van Beukering, 2009). Though not necessarily, most students with such difficulties need extra and/or special attention from the teacher to achieve an optimal development.

On the basis of the above, it is clearly vital that students with SEN, particularly students with EBD, are taught by expert teachers. Despite the recognized importance in teacher education of preparing teachers to engage with such students (Goodman & Burton, 2010), Hodkinson and Devarakonda (2011) argue that teacher education alone is insufficient. As a result, the literature shows an upcoming interest in expert teachers of students with EBD (Cooper, 2011; Prather-Jones, 2011; Reumerman, 2010).

The emerging literature on teacher quality in teaching students with EBD endeavors to ascertain what teachers need to cope with the unique demands of the job so that teacher education can equip them with these tools. However, to assess a teacher's quality in teaching students with EBD and to explore what differentiates them from less effective teachers and expert teachers of students with other SEN, it is first necessary to develop an instrument by which this type of teacher quality can be measured.

To achieve this aim, the idea that there seems to be a general prevailing consent among professionals in educational practice on which teachers are doing an excellent teaching job was used as a starting point for the study. Hence, the extent to which professionals working in educational practice agree on who are expert teachers of students with EBD was explored. The study incorporated judgments by special needs support teachers, fellow teachers, and teachers themselves.

Establishment of matching professional judgments on expert teachers of students with EBD will offer options for further research. To find out whether the judgments are an accurate way to identify expert teachers of students with EBD, these require comparison to judgments by external independent assessors of teacher quality. When a method for identifying expert teachers of students with EBD is established, the results may contribute to contemporary application methods for employing the right people for the job.

To provide a context for the study, the literature on the concept of teacher quality was first reviewed, followed by an outline of measures of teacher quality. The three measures considered most applicable for the present study were then assessed on their validity and reliability regarding perceived excellence in teaching students with EBD.

### **The concept of teacher quality**

Defining teacher quality is complex since the concept involves normative judgments and cultural differences (Alexander, 2000; Berliner, 2005). Teacher quality comprises various dimensions, including types of evidence used to determine quality and its interpretation in varied contexts (Burnett & Meacham, 2002). A number of studies which aimed to capture teacher quality in an overall theoretical construct are presented below. Various terms to describe the concept are used in this survey, since the wording in the studies reviewed is used.

The literature on teacher quality goes back long time. Within the self-determination theory (Deci & Ryan, 1985; 2000), teachers ought to satisfy three innate psychological needs in their students. Basic needs fulfillment represents a necessary condition for students' optimal learning development. Furthermore, it is found to predict a variety of positive learning outcomes, such as higher intrinsic motivation and more self-regulated learning (Reeve, Deci, & Ryan, 2004).

The basic needs comprise the need for competence (i.e. seek to control the outcome and experience mastery); autonomy (i.e. the urge to be causal agents of one's own life); and relatedness (i.e. want to interact with and be connected to others). In education, competence refers to experiencing efficacy while completing a task, autonomy to experiencing choice and psychological freedom regarding study activities, and relatedness to feeling connected to others (e.g. teachers) (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009).

Various studies have explored the contextual variables that support basic need satisfaction, including instructors' teaching styles (e.g. Soenens & Vansteenkiste, 2005). Within the self-determination theory, a distinction is prompted between three dimensions of need support teaching. Each of these dimensions is associated with a specific need in a way that they complement each other in their effects on students' satisfaction of each of the basic needs (Stroet, Opdenenakker, & Minnaert, 2013).

The following need supporting teaching styles are prompted by the self-determination theory: 1) providing students with structure allows for the satisfaction of the need for competence; 2) providing students with autonomy allows for the satisfaction of the need for autonomy; and 3) providing students with a context of respect for students' perspectives allows for the need for relatedness. The extent to which teachers satisfy the basic needs of their students is perceived by their students.

Providing students with structure involves expressing clear expectations of student behavior and setting boundaries to this, helping students so that they are more aware of how they can accomplish tasks (Skinner & Belmont, 1993), giving students competence-relevant feedback, and expressing confidence in students' abilities to achieve tasks (Connell, 1990; Reeve et al., 2004). Providing structure is found to be related to more student engagement (Tucker, Zayco, Herman, Reinke, Trujillo, & Carraway, 2002).

Autonomy support implies enabling and encouraging students to achieve their goals and supporting their endorsement of classroom behaviors (Assor, Kaplan, & Roth, 2002). Several studies have shown that autonomy-supportive teaching is positively related to educational benefits, such as intrinsic motivation (Reeve & Jang, 2006), time management and concentration (Vansteenkiste, Zhou, Lens, & Soenens, 2005), and performance (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

Student outcomes also depend on how structure is brought about (Reeve et al., 2004). Students experience a greater sense of psychological freedom when structure is communicated in a context of respect for their perceptions and when non-controlling language and a meaningful rationale are used to express expectations and limits (Reeve et al., 2004). For an outline of studies on the effects of need supportive teaching on student motivation and engagement, see Stroet et al., 2013; 2015).

Contrariwise, Berliner (1987) starts from what teachers should know and be capable of for students to profit fully from their instruction. He divides teacher quality into good teaching and effective teaching. The former concerns upholding the normative standards of the field, comprising the logical (e.g. explaining), psychological (e.g. rewarding), and moral (e.g. respect) aspects of teaching. The latter, often referred to as teacher effectiveness, concerns students' learning outcomes as a result of teachers' teaching performance.

Apart from teacher effectiveness as an aspect of teacher quality, teacher efficacy has also been found to be related to teacher quality (Ashton, 1984). Teacher efficacy is generally

defined on the basis of two dimensions (Tschannen-Moran & Woolfolk Hoy, 2001): general efficacy (i.e. the extent to which a teacher believes students can be taught, based on their background and potential) (Gibson & Dembo, 1984) and self-efficacy (i.e. the extent to which a teacher feels capable of reaching the desired learning outcomes) (Bandura, 1977).

More than a decade later, Kyriakides, Campbell and Christofidou (2002) reviewed the literature on factors associated with teacher efficacy, which they sorted into three models: presage-product (i.e. psychological characteristics, attitude, personality, experience, aptitude); process-product (i.e. teacher behavior, feedback, academic activity, organized lessons, asking questions, classroom climate); and beyond-classroom behavior (i.e. subject knowledge, knowledge of pedagogy, beliefs, self-efficacy).

Later, Verloop and Lowyck (2003) categorized teacher quality in four professional teacher roles/identities: balanced; in command of specific skills; wise; and mature. Sørdeide (2006) continued the idea of identities and described four identity constructs: the caring, kind; the creative, innovative; the professional; and the typical teacher. Meanwhile, Fenstermacher and Richardson (2005) divided the concept of teacher quality into good and successful teaching. Deceptively, there was little consensus on teacher quality.

Several researchers tried to bridge the conceptual gaps. For instance, Arnon and Reichel (2007) argued that professional knowledge (i.e. subject, didactic) and an appropriate personality are the two major features of the ideal teacher, whereas Van Gennip and Vrieze (2008) stated that good teaching comprises content knowledge, matching pedagogics and didactics, and a teacher's personality. Finally, Timmering, Snoek, and Dietze (2009) sorted the literature into generic, holistic, and metaphoric professional roles of teachers.

To summarize, two main conclusions can be drawn from the theoretical outline above: 1) teacher quality is conceptualized in various, both contradictory and complementary ways and 2) despite these differing conceptualizations, there is a general consensus among theorists that teacher quality should be considered as a multidimensional construct and should be measured as such. Accordingly, different measures of teacher quality are outlined below.

### **Measures of teacher quality**

The following measures of teacher quality are briefly described below, including their strengths and limitations: written exam; interview; observation; teacher effectiveness; teacher self-efficacy; and teacher nomination. The three measures considered most applicable to the present study were to be selected on the basis of this information.

#### ***Written exam***

Written exams are often used in initial teacher education and teacher certification programs for further professional development. Consistent evidence is found that teachers who

attended a teacher certification program are more effective than teachers who only did initial teacher education (Goldhaber & Anthony, 2007). However, Berliner (2005) argues that paper-and-pencil tests fail because capturing complex classroom environments in formats often relies on one correct answer to questions for which many answers are appropriate. Further, he argues not to confuse a highly qualified taker of tests with a highly qualified teacher.

### ***Interview***

Using interviews to measure teacher quality presents a number of problems. Firstly, teachers are not always aware of their actions (Weggeman, 2008). A lack of correspondence is often found between interventions reported in hypothetical versus real classroom situations (Almog & Shechtman, 2007). Teachers plausibly have more time to reflect on their actions during interviews or are likely to give socially desirable answers. Further, although interviews permit teachers to reflect on their actions and enable their qualities to be surveyed in depth, they risk lower reliability and are difficult to quantify (Muijs, 2006).

### ***Observation***

Observations by professionals are reported as valuable measures of teacher quality, because experts are better able to judge teacher behavior in relation to that of other teachers (Muijs, 2006), provided there is compliance with reliability and inter-reliability by training observers, informing them about possible biases in advance, and carrying out multiple observations over a period of time, preferably by more than one professional.

However, observations are by definition snapshots and the presence of an observer in the classroom influences both teacher and student behavior, either consciously or unconsciously. Another major problem in classroom observation is observer bias, which means that an observer is likely, to some extent, to align actual observations to a priori expectations of a person's behavior.

### ***Teacher effectiveness***

Teacher effectiveness is being assessed in terms of student productivity, which means that it is a measure based on student outcomes. In the literature, teacher effectiveness is reported to be strongly related to student achievement (Ashton & Webb, 1986) and motivation (Midgley, Feldlaufer, & Eccles, 1989). Many researchers have developed measures of teacher effectiveness. Tschannen-Moran and Woolfolk Hoy (2001) concluded that these measures of teacher effectiveness range from short, general measures to long, detailed ones.

Coladarci and Fink (1995) examined a number of measures of teacher effectiveness and their relationships to one another. Correlations were established between the rand

measure (Armor, Conroy-Oseguera, Cox, King, McDonnell, Pascal, Pauly, & Zellman, 1976) and the teacher efficacy scale (Gibson & Dembo, 1984), between the teacher efficacy scale and the teacher locus of control scale (Rose & Medway, 1981), and between the teacher efficacy scale and response for student achievement scale (Guskey, 1981).

Tschannen-Moran and Woolfolk Hoy (2001) argued that these correlations found suggest that these describe related but dissimilar constructs of teacher effectiveness and stressed that each measure has difficulty with measuring the complete concept of teacher effectiveness. Consequently, they developed a new measure of teacher effectiveness, comprising the dimensions instruction, management, and engagement. Additionally, they provided the instrument with validity and reliability data from three studies.

Despite attempts to capture teacher effectiveness in one construct, Berliner (2005) and Berk (2005) argue that many psychometric problems are associated with collecting evidence of student learning. This idea is supported by evidence reported by Hanushek and Rivkin (2010), who established the existence of large variations in teacher effectiveness. Muijs (2006) and Muijs, Kyriakides, Van der Werf, Creemers, Timperley, and Earl (2014) conclude that it is difficult, if not impossible, to isolate teaching as a sole factor in student learning.

In addition to these psychometric issues, there are restrictions for testing students with SEN causing problems with regard to the reliability of student responses (Geisinger, 1994). For example, the SEN of students with EBD make it difficult to develop a relationship of trust with a test taker, to understand what is asked or to follow instructions (Fore, Boon, & Martin, 2007; Van der Worp-van der Kamp, Minnaert, Post, Bijstra, & Frans, submitted) concluded that the unique characteristics of students with EBD affect the reliability of measures.

### ***Teacher self-efficacy***

Strong connections have been identified between teacher self-efficacy and student achievement (Ashton & Webb, 1986; Gibson & Dembo, 1984; Kaufman & Wong, 1991). A teacher who expresses confidence in his/her ability to teach students believes that student achievement lies within his/her control (Tschannen-Moran & Woolfolk Hoy, 1998). Further, expert teachers spend more time monitoring their students, are more likely to take risks, give more instruction, facilitate higher levels of classroom management, and enhance more student learning. Consequently, expert teachers contribute more to student achievement than teachers with low self-efficacy beliefs (Goddard, Hoy, & Woolfolk Hoy, 2004; Good & Brophy, 2003).

Measures of teacher self-efficacy vary in the number of different dimensions they comprise. For instance, Raudenbush, Rowen, and Cheong (1992) used a simple measure asking teachers 'To what extent do you feel successful in providing the kind of education you would like to provide for this class?'. Over ten years later, Tschannen-Moran and

Woolfolk Hoy (2001) developed a self-efficacy measure comprising three dimensions: Instructional strategies; Student engagement; and Classroom management. The scale is reported as being superior to previous self-efficacy measures because it has a unified, stable factor structure and assesses a broad range of capabilities that teachers consider important to good teaching.

However, according to Skaalvik and Skaalvik (2007), teacher self-efficacy has been incorrectly reduced to three dimensions by Tschannen-Moran and Woolfolk Hoy (2001). Most of the items also lack clear problem situations, which is strongly recommended by Bandura (1977). In response, Skaalvik and Skaalvik (2007) developed and factor analyzed the multidimensional Norwegian Teacher Self-Efficacy Scale. Strong support was found for the following six separate but correlated dimensions of teacher self-efficacy: Instruction; Adapting education to individual students' needs; Motivating students; Maintaining discipline; Cooperation with colleagues and parents; and Coping with change and challenges.

### ***Teacher nomination***

A nomination procedure, in which peers (e.g. teachers, head teachers) are asked to nominate expert colleagues, can also be used to measure teacher quality (Collinson, 1999; 2010; Ericsson & Lehman, 1996; Ericsson & Smith, 1991; Snoek, Spil, Van den Berg, & Suasso de Lima de Prado, 2012).

Thayer-Bacon, Arnold, and Stouts (1998) used student nomination to identify caring teachers in teacher education. A list of nominees was compared with a list of caring teachers, derived from general teaching evaluation forms. Although the authors stated that nominations may not reveal all caring teachers, no nominees had low evaluation scores.

Further, Baltes, Staudinger, Maercker, and Smith (1995) sought for a more reliable and broadly based consensus judgment rather than ratings of peers using a set of renowned descriptors or criteria. They asked people to nominate wise people (e.g. teachers), with the only criterion that nominators had sufficient knowledge of the nominees.

Evidently, a nomination procedure is associated with issues of interpersonal dynamics and ethics because of its application in closely connected networks. It is not only necessary that nominators have sufficient knowledge of the nominees but also that input is derived under circumstances in which privacy and anonymity are guaranteed.

Although nominating is reported as a suitable method for measuring teacher quality, it is wise to verify its validity with additional methods, since analytical assessment of teacher quality and nomination by colleagues do not necessarily lead to the same results (Ellett, Loup, Evans, Chauvin, & Naik, 1994).

### ***Selection of measures of teacher quality***

The present study examined consent on which teachers are expert in teaching students with EBD. Different dimensions of this type of teacher quality have been assessed by professionals in educational practice. Based on a literature review, an observation instrument, a self-efficacy scale, and a nomination procedure were selected for the present study. Observations were to be performed by special needs support teachers, teachers filled out a self-efficacy scale, and a teacher nomination procedure was applied among fellow-teachers.

Expert teachers are said to master each dimension of teacher quality and are therefore expected to obtain high scores on each of the measures of teacher quality. Since the effectiveness of the measures in relation to students with EBD is still unknown, the instruments are tentatively expected to measure different aspects of teacher quality in teaching students with EBD from different perspectives and to be reliable and significantly related to one another without showing a perfect overlap.

## **Method**

### **Design**

An observation tool, a self-efficacy measure, and a nomination procedure were applied. Student and teacher indicators of teacher quality in teaching students with EBD were rated by means of an observation tool by special needs support teachers. Teachers completed a self-efficacy questionnaire related to teaching students with EBD. Head teachers and teachers participated in a nomination procedure. Several analyses were performed with the overall aim of validating a method for measuring teacher quality in teaching students with EBD on the basis of judgments from professionals in the daily teaching practice.

### **Participants**

A sample of 60 schools were selected from all 228 primary schools cooperating with the Department of Teacher Education of the Hanze University of Applied Sciences in the Northern region of the Netherlands. Since the study required that participants knew each other well, only schools consisting of one location were selected. Different numbers of absolute in-degrees (Wasserman & Faust, 1995) could reflect a same percentage score (e.g. a nomination in a team of four teachers is equal to four nominations in a team of sixteen). With the aim to have a uniform comparison among teachers from schools of different team sizes, the variance in team size was therefore limited by selecting teams comprising between 8 and 15 teachers. Participants were class teachers, special needs support teachers, and head teachers.

Of the 60 schools selected, 34 (57%) were rejected because of the size of the school team (26 were too small, 8 too big). Of the 26 remaining schools, 15 (58%) agreed to participate in the study providing the data were collected in privacy and processed confidentially and anonymously, 6 were unwilling to participate because of other priorities, such as an impending school inspectorate visit and illness, while after several attempts 5 could not be reached by phone. Of the 15 participating teaching teams, 3 had to be rejected at a later stage because the strict deadline for data gathering could not be met. Data were collected from 12 teaching teams, comprising 137 teachers (34 men, 103 women), 12 special needs support teachers (2 men, 10 women), and 12 head teachers (3 men, 9 women).

## Measures

In an attempt to capture different dimensions of teacher quality in teaching students with EBD from different professional perspectives, input was derived from head teachers, special needs support teachers, and (fellow) class teachers.

### *Observation*

An observation tool was applied in which teacher quality in teaching students with EBD was rated through the perspectives of special needs support teachers. This tool was applied next to a nomination procedure and a self-efficacy questionnaire, which respectively involved the perspectives of teacher colleagues and teachers themselves.

The observation tool was developed for the benefit of the present study. It was inspired by the self-determination theory (Deci & Ryan, 1985; 2000), which prompts that human beings have three innate psychological needs: the need for autonomy, competence, and relatedness. Within the self-determination theory, the satisfaction of these needs is said to represent a necessary condition for students' optimal learning.

The distinction made within the self-determination theory between three dimensions of need supportive teaching, which are all associated with a specific need and complement each other in their effects on students' satisfaction, served as a basis for the observation tool. Expert teachers are expected to demonstrate high levels of need supportive teaching to engage and motivate students, in the current study students with EBD.

In consideration of the available observation instruments to measure a teacher's degree of need supportive teaching (see Stroet et al., 2013; 2015) as an indicator of a teacher's quality in teaching students with EBD, it became clear that these were not appropriate for the use in the present research because of various reasons, including the focus, the target group, and user-friendliness of the measure.

For instance, the Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008), is exclusively focused on teacher-child interaction and measures emotional

support, classroom organization, and instructional support. Although the dimensions may capture need supportive teaching skills to some extent, the instrument is not based on the fundamental principles of the self-determination theory.

The observation tool by Stroet (2014) was neither considered applicable for use in the present research. The reason for this was that the observation tool by Stroet (2014) was developed for use in secondary education. Since the present research puts the focus on expert teachers of students with EBD in primary education, the form was considered not applicable to the target group.

The observation tool developed for the benefit of the present study aimed to explore whether the three need supportive teaching styles are reflected in teacher and students indicators. Both indicators were derived from these teaching styles, since both parties show behavior that reflects the quality of a teacher's classroom performance. This combination of indicators of need supportive teaching was observed by special needs support teachers.

Special needs support teachers have completed extended teacher training to acquire professional knowledge about special educational needs and observation and coaching skills. It is their main task to regularly perform classroom observations for the benefit of coaching teachers in their skills regarding students with SEN. These observations lead to an overall impression of a teacher's ability to teach students with EBD.

The observation tool (see Appendix A), comprises 18 indicators, equally relating to the teaching styles. Per set of six indicators, three focused on teacher behavior and three on student behavior. The special needs support teacher rated the degree to which an indicator applied to the student-teacher interaction on a 4-point Likert-scale ranging from 1 (almost) never to 4 (almost) always. In the case of co-teachers, the same student was also selected.

For example, it is explored whether indicator 3 ('Teacher creates room for the students' different work and learning styles') is associated with a teacher's tendency to provide students with structure, whether indicator 6 ('Teacher challenges the student to think up his/her own solutions') is associated with providing autonomy support, and whether indicator 16 ('Student trusts the teacher') is associated with providing a context of respect.

It was considered excessive to calculate inter rater reliability between the special needs support teachers. Although the special needs support teachers were not familiar with the tool, they were certified in observing teacher and student behavior. The special needs support teachers were also experienced with the targeted teachers of students with EBD and all their students, including those with SEN.

In addition, the study required that the special needs support teachers knew the teachers and students well. Independent raters do not have an overall impression of teacher and student behavior on the basis of which the tool was to be completed. In the Dutch educational situation, special needs support teachers do because it is one of their primary tasks to assess classroom situations.

### **Self-efficacy**

Self-efficacy was measured using a modified version of the Norwegian Teacher Self-Efficacy Scale (NTSES) (Skaalvik & Skaalvik, 2007), which was translated to Dutch for the benefit of the study. The NTSES comprises six self-efficacy dimensions, measured by four items for each (i.e. Adapting instruction to individual needs, Keeping discipline, Motivating students, Instruction, Coping with changes and challenges, Cooperating with parents and colleagues) on a 4-point Likert scale ranging from 1 (not certain at all) to 4 (absolutely certain).

Originally, the dimensions had satisfactory to high reliability in terms of Cronbach's alpha ( $\alpha = .74 - .91$ ). No overall reliability of the scale was reported. Items from the NTSES relating to teaching students in general were modified for teaching students with behavioral problems. For example, item 5 of the subscale 'Adapt instruction to individual needs', was modified as follows: 'Organize schoolwork to adapt instruction and assignments to the individual needs of students with EBD' (see Appendix B).

### **Nomination**

In the nomination procedure, teacher quality in teaching students with EBD was addressed as an overall concept. Criteria were deliberately not set for the participants because there are no comprehensive criteria available yet for this type of teacher quality.

Teachers ( $n = 137$ ) and head teachers ( $n = 12$ ) were asked to nominate colleagues on the basis of academic knowledge of teacher quality in general, acquired during teacher education, as well as their implicit conception of a good teacher of students with EBD.

A similar nomination procedure was applied by Baltes et al. (1995), who aimed at a broadly based consensus using one's implicit knowledge about wisdom. This procedure was applied next to the more analytical observations and self-efficacy questionnaire to verify its reliability, as advised by Ellet et al. (1994). In order to meet the criterion that all nominators should have sufficient knowledge about their colleagues, the size of participating school teams was limited to 8 to 15 teachers (see Participants).

To avoid ethical issues, data were collected individually and in private. Also, a clear statement was made that data were processed confidentially and anonymously. Although teachers do not observe their colleagues as professionally or as often as the special needs support teachers, there are many situations in which they witness each other's teaching skills (e.g. shared lessons in- and outside the classroom, play, intervision). Further, a number of co-teachers participated, who work together and know each other's practices well.

Participants responded to the question: "Apart from yourself, do you feel there are other expert teachers of students with EBD working at your school?" If the answer was "Yes", the person was asked to name the teacher(s) he/she had in mind. The number of nominations was not restricted and used as an index for teacher quality in teaching students with EBD,

like Pijl, Frostad and Flem (2008) used the number of nominations as an index for peer acceptance and showed that the test reliability was  $\alpha = .81$ .

## Analysis

In this study, the analytical procedure of triangulation was applied (Denzin, 2006). Triangulation in the social sciences is often used to indicate that two or more methods are used to check the results of studying a phenomenon (e.g. teacher quality). The data derived from the measures of teacher quality in teaching students with EBD were analyzed in five stages, comprising factor, reliability, correlation, descriptive, and cluster analyses using IBM SPSS software. Each stage is described below.

First, the theoretical models of the observation tool and the self-efficacy scale, which respectively comprised three and six subscales, were tested by means of confirmatory factor analyses. Eigen values and explained variance were calculated. The Eigen values ought to be greater than 1. Items loading on more than one factor were analyzed in depth. A threshold value of .4 was used as a criterion for either keeping or removing an item from the scale, as well as further analyses.

Next, the reliability of the observation tool and the self-efficacy scale was calculated using Cronbach's alpha. A value of  $\alpha = .7$  was considered satisfactory. In the case of a lower value, it was checked whether deleting items would enhance an acceptable level of reliability.

In the third stage, the relation between the three measures of teacher quality in teaching students with EBD was determined by means of calculating Spearman's correlation coefficients. To compare teachers' scores among teachers from various team sizes, the absolute scores on the observation tool and the self-efficacy scale, as well as the numbers of nominations were converted into percentage scores. The measures were expected to show a modest relation of  $r_s = 0.2 - 0.6$ . This would indicate that the dimensions of teacher quality are related but not identical. Correlations found equal to or below  $r_s = 0.2$  would indicate no relation. Correlations of  $r_s \geq 0.6$  would imply that the measures are interchangeable, rather than independent of one another.

In the fourth stage of the analyses, descriptive statistics were calculated to obtain an overview of the basic features of the participants on the three measures of teacher quality in teaching students with EBD,

Finally, to explore the possibility of identifying a group of expert teachers among participants on the basis of high scores on each of the measures of teacher quality, cluster analyses were performed (Hartigan & Wong, 1979; MacKay, 2003). The cluster analyses started with an arbitrarily chosen number of five clusters (Jain & Dubes, 1988), using the measures as variables. Teachers' percentage scores were used so that each measure equally contributed to the difference or similarity between cases.

When the targeted group of expert teachers of students with EBD was established in the five cluster solution, the stability of the composition of this group was explored by attempting a solution of four, six, and seven clusters. When the five cluster solution did not reveal a group of expert teachers of students with EBD, a solution of four, six and seven clusters was attempted to verify whether either one or more of these solutions would reveal a group of the intended expert teachers.

## Results

The findings of this study are described in relation to the five stages of the data analyses procedure, which comprised confirmatory factor, reliability, correlation, descriptive, and cluster analyses.

The confirmatory factor analyses of the observation tool and the self-efficacy scale, which initially comprised three and six subscales, respectively, did not show the expected pattern of dimensions. The scales defined one primary factor only. As these models did not fit, a one factor structure appears to be more appropriate for both in the first instance.

The primary factors of both scales showed acceptable Eigen values of 8.1 and 9.4 and explained 45% and 39% of the variance in the equation, respectively. Apart from one item of the observation tool (The teacher treats confidential information, obtained from the student, discreetly), all items loaded on one factor. As its loading on this factor (.362) was below the lower limit of .4, the item was excluded from further analyses. Regarding the self-efficacy scale, all items loaded on one factor, except for items 4 and 22. Since both items still did load on the first factor above the lower limit (.496 and .485, respectively), these were kept.

Both the observation tool and the self-efficacy scale proved to be highly reliable ( $\alpha = .93$  both) measures. There was no need to delete any items from each of the questionnaires to raise the reliability of both further.

Table 3.1 shows that positive significant inter correlations were established between the three instruments. These relations were significant at a  $p$ -level of .01 between the observation tool and the nomination procedure ( $r_s = .41$ ).

**Table 3.1** Correlations between the observation tool, the self-efficacy scale, and the nomination procedure

	Observation tool	Self-efficacy scale	Nomination procedure
Observation tool	..		
Self-efficacy scale	0.21*	..	
Nomination procedure	0.41**	0.35**	..

\*Correlation is significant at the .05 level, \*\* Correlation is significant at the .01 level.

The descriptive statistics (i.e. scale and score ranges, means, medians, and standard deviations) of the measures of teacher quality in teaching students with EBD applied are presented in Table 3.2.

**Table 3.2** Descriptive statistics of the measures of teacher quality in teaching students with EBD ( $N = 137$ )

	Scale Range	Score Range	Mean	Median	SD
Observation tool	18 - 68	35 - 68	52.60	57	8.82
Self-efficacy scale	24 - 96	56 - 96	76.30	77	8.73
Nomination procedure*	0 - 100	0 - 73	15.71	7	19.02

\*Percentage scores.

The results of the K-means cluster analyses, which divided the teachers into four, five, six, and seven clusters on the basis of their scores on the three measures of teacher quality in teaching students with EBD are presented in Table 3.3.

**Table 3.3** Final cluster centers of the four, five, six, and seven cluster analysis ( $N = 137$ )

4 Cluster solution	1	2	3	4			
N	<b>15*</b>	30	35	57			
Observation tool	87.75	83.73	87.02	65.33			
Self-efficacy scale	88.47	80.10	81.13	75.77			
Nomination procedure	56.90	29.27	5.33	4.11			
5 Cluster solution	1	2	3	4	5		
N	<b>13*</b>	36	36	21	31		
Observation tool	87.22	69.00	86.56	58.33	85.10		
Self-efficacy scale	87.82	70.40	81.51	84.18	80.98		
Nomination procedure	59.28	2.12	5.00	9.43	29.92		
6 Cluster solution	1	2	3	4	5	6	
N	15	34	<b>12*</b>	14	26	36	
Observation tool	58.04	68.69	86.52	68.70	87.50	86.56	
Self-efficacy scale	86.46	70.13	86.89	77.31	82.61	81.51	
Nomination procedure	4.03	1.46	60.65	21.69	31.97	5.00	
7 Cluster solution	1	2	3	4	5	6	7
N	6	15	<b>10*</b>	17	20	33	36
Observation tool	59.07	58.04	85.59	87.89	83.60	86.36	69.44
Self-efficacy scale	78.47	86.46	86.67	86.46	76.77	82.70	69.99
Nomination procedure	22.93	4.03	63.11	38.22	23.04	4.57	1.73

\*Number of expert teachers.

The first cluster of the five cluster solution comprised 13 expert teachers of students with EBD, who met the criterion of scoring high on all three instruments. No teachers in the other clusters of this solution scored higher on one or more of the instruments. Since this initial five cluster solution established a group of expert teachers, the stability of this group was explored in a four, six, and seven cluster solution.

The first cluster of the four cluster solution included a number of 15 expert teachers of students with EBD. In this cluster solution, all the teachers scored higher than the other teachers on the measures of teacher quality in teaching students with EBD. Besides the same 13 experts teachers grouped in the five cluster solution, this group comprised two more expert teachers of students with EBD.

The third cluster of the six cluster solution comprised less experts than both the five and four cluster solution. The 12 expert teachers who were identified in the expert group of the six cluster solution were all part of the expert groups identified in the previous solutions. The teachers grouped in the fifth and sixth cluster, however, scored higher on the observation tool than the experts in the third cluster of this solution (86.56 and 86.52 respectively).

Similarly, the 10 teachers selected in the third cluster of the seven cluster solution further reduced the group of experts. These teachers identified as experts show higher scores on the observation tool than those in the fourth cluster of this solution (87.89 and 85.59 respectively). It remains unclear whether the differences between teachers' center scores on this tool are meaningful.

Both the four and five cluster solutions established the most clear groups of expert teachers of students with EBD. Although the expert groups in the six and seven cluster solutions were smaller, all the teachers identified as experts in the six and seven cluster solution were also identified as such in the larger, more stable four and five cluster solutions, in which no teachers in other clusters show higher scores than the identified experts.

Hence, choosing each of the other cluster solutions is plausible. Consequently, 10-15 expert teachers of students with EBD can be selected by means of the cluster solutions.

## Discussion

Teaching students with EBD is challenging. It appears that certain teachers are generally perceived as experts who make students with EBD thrive. This study aimed to test whether different measures which were completed by different informants converge in indicating which teachers of students with EBD are perceived as experts. Informants were head teachers, special needs support teachers, teachers themselves, and fellow teachers. The measures respectively included observations of a teacher's skills to meet students' basic psychological needs, a self-efficacy questionnaire, and a nomination procedure.

The results of this study established moderate correlations between the different measures and informants. Each of the correlations was significant. In addition, cluster analysis established a rather stable selection of expert teachers of students with EBD. The moderate significant correlations together with the selected group of expert teachers of students with EBD indicate a general prevailing consent among head teachers, special need support teachers, teachers themselves, and fellow teachers on the teachers who are expert in teaching students with EBD.

Despite its significance, the consent between the informants does not show a complete overlap. In a number of cases, they did not agree on a teacher's level of quality, which has resulted in overall modest correlations rather than high ones. However, the cluster analysis revealed a rather stable group of alleged expert teachers of students with EBD. Apparently, informants do agree on the teachers who belong to the top of the population. It is therefore explicable that the informants tend to agree to a higher extent on which teachers are expert in teaching students with EBD than on the teachers who are not.

Furthermore, the cases of conflicting judgements can possibly be explained by the fact that the perceptions of the informants were influenced by a tendency to converge perceptions to a certain extent. Such cognitive biases in which judgments of a person can be influenced by one's overall impression of that person are known as halo and/or horn effects (Thorndike, 1904). A halo effect occurs when teaching skills are rated too high due to factors such as status, friendship, or preferred personality traits, while a horn effect occurs when skills are rated too low due to negative perceptions of such factors.

The observation tool and the self-efficacy scale had low construct validity. This is remarkable in relation to the underlying theoretical construct, the original subscale structure, and proven reliability. For the observation tool, this may have been caused by a teacher's tendency to not differentiate that much in responses to students, indicating a general teaching style ranging from complementing to supplementing students' needs. Possibly, modification of the self-efficacy scale to students with EBD rather than to a wide-range group of students may have diminished the variance and caused a one factor solution.

All-in-all, the applied measures turned out to be adequate in assessing a teacher's quality in teaching students with EBD. Yet, measuring teacher quality is complex and this applies not least for teacher quality in teaching students with EBD. It remains unsure whether the measures have captured all the dimensions of teacher quality in teaching students with EBD in their full complexity. Other measures and/or methods should be used to falsify the outcomes of the study using additional, perchance independent indicators of this type of teacher quality.

### **Implications for research and practice**

An obvious next step in finding a method to identify expert teachers of students with EBD is to assess the expertise of alleged expert teachers of students with EBD. Based on the review of measures of teacher quality, observations by independent professionals are considered suitable to check their expertise identified by professionals from their teaching team. This would require the inclusion of a control group of teachers, who have not been pointed out by the professionals from their own teaching team, to rule out previously mentioned biases.

Establishment of relationships between judgments of a teacher's quality in teaching students with EBD by professionals from within and outside a teaching team will provide input for research and practice. Research may lead to a better understanding of the teachers who have successfully committed themselves to providing the highest possible level of education for their students with EBD. Insights in their distinct expertise enables initial and extended teacher education to adequately equip teacher trainees and in-service teachers for their future and current teaching jobs, in which they are expected to adapt their teaching to the needs of all students, including those with EBD.

## References

- Alexander, R. (2000). *Culture and pedagogy: International comparisons in primary education*. Basil Oxford: Blackwell.
- Almog, O., & Shechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education*, 22(2), 115–129.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading programs in selected Los Angeles minority schools, REPORT NO. R-2007-LAUSD*. Santa Monica: Rand Corporation.
- Arnon, S., & Reichel, N. (2007). Who is the ideal teacher? Am I? *Teachers and Teaching: Theory and Practice*, 13(5), 441–464.
- Ashton, P. T. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education*, 35(5), 28–32.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of teacher efficacy and student achievement*. New York: Longman.
- Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. *British Journal of Educational Psychology*, 72(2), 261–278.
- Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging*, 10(2), 155–166.
- Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.
- Berk, R. A. (2005). Survey of 12 strategies to measure teaching-effectiveness. *International Journal of Teaching and Learning in Higher Education* 17(1), 48–62.
- Berliner, D. C. (1987). Simple view of effective teaching and a simple theory of classroom instruction. In: D. C. Berliner, & B. Rosenshine (Eds.), *Talks to teachers* (pp. 93–110). New York: Random House.
- Berliner, D. C. (2005). The near impossibility of testing for teacher quality. *Journal of Teacher Education*, 56(3), 205–213.
- Burnett, P. C., & Meacham, D. (2002). Measuring the quality of teaching in elementary school classrooms. *Asia-Pacific Journal of Teacher Education*, 30(2), 141–153.
- Coladarci, T., & Fink, D. R. (1995). *Correlations among measures of teacher efficacy: Are they measuring the same thing?* Paper presented at the American Educational Research Association conference (AERA), San Francisco (April).
- Collinson, V. (1999). Redefining teacher excellence. *Theory into Practice* 38(1), 4–11.
- Collinson, V. (2010). *Exemplary teachers, a way of being: Outline of a grounded theory*. Paper presented at the European Conference on Educational Research (ECER), Helsinki (January).
- Cooper, P. (2011). Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: An international review. *European Journal of Special Needs Education*, 26(1), 71–86.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227–268.

- Denzin, N. (2006). *Sociological methods: A sourcebook*. Aldine Transaction. Piscataway: Aldine Transaction.
- Ellett, C. D., Loup, K. S., Evans, R. L., Chauvin, S. W., & Naik, N. S. (1994). A study of teachers' nominations of superior colleagues: Implications for teacher evaluation programs and the construct validity of classroom-based assessments of teaching and learning. *Journal of Personnel Evaluation in Education*, 8(1), 7–28.
- Ericsson, K. A., & Smith, J. (1991). Prospects and limits of the empirical study of expertise: An introduction. In: K. A. Ericsson, & J. Smith (Eds.), *Towards a general theory of expertise: An introduction* (pp. 1–38). Cambridge: Cambridge University Press.
- Ericsson, K. A., & Lehman, A. C. (1996). Expert and exceptional performance: Evidence of maximal adaptation to task constraints. *Annual Review Psychology*, 47, 273–305.
- Fenstermacher, G. D., & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers College Record*, 107(1), 186–215.
- Fore, C., Boon, R., & Martin, C. (2007). Concurrent and predictive criterion-related validity of curriculum based measurement for students with Emotional and Behavioral Disorders. *International Journal of Special Education* 22(2), 24–31.
- Geisinger, K. F. (1994). Psychometric issues in testing students with disabilities. *Applied Measurement in Education*, 7(2), 121–140.
- Gest, S. D., & Gest, J. M. (2005). Reading tutoring for students at academic and behavioral risk: Effects on time-on-task in the classroom. *Education and Treatment of Children* 28(2), 25–47.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy. *Journal of Educational Psychology*, 76(4), 569–582.
- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479–508.
- Goei, S. L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad 'Omgang met zorgleerlingen met gedragsproblemen'* [Final report study of literature by the Education Council 'Coping with students with EBD']. Zwolle, the Netherlands: Hogeschool Windesheim.
- Good, T. L., & Brophy, J. (2003). *Looking in the classroom*. Boston: Allyn & Bacon.
- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers' experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties*, 15(3), 223–237.
- Goldhaber, D., & Anthony, E. (2007). Can teacher quality be effectively assessed? National Board Certification as a signal of effective teaching. *The Review of Economics and Statistics*, 89(1), 134–150.
- Guskey, T. R. (1981). Measurement of responsibility teachers' assume for academic successes and failures in the classroom. *Journal of Teacher Education*, 32(3), 44–51.
- Hanushek, E. C., & Rivkin, S. G. (2010). Generalizations about using value-added measures of teacher Quality. *American Economic Review*, 100(2), 267–271.
- Hartigan, J. A., & Wong, M. A. (1979). Algorithm AS 136: A K-means clustering algorithm. *Journal of the Royal Statistical Society*, 28(1), 100–108.
- Hattie, J. (2003). *Teachers make a difference. What is the research evidence?* Paper presented at the Australian Council for Educational Research conference (ACER), Melbourne (October).
- Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analyses relating to achievement*. South Yarra: Palgrave Macmillan.

- Hodkinson, A., & Devarakonda, C. (2011). Conceptions of inclusion and inclusive education: A critical examination of the perspectives and practices of teachers in England. *Educational Futures* 3(1), 52–65.
- Jain, A. K., & Dubes, R. C. (1988). *Algorithms for clustering data*. New Jersey: Prentice Hall.
- Kaufman, J. M., & Wong, L. H. (1991). Effective teachers of students with behavioural disorders: Are generic teaching skills enough? *Behavioural Disorders*, 16(3), 225–237.
- Kyriakides, L., Campbell, R. J., & Christofidou, E. (2002). Generating criteria for measuring teacher effectiveness through a self-evaluation approach: A complementary way of measuring teacher effectiveness. *School Effectiveness and School Improvement*, 13(3), 291–325.
- MacKay, D. (2003). *An example inference task: Clustering information theory, inference and learning algorithms*. Cambridge: University Press.
- Marzano, R. J., Marzano, J. S., & Pickering, D. J. (2003). *Classroom management that works. Research-based strategies for every teacher*. Alexandria: Association for Supervision and Curriculum Development.
- Midgley, C., Feldlaufer, H., & Eccles, J. (1989). Change in teacher efficacy and student self-and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology*, 81(2), 247–258.
- Muijs, D. (2006). Measuring teacher effectiveness: Some methodological reflections. *Educational Research and Evaluations*, 12(1), 53–74.
- Muijs, D., Kyriakides, L., Van der Werf, G., Creemers, B., Timperley, H., & Earl, L. (2014). State of the art-teacher effectiveness and professional learning. *School Effectiveness and School Improvement* 25(2), 231–256.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system (CLASS) manual: Pre-K*. Baltimore: Brookes.
- Pianta, R., & Hamre, B. (2009). Conceptualization, measurement, and improvement of classroom processes: Standard observation can leverage capacity. *Educational Researcher*, 38(2), 109–119.
- Pijl, S. J., Frostad, P., & Flem, A. (2008). The social position of pupils with special needs in regular schools. *Scandinavian Journal of Educational Research*, 52(4), 387–405.
- Prather-Jones, B. (2011). Some people aren't cut out for it: The role of personality factors in the careers of teachers of students with EBD. *Remedial and Special Education*, 32(3), 179–191.
- Raudenbush, S., Rowen, B., & Cheong, Y. (1992). Contextual effects on the self-perceived efficacy of high school teachers. *Sociology of Education*, 65(2), 150–167.
- Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Self-determination theory: A dialectical framework for understanding socio-cultural influences on student motivation. In: D. M. McInerney, & S. Van Etten (Eds.), *Big theories revisited* (pp. 31–60). Greenwich: Information Age Press.
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology*, 98(1), 209–218.
- Reumerman, R. (2010). *Expertleerkrachten in de omgang met probleemgedrag [Expert teachers dealing with problem behavior]*. Proefschrift [Dissertation]. University of Amsterdam.
- Rose, J. S., & Medway, F. J. (1981). Measurement of teachers' beliefs in their control over student outcome. *Journal of Educational Research*, 74(3), 185–190.
- Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville: University of Tennessee, Value-Added Research and Assessment Center.

- Sierens, E., Vansteenkiste, M., Goossens, L., Soenens, B., & Dochy, R. (2009). The synergistic relationship of perceived autonomy support and structure in the prediction of self-regulated learning. *British Journal of Educational Psychology, 79*(1), 57–68.
- Siperstein, G. N., Wiley, A. L., & Forness, S. R. (2011). *Academic and behavioral progress of students with ED served in low income versus high income schools*. Paper presented at the Teacher Educators for Children with Behavior Disorders conference (TECBD), Tempe (October).
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*(3), 611–625.
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behaviour and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571–581.
- Snoek, M., Spil, S., Van den Berg, E., & Suasso de Lima de Prado, E. (2012). In search for teacher excellence: Honours programmes and the recognition of teacher excellence in the Netherlands. *Reflecting Education 8*(2), 72–87.
- Soenens, B., & Vansteenkiste, M. (2005). Antecedents and outcomes of self-determination in three life-domains: The role of parents' and teachers' autonomy support. *Journal of Youth and Adolescence, 34*(6), 589–604.
- Søreide, G. E. (2006). Narrative construction of teacher identity: positioning and negotiation. *Teachers and Teaching: Theory and Practice, 12*(5), 527–547.
- Stroet, K., Opendakker, M., & Minnaert, A. (2013). Effects of need supportive teaching on early adolescents' motivation and engagement: A review of the literature. *Educational Research Review, 9*, 65–87.
- Stroet, K. (2014). *Studying motivation in classrooms. Effects of teaching practices on early adolescents' motivation* [Dissertation]. University of Groningen.
- Stroet, K., Opendakker, M., & Minnaert, A. (2015). What motivates early adolescents for school? A longitudinal analysis of associations between observed teaching and motivation. *Contemporary Educational Psychology, 42*, 129–140.
- Thayer-Bacon, B. J., Arnold, S., & Stouts, J. (1998). *Identification of caring professors in teacher education programs*. Paper presented at the American Educational Research Association conference (AERA), San Diego (April).
- Thorndike, E. L. (1904). *An introduction to the theory of mental and social measurements*. New York: Science Press.
- Timmering, L., Snoek, M., & Dietze, A. (2009). *Identifying teacher quality: Structuring elements of teacher quality*. Paper presented at the Association for Teacher Education in Europe conference (ATEE), Mallorca (August).
- Tschannen-Moran, M., & Woolfolk Hoy, A. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202–248.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783–805.
- Tucker, C. M., Zayco, R. A., Herman, K. C., Reinke, W. M., Trujillo, M., & Carraway, K. (2002). Teacher and child variables as predictors of academic engagement among low-income African American children. *Psychology in the Schools, 39*(4), 477–488.

- Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). Motivating learning, performance, and persistence: The synergistic effects of intrinsic goal contents and autonomy-supportive contexts. *Journal of Personality and Social Psychology*, *87*(2), 246–260.
- Vansteenkiste, M., Zhou, M. M., Lens, W., & Soenens, B. (2005). Experiences of autonomy and control among Chinese learners: Vitalizing or immobilizing? *Journal of Educational Psychology*, *97*(3), 468–483.
- Van der Ploeg, J. D. (2007). *Gedragsproblemen. Ontwikkelingen en risico's [Behavioral problems. Development and risks]*. Rotterdam, the Netherlands: Lemniscaat.
- Van der Wolf, K., & Van Beukering, T. (2009). *Gedragsproblemen in scholen. Het denken en handelen van Leraren [Behavioral problems in schools. Teacher beliefs and actions]*. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Van der Worp-van der Kamp, L., Minnaert, A. E. M. G., Post, W. J., Bijstra, J. O., & Frans, N. (submitted). Measuring the academic performances of students with severe emotional and/or behavioural disorders: The use and reliability of a large-scale standardized assessment system.
- Van Gennip, H., & Vrieze, G. (2008). *Wat is de ideale leraar? Studie naar vakkennis, interventie en Person [Who is the ideal teacher? A study on content knowledge, intervention and personality]*. Nijmegen, the Netherlands: Radboud Universiteit, ITS.
- Verloop, N., & Lowyck, J. (2003). *Onderwijskunde – een kennisbasis voor professionals [Educational science – a knowledge base for professionals]*. Groningen, the Netherlands: Wolters-Noordhoff.
- Wasserman, S., & Faust, K. (1995). *Social network analyses: Methods and implications*. New York: University Press.
- Weggeman, M. (2008). *Leiding geven aan professionals? Niet doen [Managing professionals? Don't!]* Schiedam, the Netherlands: Scriptum.

## **Appendix A: Observation tool**

For the teacher and the student indicate the extent to which you are inclined to think that the...

*Response Categories: 1 = (almost) not, 2=sometimes, 3 = usually, 4 = (almost) always*

### **Providing structure**

- ...student finds out over time that he/she is doing better and better (2)
- ...teacher creates room for the students' different work and learning styles (3)
- ...student finds out that he/she is able to cope with the schoolwork (7)
- ...teacher makes sure that every student gets to answer questions in class (9)
- ...teacher expresses high expectations in tune with the student's talents and potentials (17)
- ...student is motivated (18)

### **Providing autonomy support**

- ...teacher adequately responds to the student's initiatives (1)
- ...teacher challenges the student to think up his/her own solutions (6)
- ...student is aware that he/she can influence the learning process (8)
- ...student bears a suitable share of the responsibility for the learning process (10)
- ...teacher gives a suitable share of responsibility to the student (12)
- ...student directs his/her behavior (13)

### **Providing a context of respect**

- ...teacher makes adequate time for teacher-student interactions (4)
- ...teacher treats confidential information, obtained from the student, discreetly (5)
- ...student feels accepted (11)
- ...student feels safe (14)
- ...teacher keeps agreements made with the student (15)
- ...student trusts the teacher (16)

## **Appendix B: Modified version of the Norwegian Teacher Self-Efficacy Scale**

Indicate how certain you are that you...

*Response Categories: 1 = not certain at all, 2 = quite uncertain, 3 = quite certain, 4 = absolutely certain*

### **Instruction**

- ...explain central themes in your subjects so that even the low-achieving students with EBD understand (1)
- ...provide good guidance and instruction to all students with EBD regardless of their level of ability (8)
- ...answer questions of students with EBD so that they understand difficult problems (12)
- ...explain subject matter so that most students with EBD understand the basic principles (16)

### **Adapt instruction to individual needs**

- ...organize schoolwork to adapt instruction and assignments to the individual needs of students with EBD (5)
- ...provide realistic challenges for all students with EBD, even in mixed ability classes (11)
- ...adapt instruction to the needs of low-ability students with EBD while you also attend to the needs of other students in class (18)
- ...organize classroom work so that both low- and high-ability students with EBD work on tasks that are adapted to their abilities (23)

### **Motivate students**

- ...get all students with EBD in class to work hard on their schoolwork (2)
- ...invoke the desire to learn even among the lowest achieving students with EBD (10)
- ...get students with EBD to do their best even when working with difficult problems (15)
- ...motivate students with EBD who show little interest in schoolwork (21)

### **Keep discipline**

- ...maintain discipline in any school class or group of students (6)
- ...control even the most aggressive students (9)
- ...get students with EBD to follow classroom rules (14)
- ...get all students with EBD to behave politely and respect the teachers (19)

**Cooperate with colleagues and parents**

- ...cooperate well with most parents of students with EBD problems (3)
- ...find adequate solutions to conflicts of interest with other teachers (7)
- ...collaborate constructively with parents of students with EBD (13)
- ...cooperate effectively and constructively with other teachers (e.g. in teaching teams) (22)

**Cope with change**

- ...successfully use any instructional method that the school decides to use (4)
- ...manage instruction regardless of how it is organized (e.g. group composition, mixed age groups) (17)
- ...manage instruction even if the curriculum is changed (20)
- ...teach well even if you have to use instructional methods that would not be your choice (24)





# OBSERVING THE TEACHING SKILLS OF ALLEGED EXPERT TEACHERS OF STUDENTS WITH EBD

S.A. Büttner  
B. Orobio de Castro  
J.O. Bijstra

*This chapter is in preparation for submission as:*

Büttner, S. A., Orobio de Castro, B., & Bijstra, J. O. (2018)  
Observing the teaching skills of alleged expert teachers of  
students with EBD.

*S.A. Büttner developed the study concept and design, and B. Orobio de Castro and J.O. Bijstra gave advice and feedback. S.A. Büttner did the main literature search. S.A. Büttner coded the study. S.A. Büttner performed the data-analysis. S.A. Büttner, B. Orobio de Castro, and J.O. Bijstra performed interpretation. S.A. Büttner drafted the manuscript, and B. Orobio de Castro and J.O. Bijstra provided critical revisions.*

---



## **Abstract**

Teaching students with emotional and behavioral difficulties (EBD) is challenging and holds significant risks for students and teachers. It is therefore vital to develop procedures to find the teachers who are able to teach such students effectively. This study compared teacher behavior of 12 alleged expert teachers of students with EBD to 24 alleged non-experts in Dutch primary education. Their alleged proficiency was based on peer perceptions and teacher self-reports. Participants were observed in the classroom on effective and inappropriate teacher behaviors using the International Comparative Analysis of Learning and Teaching (ICALT) and a list of inappropriate teacher behaviors. Multivariate analysis of variance indicated a significant difference between the alleged expert and non-expert teachers in their mastery of generic teaching competencies. T-tests established that the alleged experts obtained significantly higher scores on the domains of 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement'. Four teachers, including one alleged expert, showed inappropriate teacher behavior once. Peer perceptions, self-reports, and independent observations are not entirely exchangeable. These procedures are complementary and should be used together for identifying expert teachers of students with EBD.

## Introduction

A good education is a prerequisite for success. Students and society benefit from investing in high quality education for everyone (Biesta, 2009; Goldhaber & Antony, 2007). Decades of research have shown that what teachers know, do, and care about makes a difference in the learning equation (Hattie, 2003). Teacher quality has twice the impact on student achievement compared to school policies (Marzano, Marzano, & Pickering, 2003). Hence, research aimed at defining the proficiency of expert teachers contributes to the development of teaching methods and approaches for getting the best out of all students.

The literature on expert teachers in regular education provides broad insight in their qualities (Arnon & Reichel, 2007; Darling-Hammond, 2009; MacDonald Grieve, 2010). Generally, expert teachers are willing and able to recognize and respond to students' differing educational needs in pedagogically and didactically correct ways. They ask themselves questions such as: 'What does this student require of me in order to be able to achieve?' and 'How can I make sure this student benefits from education?'. Thus, expert teachers meet the fundamental right of students to educational opportunities (Unesco, 1994).

Within the general literature on the qualities of expert teachers, specific attention is being paid to teachers of students with emotional and behavioral difficulties (EBD) (Goodman & Burton, 2010; Prather-Jones, 2009, Reumerman, 2010). The concept of EBD comprises a variety of social and/or emotional difficulties, which range from being internalizing to externalizing, vary in frequency, duration, extent, and consequence (Van der Ploeg, 1990), and are relative, relational, and dependent on circumstances (Van der Wolf & Van Beukering, 2009).

The definition used in this study is based on both of the above: 'EBD result from interactions between student, home, and school environment and are disturbing and restrictive for all parties since they are contrary to normal standards and values.' Research has shown that students with EBD are at risk for developing more severe difficulties when they are not being guided properly by significant persons such as teachers (Gest & Gest, 2005; Goei & Kleijnen, 2009) and that they risk achievement gaps, leaving school without a diploma (Siperstein, Wiley, & Forness, 2011), and unemployment (Seidman, 2005).

Regarding teachers of students with EBD, it is known that many of them find it difficult to meet the needs of such students and feel incompetent while teaching them (Cooper, 2011; Hofstetter & Bijstra, 2014). Such feelings of professional inadequacy occur when a teacher lacks the pedagogical and/or didactic skills to act adequately in complex classroom situations (Edelenbos, Meijer, & Harms, 2002; Meijer, 2003). Consequently, they experience huge amounts of stress, risk burnout, and are likely to leave the profession early (Adera & Bullock, 2010; Nelson, Maculan, Roberts, & Ohlund, 2001).

In addition, teachers of students with EBD are inclined to use coercive responses in their approach to their students (Boivin, Hymel, & Hodges, 2001). Students who are not well adjusted are at high risk of becoming the target of verbal abuse by the teacher, and those who experience verbal teacher abuse miss out on learning opportunities and are at risk for further behavioural, emotional, and social maladjustment (Brendgen, Wanner, & Vitaro, 2006). This especially accounts for primary education, where the teacher-student relationship exerts a major influence on students' adjustment (Pianta, 1999).

Knowing that teaching students with EBD is exceptionally challenging for those who work closely with them (Cooper, 2011; Reumerman, 2009; Smeets & Rispens, 2007) and is accompanied by many risks for students and teachers, it is vital to let the right people do the job. Aspiring teachers wonder whether this work will suit them, while teacher education and those in charge of hiring teachers who are able suitable for the job have a decisive task. They need to know what to educate, where to pay attention to during an application procedure, what features ought to be looked for, and, in turn, where pitfalls could be.

Hence, the question is how to select expert teachers of students with EBD? Teacher quality is commonly acknowledged on the basis of the achievements of their students and/or anecdotal impressions of their abilities. Such information sources are limited, because student performance does not just depend on the teacher and anecdotal impressions are open to biases and misinterpretation. In addition, standardized testing of students with EBD risks low validity and reliability (Van der Worp-van der Kamp, Pijl, Post, Bijstra, & Van den Bosch, 2016) due to students' deviant responses to testing procedures (Fore, Boon, & Martin, 2007).

Selecting effective teachers of students with EBD on the basis of their behavior in hypothetical classroom situations is complex as well. According to Berliner (2005), it is difficult, if not impossible, to capture complex classroom situations in hypothetical formats such as interview and written exams for which many answers or responses may be appropriate. Furthermore, Almog and Shechtman (2007) established that teachers of students with EBD tend to use other strategies in real classroom situations than the ones they reported to be using in hypothetical classroom situations.

More appropriate ways to assess a teacher's quality reported in the literature are peer evaluation, self-perception, and observation. Nomination procedures in which peer teachers from a teaching team (e.g. fellow teachers, head teachers) are asked to name expert colleagues are used as indicators of teacher quality in varying educational settings (Baltes, Staudinger, Maercker, & Smith, 1995; Ericsson & Lehman, 1996; Collinson, 2010; Snoek, Spil, Van den Berg, Suasso de Lima de Prado, 2012). In the procedures applied in these studies, a reliable broadly based consensus is sought rather than ratings using a set of descriptors or criteria.

In addition to peer perceptions, teachers' self-perceptions of their teaching abilities are used to determine a teacher's quality, termed self-efficacy beliefs. Strong relations

have been established between teacher self-efficacy and student achievement (Gibson & Dembo, 1984; Kaufman & Wong, 1991). Teachers with high self-efficacy beliefs spend more time monitoring students, give more instruction, facilitate higher levels of classroom management, and enhance more student learning than teachers with low self-efficacy beliefs (Goddard, Hoy, & Woolfolk Hoy, 2004; Tschannen-Moran & Woolfolk Hoy, 1998).

In search of expert teachers of students with EBD, perceptions of a teacher's quality by members of primary school teaching teams were combined with self-evaluations (Chapter 3). The perceptions included teachers who completed a self-efficacy survey, fellow-teachers and head teachers who participated in a nomination procedure, and special needs support teachers who rated indicators of need supporting teaching based on classroom observations. The extent to which the different informants and measures converged in indicating which teachers of students with EBD were perceived as experts was tested.

Modest significant correlations between the informants were found and the cluster analysis revealed a clear group of alleged expert teachers of students with EBD. Nonetheless, it was not clear whether the corresponding impressions of teachers and their colleagues do actually correspond to real-life expert behavior in the classroom. To test the validity of these procedures for identifying expert teachers of students with EBD, the present study assessed the correspondence between peer and self-perceptions of teacher quality in teaching students with EBD and actual teacher behavior.

A valuable way to test whether teachers pointed out as experts in teaching students with EBD by peers and themselves are indeed experts is observation. Independent qualified observers are able to assess teacher behavior provided that this behavior is considered to be variable (Hanushek & Rivkin, 2010), compliance is assured with reliability and inter-reliability by training observers, observations are performed by more than one observer, and biases such as halo and horn effects (Thorndike, 1904), a nested data effect (Fidell & Tabacnick, 2007), and a cluster effect (Porter, 1998) are ruled out in advance (Muijs, 2006).

This study aims to provide extended insight in the reliability and validity of peer and self-perceptions as information sources for identifying a teacher's quality in teaching students with EBD. Using observations, this study will reveal whether identifying expert teachers of students with EBD on the basis of peer and self-evaluations is adequate. Alleged expert teachers of students with EBD are expected to master generic teaching strategies to a sufficient to high extent, to have higher levels of teaching abilities at their disposals compared to alleged non-expert teachers, and to demonstrate no inappropriate teacher behaviors.

Establishing consent between dependent teaching teams and independent observers on who are expert teachers of students with EBD would offer a useful as well as valid way to find them. Perceptions are easier to collect and have less impact on the education situation than observations. A consent would allow a valid selection of the intended experts

in selection and application procedures and in-depth examination of their qualities for training purposes. A lack of consent would indicate that caution must be applied with the use of peer and self-perceptions in such procedures and would stress study of features that mislead perspectives.

## **Method**

### **Design**

In a cross-sectional design, a group of teachers who are experts according to self-reports and impressions by colleagues were compared to a group of less favorably evaluated teachers from the same schools on observations of their teaching behavior. Both groups were assessed on observed effective and inappropriate behaviors. Independent ratings of teachers' generic teaching performances were used together with items for inappropriate teacher behavior.

### **Procedure**

The data were collected in 2017 from a sample of 12 alleged expert teachers of students with EBD and a control group of 24 alleged non-expert teachers. The teachers worked in either kindergarten or higher grades of elementary school in the North Netherlands and were represented just about equally in both groups. Each teacher had been teaching his/her class from the start of the school year. The observations took place in spring to make sure that teachers and students have had enough time to get to know one another.

When teachers were requested to participate in the study, they were asked to indicate whether they had students with EBD in their classrooms. All the teachers, including those who chose not to participate, confirmed that they currently had students with EBD in their classroom. The presence of students with EBD in every classroom is due to the trend to teach students with special educational needs (SEN) in a mainstream education surrounded by their peers, termed inclusive education (Unesco, 1994).

Observation conditions were made comparable. Each teacher was observed once while giving a regular lesson in mathematics by a randomly composed duo from a total of 6 observers. For the benefit of the study, the observers were certified in using the observation tool. They had achieved an interrater agreement on 83% of the test cases, while 80% agreement was required to complete the training. Due to illness of one observer, two observations were performed by one observer to meet a strict deadline for data collection.

The observers were not informed about which students had EBD for four reasons. First, the observation instrument does not require pre-information about the students to observe. Second, it was considered unethical to provide such information because of a possible stigmatizing effect of labeling students with EBD (Pijl, 2015; Tomlinson, 2015).

Paying specific attention to students with EBD would put the focus on students' difficulties rather than their capabilities and may eventually have done harm rather than good.

A third reason for not informing observers on which students had EBD was to rule out the risk of teachers triggering undesired behavior in their students with EBD to establish the information they provided to the observers about them. Finally, it is considered unwanted to inform observers with information on which students have EBD because they may be inclined to put the focus too much on a teacher's interactions with students with EBD rather than a teacher's interactions with other students, which may affect their overall ratings.

Observers were also kept blind to the alleged expert or non-expert status of the teachers they observed to reduce the risk of an observer bias. Thus, observers could not align actual observations to a priori expectations of a teacher's classroom behavior. Moreover, it was attempted to keep the participating teachers blind for their status in the research. This was managed in all of the cases except for two alleged expert teachers, who were provided with clarification on their status to confirm their participation.

Before the teacher and the students entered the classroom, observers took place in the classroom. Each observation started with the teacher and the students entering the classroom at the beginning of a morning or after a break (i.e. morning or lunch). The observations in kindergarten had an average duration of 27 minutes ( $\sigma = 7.17$ , min 20, max 35), while the observations in higher grades had an average duration of 54 minutes ( $\sigma = 12.57$ , min 30, max 75). The average number of students in the classroom was 21 ( $\sigma = 6.38$ , range 9-31).

After each observation, an assessment protocol was followed similar to the one used in the training procedure. This allowed for the observers to reflect on their ratings by reasoning them with the co-observer, and to change them if desired. Observers were informed that the protocol had the aim to reassure their findings rather than to reach a uniform scoring. Directly after the two observations one observer performed singly, the impressions were discussed with the most experienced observer, following the assessment protocol as far as possible.

## Participants

The group of 12 alleged expert teachers of students with EBD and a control group of 24 alleged non-expert teachers were identified as such among two preselected samples (i.e. single location schools, team size 8-12) drawn from all primary schools in the Northern Region of the Netherlands. The samples together included 417 primary school teachers. By means of cluster analyses of scores on three measures of teacher quality in teaching students with EBD (i.e. self-perceptions, nominations by peer teachers and head teachers, observations by special needs support teachers), 23 teachers were identified as alleged experts. The alleged expert and non-expert teachers were identified in studies 2 and 4.

All alleged expert teachers were asked to participate in the present study. For each alleged expert who confirmed this request, two alleged non-experts were sought for to generate a twice as large control group. A similar distribution between kindergarten teachers and teachers from higher grades of primary education was aimed for between the two research groups. Neither the alleged experts nor the non-experts were informed in advance about the results of the prior investigation (i.e. being identified as an alleged expert or non-expert teacher of students with EBD). A statement was made that individual data would be treated confidentially and not be communicated with associates.

From the 23 alleged expert teachers of students with EBD, 12 agreed to participate in the present study. From the 11 alleged expert teachers of students with EBD who did not participate, 2 had retired in the meantime, 1 had meanwhile become a special needs support teacher with merely coordinating and coaching tasks, 3 were physically ill, 1 refused because of severe illness of a relative, 2 refused because of a supposed negative effect of observers in the classroom on students with special educational needs, and 2 declined without giving any reason. None of the alleged expert teachers of students with EBD had dropped out due to burn-out or work-related complaints.

The group of alleged expert teachers did not differ from the group of alleged non-expert teachers regarding gender, age, years of teaching experience, and number of teaching days. Respectively, their male female ratio was 2:10 versus 3:21, their mean age 44.5 ( $\sigma = 10.32$ , range 30-61) versus 45.1 years ( $\sigma = 9.6$ , range 30-62), their teaching experience 18.32 ( $\sigma = 8.42$ , range 6-32) versus 18.63 years ( $\sigma = 9.22$ , range 6-39), and their number of teaching days 2.96 ( $\sigma = .81$ , range 2-4) versus 2.94 days a week ( $\sigma = 1.17$ , range 2-5). One alleged expert worked in kindergarten, while 11 worked in higher grades of primary education versus three alleged non-experts in kindergarten and 21 in higher grades of primary education.

## **Instruments**

### ***ICALT observation instrument***

An internationally applicable observation instrument was applied to assess the generic teaching competencies of the alleged expert teachers and the non-expert teachers: the International Comparative Analysis of Learning and Teaching (ICALT) (Van de Grift, 2007). The ICALT comprises all the teacher competencies prescribed by the Dutch Ministry of Education, which are implemented in the Dutch Curriculum of Teacher Education and used in coaching and assessment procedures. Its reliability and validity were first established in primary education (Cronbach's Alpha's  $>.70$ ), followed by secondary education in many European countries, among which are the Netherlands, Belgium, Germany, England, Slovakia, and Croatia (Van de Grift, 2007; Van de Grift, Van der Wal, & Torenbeek, 2011).

The ICALT instrument comprises the following 35 items covering seven domains of effective teacher behaviors, which are related to student achievement (Van de Grift, 2007):

1. Safe and stimulating learning climate (4 items): The teacher... Shows respect for learners in his/her behavior and language; Maintains a relaxed atmosphere; Promotes learners' self-confidence; and Fosters mutual respect.
2. Efficient organization (4 items): The teacher... Ensures the lesson proceeds in an orderly manner; Monitors to ensure learners carry out activities in the appropriate matter; Provides effective classroom management; and Uses the time for learning efficiently.
3. Clear and structured instructions (7 items): The teacher... Presents and explains the subject material in a clear manner; Gives feedback to learners; Engages all learners in the lesson; During the presentation stage, checks whether learners have understood the subject material; Encourages learners to do their best; Teaches in a well-structured manner; and Gives a clear explanation of how to use didactic aids and how to carry out assignments.
4. Intensive and activating teaching (7 items): The teacher... Offers activities and work forms that stimulate learners to take an active approach; Stimulates the building of self-confidence in weaker learners; Stimulates learners to think about solutions; Asks questions which stimulate learners to reflect; Lets learners think aloud; Gives interactive instructions; Clearly specifies the lesson aims at the start of the lesson.
5. Adapting instructions and learner processing to inter-learner differences (4 items): The teacher... Evaluates whether the lesson aims have been reached; Offers weaker learners extra study and instruction time; Adjusts instructions to relevant inter-learner differences; and Adjusts the processing of subject matter to relevant inter-learner differences.
6. Teaching learning strategies (6 items): The teacher... Teaches learners how to simplify complex problems; Stimulates the use of control activities; Teaches learners to check solutions; Stimulates application of what has been learned; Encourages learners to think critically; and Asks learners to reflect on practical strategies.
7. Learner engagement (3 items): The learners... Are fully engaged in the classroom; Show that they are interested; and Take an active approach to learning.

The extent to which teachers demonstrated the items is rated on a Likert scale ranging from 1 to 4 (i.e. 1 = predominantly weak; not observed or demonstrated insufficiently, 2 = more weak than strong, 3 = more strong than weak, 4 = predominantly strong; demonstrated sufficiently). Examples of good practices for each item are provided in the manual to help observers rating the item. In accordance with the manual, observers based their ratings on impressions of a teacher's competencies towards all students in the classroom, including those with EBD. Hence, high scores are only allowed when an item fully applies to all

students. As the instrument is currently being internationally standardized in primary and secondary education, it is impossible to determine whether a teacher can be considered an expert or a non-expert on the basis of individual scores. This issue is overcome by the inclusion of a control group, which enables comparison of group scores rather than individual scores.

### ***List of inappropriate teacher behaviors***

A list of inappropriate teacher behaviors was added to the observation tool because teaching students with EBD tends to trigger coercive responses from teachers (Boivin, Hymel, & Hodges, 2001). During the observation was tracked which inappropriate behavior was shown and how often. The indicators unfavorable to teaching were based on a seminal study of the consequences of teacher inappropriate behavior (Brendgen, Wanner, & Vitaro; 2006): using irony/sarcasm (e.g. ridiculing, shaming, laughing at, teasing); expressing negative predictions (e.g. scapegoating, negative comparison); verbally putting down individually or in front of the group (e.g. teasing, name calling); verbally threatening (e.g. scaring other than in correct I-message, cursing, swearing); physically threatening (e.g. shaking, grabbing); removing from the classroom as a punishment, shutting out (e.g. ignoring adequate behaviors, pretending one does not belong); punishing inadequately (i.e. too heavy in relation to penalty); and getting angry inadequately (i.e. too angry in relation to penalty, sincerely rather than professional, yelling). The list also included the option to report other inappropriate teacher behaviors as free text.

### **Analysis**

The interrater agreement was calculated for the ICALT instrument and the list of inappropriate behaviors. The two ICALT forms that were completed by each observer duo per observation were merged. In the case of different scores, the lowest score was used in line with the guidelines provided in the manual of the ICALT (Van de Grift, 2007). Cronbach's Alpha was used to measure the reliability of each of the domains of the ICALT. Mean domain scores, ranges, mean item scores, and standard deviations for the two research groups (i.e. alleged expert teachers and alleged non-expert teachers) were also calculated. The variance between groups for the complete ICALT was analyzed using MANOVA with the seven domains as dependent variables and alleged expertise (i.e. expert versus non-expert teachers of students with EBD) as fixed variable. Independent T-tests were performed to compare group means on domain level. The analyses ended with examination of the extent to which the alleged expert and non-expert teachers demonstrated inappropriate teacher behaviors.

## Results

### Interrater agreement

The observers agreed on 951 of the 1190 items (35 items times 34 duo observations) of the ICALT instrument, while they disagreed on 236 items. Hence, an interrater agreement was reached of 80%. For inappropriate teacher behaviors, observers agreed in all cases. No additional inadequate teacher behaviors were reported on any of the observation forms.

### ICALT instrument

The Cronbach's Alpha's on the seven domains ranged from .5 to .8 (i.e. Safe and stimulating learning climate  $\alpha = .786$ ; Efficient classroom management  $\alpha = 0.682$ ; Clear and structured instruction  $\alpha = .713$ ; Intensive and activating lesson  $\alpha = .474$ ; Adapting to differences  $\alpha = .677$ ; Teaching learning strategies  $\alpha = .575$ ; Student engagement  $\alpha = .775$ ). The reliability of the domains of 'Intensive and activating lesson' and 'Teaching learning strategies' was low. Table 4.1 shows the mean scores and standard deviations (SD) on the seven domains of the ICALT instrument from the group of alleged expert teachers of students with EBD and the group of alleged non-expert teachers of students with EBD. The mean scores obtained by the alleged expert teachers of students with EBD ranged from 2.56 (More strong than weak) to 3.63 (Predominantly strong), whereas those of alleged non-expert teachers of students with EBD ranged from 2.12 (More weak than strong) to 3.27 (More strong than weak).

**Table 4.1** Mean scores and standard deviations (SD) on the domains of the ICALT instrument from alleged expert teachers ( $n = 12$ ) and alleged non-expert teachers ( $n = 24$ ) of students with EBD, including T-test results.

Domain	Experts		Non-experts		T
	Mean	SD	Mean	SD	
Safe and stimulating learning climate	3.63	1.57	3.27	1.44	2.63*
Efficient organisation	3.38	1.98	3.08	1.76	1.79
Clear and structured instructions	3.25	3.31	2.98	2.50	1.77
Intensive and activating teaching	3.13	3.23	2.80	2.26	2.20*
Adjusting instructions and learner processing to inter-learner differences	2.58	3.39	2.12	2.67	1.64
Teaching learning strategies	2.56	2.84	2.21	2.92	2.06*
Learner engagement	3.53	1.31	2.88	1.47	4.06**

\*Significant at the .05 level; \*\* significant at the .01 level.

The alleged expert teachers of students with EBD demonstrated higher levels of generic teaching competencies than the alleged non-experts, as the multivariate test indicated

significant differences ( $F(7,28) = 2.47, p < .05$ ). Independent T-tests on the seven domains revealed that the alleged expert teachers differed from the non-experts, specifically in 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement'. Effect sizes for these group differences were large.

### **Inappropriate teacher behavior**

Four inappropriate teacher behaviors were observed: 'Physically threatening' as in grabbing a student by the arm; 'Removing a student from the classroom as a punishment', which occurred within the first 10 seconds of the lesson; 'Getting angry inadequately' as in yelling at students; and 'Shutting out' as in ignoring a student during a significant part of the lesson. Each of these behaviors was observed once. One inappropriate behavior ('Shutting out') was demonstrated by an alleged expert teacher, the other three by alleged non-experts. These frequencies were too low for a statistical test of group differences in prevalence.

### **Discussion and limitations**

This study assessed the correspondence between dependent peer perceptions and self-perceptions of a teacher's ability to teach students with EBD, and independent observations of the behavior of teachers of students with EBD in the classroom. Independent standardised observations were performed by trained professionals. A group of teachers identified as experts by head teachers, special needs support teachers, fellow teachers, and themselves, termed alleged experts teachers, was compared to a group of less favorably evaluated teachers from the same schools.

The International Comparative Analysis of Learning and Teaching (ICALT) (Van de Grift, 2007) was applied to assess teachers' generic teaching competencies. A list of inappropriate teacher behaviors was added to the observation instrument to explore the extent to which participants use these in their responses to students with EBD. Alleged expert teachers of students with EBD were expected to master generic teaching strategies to a sufficient to high extent, to have higher levels of teaching abilities at their disposals than alleged non-expert teachers, and to demonstrate no inappropriate teacher behaviors.

The results support the first hypothesis: expert teachers of students with EBD master the generic teaching competencies to a sufficient to high extent. These competencies, which include teaching didactics as well as pedagogies, were found to have positive effects on student achievement in research by Van de Grift, (2007), and to prevent students with EBD from demonstrating challenging behaviour in the classroom (Gest and gest, 2005). The alleged expert teachers of students with EBD can actually be considered expert teachers because they are found to use a broad range of adequate teaching strategies.

The results also support the second hypothesis: alleged expert teachers of students with EBD demonstrate significantly higher levels of generic teaching competencies than alleged

non-experts. On domain level, experts show significantly more 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement'. The impressions of a teacher's ability to teach students with EBD by professional observers match the evaluations by peer teachers and teachers themselves and can thus be considered reliable sources for identifying the intended expert teachers.

The results did not support the third hypothesis. One alleged expert and three alleged non-experts were observed using inappropriate teacher behavior once. Although these frequencies were too low for a statistical test of group differences in prevalence, the very occurrence of these behaviors is undesirable. Students who are abused by a teacher are the most vulnerable to subsequent developmental difficulties (Brendgen, Wanner, & Vitaro, 2006). This finding stresses the importance of ensuring teachers not to harm their students in any way. They require insight and tools to prevent them from doing so in teacher education.

In reflection on the findings, it must be noted that restrictions with regard to their clinical relevance need to be taken into account when interpreting the results. Teacher quality is a variable on a scale ranging from effective to ineffective. When expert teachers are sought for, less effective teachers are automatically ranked lower. This, however, does not imply that teachers who are not ranked in the top of the research population are not doing a good teaching job. This becomes evident from sufficient scores of alleged non-expert teachers of students with EBD on five of the seven ICALT domains.

The two domains on which the alleged non-expert teachers performed unsatisfactorily include 'Adjusting instructions and learner processing to inter-learner differences' and 'Teaching learning strategies'. The lower performance of non-expert teachers with regard to these competencies was also found by Goei and Kleijnen (2009). It remains, however, uncertain whether the teachers in the present study actually waste instruction time due to a main focus on managing student behaviour, rather than teaching as was reported by Goei and Kleijnen (2009) and Gest and Gest (2005).

Because expert teachers master each of the ICALT domains, the findings generally signify that educating expert teachers of students with EBD requires a broad approach. More specifically, the findings stress the importance of teaching teacher trainees and ineffective teachers to adjust instructions and learner processing to differences between students, including those with EBD because non-expert teachers are less capable to accomplish this. Both interferences call for extended research on how to improve the process of equipping teachers with evident skills in teacher education.

Furthermore, the evidence suggests a general consensus on who are expert in teaching students with EBD among those who work closely with them in educational practice and those who are able to evaluate their proficiency from an independent empirical perspective. The identification procedures obviously are not completely interchangeable. Each

information source has unique features and application conditions, which are not fitting for every school neither applicable to every school. For example, peer perceptions are rather easy to obtain, but require a private and anonymous test situation, and participants who know each other well.

Similarly, it can be difficult to make observation conditions comparable, to arrange time and money costly observations by external professionals, and to limit the impact of one or more observers in the classroom on everyday classroom routines to a minimal extent. Furthermore, the ICALT instrument is only allowed to be used individually for the purpose of coaching, not assessments, and to be used group wise to compare multiple single observations (Van de Grift, 2007). Hence, the identification procedures applied here ought to be considered as complementary for identifying expert teachers of students with EBD.

Regarding finding the right people for the job, it must be noted that the ICALT observation instrument does not include all aspects of the teaching profession. In addition to generic pedagogical-didactic teaching competencies, there are other aspects mandatory to be considered an expert. Examples of such competencies are being able to work together with parents, staff, and external professionals. It is thus essential to find out whether alleged expert teachers of students with EBD also distinguish themselves from non-experts on these competencies to sharpen the profile of expert teachers of students with EBD.

Furthermore, although the results of the present study allow for the conclusions that expert teachers are actually teaching students with EBD effectively and that alleged non-experts perform less well in the classroom while teaching students with EBD, it cannot be ruled out that the non-expertise of less effective teachers is due to other factors than the presence of students with EBD in the classroom. This could be explored by means of observing teaching competencies while teaching students with and without EBD by observers who are informed in advanced about the students who have EBD and who do not.

This study has a number of limitations. The list of inappropriate teacher behaviors turns out to be reliable but may miss more frequently occurring smaller behaviors, resulting in low prevalence of inappropriate behaviors. Though, observers fully agreed on their scores of inappropriate behaviors and did not report other inappropriate behaviors than those included in the list. Further, the ICALT domains 'Intensive and activating lesson' and 'Teaching learning strategies' have unsatisfactory reliability. This was unexpected, because the ICALT has been established to be a reliable and valid instrument for observing generic teaching competencies.

Another limitation concerns the representativeness of the research sample. Some drop-out occurred because teachers were asked twice to participate in studies that were carried out over several school years. The expert group thus shares the characteristic of having continued teaching in the same education setting over several years. In addition, there

are differences in the education setting. Despite the objective of comparability between observations, classes may differ on size, number and type of students with EBD, school location, and so on. It is not clear whether an expert teacher manifests him- or herself as such in each group.

It would be useful to strengthen the generalization of this study's results with a larger sample. When all the ICALT scales turn out to be reliable in a larger research population, larger and/or additional differences between the samples may be established than those found in the present study. Such a study may also provide more insight in the representativeness of this study's results. Composing a group of expert teachers of students with EBD and a group of non-expert teachers in a shorter time span by means of peer and self-perceptions will allow for drawing stronger conclusions about the two research groups.

This study has shown that the combined use of peer and self-perceptions of a teacher's ability to teach students with EBD is applicable for identifying expert teachers of students with EBD. The established consent between dependent teaching teams and independent observers on who are expert teachers clearly offers a useful, reliable, and valid way to find them. Collecting perceptions is easier and has less impact on the daily education situation than observations and allows an adequate selection of expert teachers of students with EBD in application procedures and in-depth examination of their qualities for training purposes.

## Recommendations

This study has provided input for educational practice where teachers who bring out the best in students with EBD are sought for. Establishing an ample method for selecting such teachers allows for further identification of their qualities. Specifically with regard to their personality traits, which are suggested to play a role in a teacher's ability to teach students with EBD (Prather-Jones, 2011). Although the relationship between teacher personality and teacher quality in teaching students with EBD has not yet been studied by means of taking actual personality tests, review and classification of the literature on the personality traits of expert teachers of students with EBD in accordance with the Five Factor Model of personality (Costa & McCrae, 2008) has indicated that such teachers demonstrate high levels of Extraversion, Agreeableness, Conscientiousness, and Openness to Experience (Chapter 2).

A next step would be to explore whether expert teachers of students with EBD actually have high levels of these traits at their disposals. Linking the findings from Chapter 2 to those from the present study allows for a study to answer the question whether the teachers who provide a safe and stimulating learning climate, teach intensively and activating, teach learning strategies, and engage learners indeed demonstrate high levels of sociability and emotional expressiveness (Extraversion), pro-social behaviors (Agreeableness), goal-

directed, organized behaviors (Conscientiousness), and flexibility and a broad range of interest (Openness to Experience). A more refined insight into the qualities of expert teachers of students with EBD may be decisive for the futures of aspiring teachers, teachers who experience feelings of professional inadequacy, and, not least, student with EBD.

## References

- Adera, B. A., & Bullock, L. M. (2010). Job stressors and teacher job satisfaction in programs serving students with emotional and behavioral disorders. *Emotional and Behavioural Difficulties*, 15(1), 5–14.
- Almog, O., & Shechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education*, 22(2), 115–129.
- Arnon, S., & Reichel, N. (2007). Who is the ideal teacher? Am I? *Teachers and Teaching: Theory and Practice*, 13(5), 441–464.
- Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging*, 10(2), 155–166.
- Berliner, D. C. (2005). The near impossibility of testing for teacher quality. *Journal of Teacher Education*, 56(3), 205–213.
- Biesta, G. (2009). Good education in an age of measurement: on the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability*, 21(1), 33–46.
- Boivin, M., Hymel, S., & Hodges, E. (2001). Toward a process view of peer rejection and harassment. In: J. Juvonen, & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 265–289). New York: Guilford Press.
- Brendgen, M., Wanner, B., & Vitaro, F. (2006). Verbal Abuse by the Teacher and Child Adjustment From Kindergarten through grade 6. *Pediatrics* 117(5), 1585–1598.
- Collinson, V. (2010). *Exemplary teachers, a way of being: Outline of a grounded theory*. Paper presented at the European Conference on Educational Research (ECER), Helsinki (January).
- Costa, P. T., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO-PI-R). In: G.J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Cooper, P. (2011). Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: An international review. *European Journal of Special Needs Education*, 26(1), 71–86.
- Edelenbos, P., Meijer, W., & Harms, T. (2002). *Depedagogisch-didactische consequenties van diagnostiseren [The pedagogic-didactic consequences of diagnoses]*. Groningen, the Netherlands: GION.
- Fore, C., Boon, R., & Martin, C. (2007). Concurrent and predictive criterion-related validity of curriculum based measurement for students with Emotional and Behavioral Disorders. *International Journal of Special Education* 22(2), 24–31.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy. *Journal of Educational Psychology*, 76(4), 569–582.
- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479–508.
- Goei, S. L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad 'Omgang met zorgleerlingen met gedragsproblemen' [Final report study of literature by the Education Council 'Coping with students with EBD']*. Zwolle, the Netherlands: Hogeschool Windesheim.
- Goldhaber, D., & Anthony, E. (2007). Can teacher quality be effectively assessed? National Board Certification as a signal of effective teaching. *The Review of Economics and Statistics*, 89(1), 134–150.

- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers' experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties*, 15(3), 223–237.
- Hanushek, E. C., & Rivkin, S. G. (2010). Generalizations about using value-added measures of teacher Quality. *American Economic Review*, 100(2), 267–271.
- Hattie, J. (2003). *Teachers make a Difference. What is the Research Evidence?* Paper presented at the Australian Council for Educational Research conference (ACER), Melbourne (October).
- Hofstetter, W., & Bijstra, J. O. (2014). Passend Onderwijs: Zijn we er klaar voor [Appropriate Education: Are We Ready]? *Kind en Adolescent Praktijk [Child and Adolescent Practice]*, 3, 132–139.
- Kaufman, J. M., & Wong, L. H. (1991). Effective teachers of students with behavioural disorders: Are generic teaching skills enough? *Behavioural Disorders*, 16(3), 225–237.
- Lord, W. (2007). *NEO PI-R - A guide to interpretation and feedback in a work context*. Oxford: Hogrefe Ltd.
- MacDonald Grieve, A. (2010). Exploring the characteristics of 'teachers for excellence': Teachers' own perceptions. *European Journal of Teacher Education*, 33(3), 265–277.
- Marzano, R., Marzano, J., & Pickering, D. (2003). *Classroom management that works. Research-based strategies for every teacher*. Alexandria: Association for Supervision and Curriculum Development.
- Meijer, C. (2003). *Special Education across Europe in 2003. Trends in provision in 18 European countries*. Middelfart, Denmark: European Agency for Development in Special Needs Education.
- Muijs, D. (2006). Measuring teacher effectiveness: Some methodological reflections. *Educational Research and Evaluations*, 12(1), 53–74.
- Nelson, J. R., Maculan, A., Roberts, M. L., & Ohlund, B. J. (2001). Sources of occupational stress for teachers of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 9(2), 123–130.
- Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington: American Psychological Association.
- Pijl, S. J. (2015). Fighting segregation in special needs education in the Netherlands: The effects of different funding models. *Discourse: Studies in the Cultural Politics of Education* 37(4), 553–562.
- Prather-Jones, B. (2011). Some people aren't cut out for it: The role of personality factors in the careers of teachers of students with EBD. *Remedial and Special Education*, 32(3), 179–191.
- Reumerman, R. (2010). *Expertleerkrachten in de omgang met probleemgedrag [Expert teachers dealing with problem behavior]*. Proefschrift [Dissertation]. University of Amsterdam.
- Seidman, A. (2005). The learning killer: Disruptive student behavior in the classroom. *Reading Improvement*, 42(1), 40–47.
- Siperstein, G. N., Wiley, A. L., & Forness, S. R. (2011). *Academic and behavioral progress of students with ED served in low income versus high income schools*. Paper presented at the Teacher Educators for Children with Behavior Disorders conference (TECBD), Tempe (October).
- Smeets, E. F. L., & Rispens, J. (2008). *Op zoek naar Passend Onderwijs. Overzichtsstudie van de samenhang tussen Regulier en Speciaal (Basis)Onderwijs [Looking for Appropriate Education. Outline Study on the Relation between Regular and Special (Primary) Education]*. Nijmegen, the Netherlands: ITS.
- Snoek, M., Spil, S., Van den Berg, E., & Suasso de Lima de Prado, E. (2012). In search for teacher excellence: Honours programmes and the recognition of teacher excellence in the Netherlands. *Reflecting Education* 8(2), 72–87.

- Tomlinson, S. (2012). The irresistible rise of the SEN industry. *Oxford Review of Education*, 38(3), 267–286.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202–248.
- UNESCO (1994). *The Salamanca statement and framework for action on special needs education*. Paris: UNESCO.
- Van de Grift, W. (2007). Quality of Teaching in Four European Countries: A review of the literature and an application of an assessment instrument. *Educational research*, 49(2), 127–152.
- Van de Grift, W. J. C. M., Van der Wal, M., & Torenbeek, M. (2011). Ontwikkeling in de pedagogische didactische vaardigheid van docenten in het basisonderwijs [Development of pedagogic didactic competence of teachers in primary education]. *Pedagogische Studiën [Pedagogic Studies]*, 88, 416–432.
- Van der Ploeg, J. D. (1990). *Gedragsproblemen. Ontwikkelingen en risico's [Behavioral problems. Development and risks]*. Rotterdam, the Netherlands: Lemniscaat.
- Van der Wolf, K., & Van Beukering, T. (2009). *Gedragsproblemen in scholen. Het denken en handelen van leraren [Behavioural problems in schools. Teacher beliefs and actions]*. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Van der Worp-van der Kamp, L., Pijl, S. J., Post, W. J., Bijstra, J. O., & Van den Bosch, E. J. (2016). The effect of systematic academic instruction on behavioural and academic outcomes of students with EBD. *Educational Studies* 42(1), 72–84.



# EXPLORING THE RELATIONSHIP BETWEEN TEACHER PERSONALITY AND TEACHER QUALITY AMONG TEACHERS OF STUDENTS WITH EBD

S.A. Büttner  
S.J. Pijl  
J.O. Bijstra  
E.J. Van den Bosch

*An adapted version of this Chapter was published as:*

Büttner, S. A., Pijl, S. J., Bijstra, J., & Van den Bosch, E. J. (2015). Personality traits of expert teachers of students with EBD: Clarifying a teacher's X-Factor. *International Journal of Inclusive Education*, 20(6), 569–587.

*S.A. Büttner developed the study concept and design, and S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch gave advice and feedback. S.A. Büttner did the main literature search. S.A. Büttner coded the study. S.A. Büttner performed the data-analysis. S.A. Büttner, S.J. Pijl, J.O. Bijstra, and E.J. Van den Bosch performed interpretation. S.A. Büttner drafted the manuscript, and S.J. Pijl, J.O. Bijstra, and E.J. van den Bosch provided critical revisions.*

---



## **Abstract**

In this study, the predictive value of teacher personality for teacher quality in teaching students with emotional and behavioral difficulties (EBD) was examined among a sample of Dutch primary school teachers. Personality was measured using a self-report questionnaire based on the personality dimensions of the Five Factor Model of personality: Extraversion; Agreeableness; Conscientiousness; Neuroticism; and Openness to Experience. Different dimensions of teacher quality in teaching students with EBD were assessed using an observation instrument, a self-efficacy questionnaire, and a nomination procedure. The dimensions of Agreeableness, Conscientiousness, and Openness to Experience were found to explain 35% of the variance in teacher quality in teaching students with EBD measured by the self-efficacy questionnaire. No relationships were found regarding the other measures. The evidence does not convincingly support the existence of a relationship between teacher personality and teacher quality in teaching students with EBD. Implications are discussed.

## Introduction

In the ideology of inclusive education, every child should be able to attend a regular school, unless there are insoluble barriers that make this impossible. This principle is voiced in treaties such as the Salamanca Statement (UNESCO, 1994.) Therefore, many countries aim to include students with special educational needs (SEN) in mainstream education. Although the degree of inclusion differs between countries and educational systems, the literature reports that the trend toward inclusion confronts teachers with a specific challenge: to meet the SEN of students with emotional and behavioral difficulties (EBD) (Goei & Kleijnen, 2009).

Students with EBD demonstrate internalising (e.g. anxious, withdrawn) and/or externalising (e.g. hyperactive, disruptive) behaviours (DfEs, 2001), which vary in frequency, duration, extent, and consequence (Van der Ploeg, 2007), fluctuate, are relative and relational, and dependent on circumstances at all times (Van der Wolf & Van Beukering, 2009). On the basis of these descriptions, the concept is addressed as follows in this study: 'EBD result from interactions between the student, the home, and school environment, and are disturbing and restrictive for all parties since they are contrary to normal standards and values.'

Most students with EBD need special attention in the classroom. Their difficulties are said to either undermine their academic progress because of reduced learning opportunities, or to function as an escape from too difficult academic tasks (Gest & Gest, 2005; Van der Worp-Van der Kamp, Pijl, Bijstra, & Van den Bosch, 2014). Compared to students with other SEN or without, students with EBD make less academic progress, (Siperstein, Wiley, & Forness, 2011), are referred more often to special education (Ledoux, Roeleveld, Van Langen, & Paas, 2012), and show higher dropout rates (Bradley, Henderson, & Monfore, 2004).

Not only students with EBD are at risk (Billingsley, Fall, & Williams, 2006), but their teachers are as well (Kokkinos, 2007). Many of them believe their skills to handle and teach students with EBD are limited and report feelings of professional inadequacy (Jones & Chronis-Tuscano, 2008). These teachers experience more job stress (Kokkinos, Panayiotou, & Davazoglou, 2005) and are more likely to stop teaching than other teachers (Adera & Bullock, 2010). Clearly, teachers need to engage students with EBD whilst minimizing disruption of the learning environment to provide effective education to all students.

As a result of the trend towards inclusive education, the requirements to teach students with SEN have effectively increased. Hodkinson and Devarakonda (2011) argue that teacher education for SEN is insufficient and does not meet these changes in policy. As this particularly applies to teaching students with EBD, preparing teachers to teach these students should have high priority within teacher education (Goodman & Burton, 2010). It is therefore important to examine what exactly pre-service teachers require to be able to cope with the unique demands of the job.

One way to approach this issue is to apply appreciative inquiry (Cooperrider & Srivastva, 1987). This means studying what works for teachers who are able to bring out the best in students with EBD, rather than what goes wrong with those struggling to handle and teach these students. With a nod to today's media, which is continuously looking for people who stand out in the crowd through talent hunts, the term X-Factor (Smits, 2006) is used in this study to express the enigmatic, hard-to-describe quality that adds to a teacher's excellence in teaching students with EBD.

Studies on the qualities of expert teachers of students with EBD report that they have democratic teaching beliefs (Almog & Shechtman, 2007) and a neutral, responsive, sensitive, and reflective attitude towards their students (Goodman & Burton, 2010; Reumerman, 2010). They also show a sincere interest in their students, are motivated to help them, are willing to self-reflect and learn, and perceive their incentives and cooperation with professionals as effective (Almog & Shechtman, 2007; Poulou & Norwich, 2002). The intended experts tend not to take things personally and are well aware of their limitations (Prather-Jones, 2011).

In addition to beliefs and attitudes, expert teachers of students with EBD plan their lessons effectively and show many differentiation and regulation skills (Gadeyne, Ghesquière, & Onghena, 2006; Reumerman, 2010). They also engage in high quality teacher-student relationships (Berry & Connor, 2010), make use of positive styles of humor in their approach to students (Fovet, 2009), and provide individual students with feedback, create room for negotiation with their students, give them responsibility for their own behavior (Goodman & Burton, 2010), provide many opportunities for students to achieve (Prather-Jones, 2011).

Further, the literature on the competencies of expert teachers of students with EBD discloses an upcoming interest in the personality characteristics of expert teachers of students with EBD as well (Prather-Jones, 2011; Chapter 2). Such teachers are usually described in terms of personality traits such as being genuine, engaged, committed, trustworthy, empathic, disciplined, and respectful (Arnon & Reichel, 2007; Mertens, 2010). Prather-Jones (2011) argues that some teachers just aren't cut out for the job and that there is reason to believe that personality plays a role in a teacher's approach towards students with EBD.

Personality is defined as enduring patterns of thoughts, feelings, and behaviors (McCrae & John, 1992). Personality matures (Costa, Herbst, McCrae, & Siegler, 2000) and stabilizes over time (Cobb-Clark & Schurer, 2012; Costa & McCrae, 2008). Heritability and environmental factors are found to equally influence human personality (Bouchard & McGue, 2003). Personality traits are dynamic, shift along developmental trajectories (Boyce, Wood, & Powdthavee, 2013; Paunonen & Ashton, 2001), and should be conceived as continua that can change with circumstances in life (Fleeson, 2001).

The Five Factor Model of personality (FFM) (McCrae & Costa, 2008) adopts the tenets of trait theory in that individuals can be characterized in terms of enduring patterns

of thoughts, feelings, and behaviours (McCrae & John, 1992). The FFM is an explanatory account of the role of five related core personality dimensions and six underlying clusters of related traits/facets. Each dimension represents a range between two extremes (e.g. introvert versus extravert). The FFM is found to be consistent in observations, interviews, and self-reports and to be valid across cultures (Schacter, Gilbert, & Wegner, 2013).

Relationships between personality and job performance are established using the FFM in work fields in which interaction with people is required (Barrick & Mount, 1991; Connor-Smith & Flachsbar, 2007). For example, Conscientiousness, Extraversion, and Agreeableness generally predict problem-solving and cognitive restructuring skills (Hurtz & Donovan, 2000; Mount & Barrick, 1998), Neuroticism predicts less problem solving, cognitive restructuring, and training proficiency (Salgado, 1997), and women show higher levels of Extraversion, Agreeableness, and Neuroticism than men (Weisberg, De Young, & Hirsch, 2011).

Though less widespread, the relationship between personality and job performance has also been studied in secondary education (Jugović, Marušić, Pavin, & Vizek, 2012; Pertegal-Felicesa, Castejón-Costaa, & Jimeno-Morenillab, 2014). The insights from these studies are not applicable to inclusive primary education teachers who are teaching students with EBD for many reasons. A fundamental limitation of these studies concerns the unilaterally assessments of teacher quality by students, whose ratings may have been influenced by factors such as a dependency relationship and pleasant personality traits.

In addition, teachers in primary education need to teach more topics compared to teachers in secondary education, who have a content specialism. The concept of teacher quality has a different meaning in different educational settings, so it is not possible to draw general conclusions about a teacher's quality. Furthermore, primary school teachers are teaching students of a younger age, who demonstrate more variation in social emotional and cognitive behaviors and (special) educational needs. Finally, the teacher-student relationship is different because a teacher in primary education spends more time with students.

Overall, the empirical evidence on the relationship between teacher personality and teacher quality does not provide distinctive insight in a teacher's quality in teaching students with EBD. In addition, the literature on the qualities of expert teachers of students with EBD does not include studies which have actually measured their personality traits by means of a comprehensive personality test. The only studies available explore evident thoughts, feelings, and behaviors of expert teachers of students with EBD, which according to trait theory together determine one's personality characteristics (Costa & McCrae, 1992).

To explore the assumed relationship between a teacher's ability to teach students with EBD and a teacher's personality, variables relating to the personality traits of expert teachers of students with EBD were reviewed and classified in Chapter 2 by independent raters using the dimensions of the FFM. The results indicated that teacher quality in teaching students

with EBD is positively related to levels of Extraversion, Agreeableness, Conscientiousness, and Openness to Experience. More research using actual personality tests is required to study the relationship between the FFM and teaching students with EBD in inclusive education.

In addition to real-life personality tests, adequate measures of teacher quality in teaching students with EBD are required for assessing the alleged relationship. A number of measures of teacher quality (e.g. written exam, interview, observation, teacher effectiveness, teacher self-efficacy, teacher nomination) which involve differing dimensions of the multidimensional construct of teacher quality (Burnett & Meacham, 2002; Muijs, 2006) have been evaluated for the benefit of validating a method for measuring teacher quality in teaching students with EBD (Chapter 3).

The evaluation of the variety of measures of teacher quality resulted in not using written exams and interviews, because it is complex to capture difficult classroom situations in formats that are hard to quantify (Berliner, 2005; Muijs, 2006) and teachers tend to use other teaching and regulation strategies in real classroom situations than they report to use in hypothetical situations (Almog & Shechtman, 2007). Measuring teacher effectiveness was also considered unsuitable because it is impossible to isolate teaching as a factor in student learning (Muijs, 2006; Muijs, Kyriakides, Van der Werf, Creemers, Timperley, & Earl, 2014).

Perceptions by teachers themselves, peer-teachers, and external professionals appeared to be more applicable to assess teacher quality in teaching students with EBD. Self-efficacy measures comprise different teaching dimensions and have been found to be strongly related to student achievement (Kaufman & Wong, 1991; Tschannen-Moran & Woolfolk Hoy, 2001). Nomination procedures involve peers perceptions and have been successfully used to sought for a consensus judgment rather than ratings with a list of criteria (Collinson, 2010; Ericsson & Lehman, 1996; Thayer-Bacon, Arnold, & Stouts, 1998).

Finally, observations were also considered applicable for assessing teacher quality in teaching students with EBD, provided reliability and inter-reliability are complied with and trained observers are informed in advance about possible biases (Muijs, 2006). With the aim of developing a valuable, easy to apply method for assessing a teacher's quality in teaching students for the benefit of study of the relationship between teacher personality and teacher quality in teaching students with EBD, perceptions of a teacher's quality by members of primary school teaching teams were combined with self-evaluations (Chapter 3).

The perceptions included teachers who completed a self-efficacy survey, fellow-teachers and head teachers who participated in a nomination procedure, and special needs support teachers who rated indicators of need supporting teaching based on classroom observations. The extent to which the different informants and measures converged in indicating which teachers of students with EBD were perceived as experts was tested. Modest significant correlations between informants were found and cluster analysis revealed a clear group of alleged expert teachers of students with EBD.

To find out whether the matching perceptions of special needs support teachers, head teachers, fellow teachers, and teacher themselves do actually correspond to real-life expert teacher behavior in the classroom, these were compared to observations of generic teaching skills by independent professional observers in Chapter 4. These observations established that the teachers who were alleged expert in teaching students with EBD were experts indeed. Hence, an accurate and easy to use method for identifying expert teachers of students with EBD was successfully validated.

The next step to extent the emerging literature on teacher quality in teaching students with EBD is taken in the present study in which the relationship between this type of teacher quality and teacher personality is studied. On the basis of study findings reported in Chapter 2, five main outcomes were expected: a positive predictive value of teacher personality for teacher quality in teaching students with EBD regarding the dimensions of Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, as well as a negative value for Neuroticism. Gender differences were also expected to be found among participants.

## **Method**

### **Design**

Data were collected in two stages. First, teacher quality in teaching students with EBD was assessed among a sample of Dutch primary school teachers using a validated combination of three measures for identifying expert teachers of students with EBD: 1) an observation tool applied by special needs support teachers; 2) a self-efficacy scale completed by teachers; and 3) a nomination procedure followed by fellow teachers and head teachers (Chapters 3 and 4). Personality tests were performed later on from a selection of participants from the first stage.

### **Participants**

The sample was drawn from the 1015 primary schools in the Northern region of the Netherlands. Only single location schools were selected as the study required all teachers from a school team to know each other. To enable comparison among teachers from teams of different sizes, the variance in team size was limited to 8-15 teachers. From this preselected database, a sample of 200 schools was randomly drawn and asked for participation. Data were collected from 35 school teams who agreed to participate, of which 32 came from the random sample and 3 responded to snowball sampling from the author's networks. In the first phase of the data collection, 280 teachers (i.e. 44 male, 236 female), 35 special needs support teachers, and 35 head teachers participated. In the second phase, 74 teachers (i.e. 16 male, 58 female, mean age 44, range 24-63) from a random sample of 150 of the original 280 teachers responded and took personality tests.

## Measures

### *Teacher quality*

Three measures were used to assess a teacher's quality: an observation tool applied by special needs support teachers ( $\alpha = .93$ ); a self-efficacy scale completed by teachers ( $\alpha = .93$ ); and a nomination procedure followed by fellow teachers and head teachers. The observation tool is inspired by the self-determination theory (Deci & Ryan, 1985; 2000), which prompts that individuals have three psychological needs that must be met in order to be motivated to achieve: the need for competence (experience mastery); autonomy (be in control of one's own life); and relatedness (be connected to others). In the self-determination theory, a distinction is also made between three associated dimensions of need supportive teaching, which complement each other in their effects on students' satisfaction: providing students with structure, autonomy support, and a context of respect for their perspectives.

Special needs support teachers rated indicators of a teacher's quality in teaching students with EBD based on regularly performed classroom observations. The indicators are applicable to the teacher and the student. The tool comprises 17 indicators relating to the three need supportive teaching styles. At first, the tool comprised 18 indicators. On the basis of factor analysis, 1 indicator was rejected (Chapter 3). Special needs support teachers, who are trained to monitor (e.g. observe, coach) teachers of students with SEN and students with SEN in primary education, including students with EBD, rated the teacher and student indicators on a 4-point Likert-scale. The scales ranged from 1 ((almost) never) to 4 ((almost) always). To involve a representative population, the student with EBD whose name was first on the class list was selected. In the case of co-teachers, the same student was selected.

Teacher self-efficacy in teaching students with EBD was measured as an overall construct using a modified version of the Norwegian Teacher Self-Efficacy Scale (NTSES) (Skaalvik & Skaalvik, 2007). Items regarding teaching were rephrased so that they related to teaching students with EBD. In the present study, teachers rated their self-efficacy beliefs on a 4-point Likert-scale, ranging from 1 (not certain at all) to 4 (absolutely certain).

A nomination procedure was applied next to the observation tool and the self-efficacy scale. Teacher quality in teaching students with EBD was addressed as an overall concept, as did Baltes, Staudinger, Maercker, and Smith (1995) while assessing teacher wisdom. On the basis of implicit knowledge about teacher quality in teaching students with EBD and impressions of each other's practices, teachers and head teachers nominated teachers by answering the question: 'Apart from yourself, do you feel there are other expert teachers of students with EBD working at this school?'. If the answer was 'Yes', the person was asked to name the expert(s). The number of nominations was not restricted and was used as an index for teacher quality, like Pijl, Frostad, and Flem (2008) used the number of nominations as an index for peer acceptance. To avoid ethical issues, a statement was made that data were collected and processed confidentially and anonymously.

### **Teacher personality**

An authorized, validated, translated version (Hoekstra, Ormel, & De Fruyt, 2012) of the NEO Personality Inventory – Revised (NEO PI-R) (Costa & McCrae, 1992) was used to measure teacher personality. The five personality domains and the six underlying facet scales of each domain were measured equally by a total of 240 items. The internal consistency of the NEO PI-R, ranges from  $\alpha = .89-.93$  for domains and  $\alpha = .54-.83$  for facets (McCrae & Costa, 2010). The dimensions are described as follows:

1. Extraversion: quantity and intensity of energy directed outwards at the social world. Comprises the facets of warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotions.
2. Agreeableness: the kind of interactions an individual prefers varying from compassion to tender mindedness. Comprises the facets of trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness.
3. Conscientiousness: degree of organization, persistence, control, and motivation in goal-directed behavior. Comprises the facets of competence, order, dutifulness, achievement striving, self-discipline, and deliberation.
4. Neuroticism: the extent one is prone to psychological distress. Comprises the facets of anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability.
5. Openness to experience: actively seeking experiences for their own sake and appreciating these. Comprises the facets of fantasy, aesthetics, feelings, actions, ideas, and values.

### **Analysis**

The data analyses involved a step-by-step procedure. Prior to the actual analyses, as advised in the NEO-PI-R manual (Costa, McCrae, & Dye, 1991), checks were run for patterns of answers that agreed, disagreed or were arbitrary, since the test does not automatically check for untruthful or misleading answers. Participants who agreed with  $\geq 150$  or  $\leq 50$  of the 240 items and/or displayed  $\geq 1$  row of 10 identical scores were eliminated from the analyses to prevent these cases of answer tendency from influencing the results.

The analyses started with exploring gender differences in personality on domain level using Unpaired Samples T-tests. Depending on whether gender differences were found or not, male and female teachers were subsequently analyzed separately or together. The relation between the three measures of teacher quality in teaching students with EBD was calculated using Spearman's correlation coefficients. The absolute scores on the observation tool and the self-efficacy scale and the numbers of nominations were converted into percentage scores to compare scores on the three instruments by teachers from various team sizes. Cluster analyses were performed to explore the composition of a group of expert teachers among participants on the basis of high scores the measures of teacher quality.

Descriptive statistics of scores on the personality dimensions and the three measures of teacher quality in teaching students with EBD were calculated (i.e. Score Ranges, Means, Medians, Standard Deviations). To explore the contribution of teacher personality to teacher quality in teaching students with EBD, 15 linear regression analyses were performed. Teacher personality comprised the five personality dimensions of the FFM as independent variables while teacher quality comprised the three measures of teacher quality in teaching students with EBD as dependent variables. Absolute scores for the measures were used, except for the nomination procedure, for which percentage scores were calculated so that the number of nominations between teachers from differing team sizes could be compared.

Finally, in the case of predictive relationships found between the personality dimensions and the measures of teacher quality in teaching students with EBD, each of these relationships was studied in depth on facet level. Once more, linear regression analyses were used to determine which of the underlying personality traits or facets of the relevant personality dimension demonstrated a predictive relationship with a teacher's quality in teaching students with EBD.

## Results

The checks for answer tendencies revealed 13 cases of a tendency to agree with the answer. No patterns of disagreeing or answering arbitrarily were found. The removal of the 13 cases resulted in a definite sample of 61 participants (14 men, 47 women). Table 5.1 shows the means and standard Deviations (SD) for male and female scores on the personality dimensions. T-tests did not indicate gender differences regarding any of the personality dimensions (Extraversion  $t = -.11$ ; Agreeableness  $t = -1.51$ ; Conscientiousness  $t = .63$ ; Neuroticism  $t = .14$ ; Openness to Experience  $t = .89$ ). Hence, the subsequent analyses were performed on the complete sample.

**Table 5.1** Means and Standard Deviations (SD) for male ( $N = 14$ ) and female ( $N = 47$ ) participants on the five personality dimensions

Personality dimension	Mean		SD	
	Male	Female	Male	Female
Extraversion	158.07	158.68	16.51	19.62
Agreeableness	176.29	183.28	18.94	14.04
Conscientiousness	179.79	176.02	15.08	20.58
Neuroticism	125.86	124.98	15.31	21.30
Openness to Experience	163.14	158.06	22.47	17.80

Table 5.2 presents the correlations between the observation tool, the self-efficacy scale, and the nomination procedure. Significant but modest correlations were established between each of the measures of teacher quality in teaching students with EBD.

**Table 5.2** Correlations between the observation tool, the self-efficacy scale, and the nomination procedure

	Observation tool	Self-efficacy scale	Nomination procedure
Observation tool	..		
Self-efficacy scale	0.27*	..	
Nomination procedure	0.32*	0.38**	..

\*Correlation is significant at the .05 level, \*\* Correlation is significant at the .01 level.

The results of the cluster analyses are presented in Table 5.3. The teachers were divided into four, five, six, or seven clusters on the basis of their scores on the measures of teacher quality in teaching students with EBD.

**Table 5.3** Final cluster centers of the four, five, six, and seven cluster analysis (N = 61)

4 Cluster solution	1	2	3	4			
N	10	<b>10*</b>	28	13			
Observation tool	61.91	88.53	82.25	81.33			
Self-efficacy scale	78.33	88.02	78.53	83.01			
Nomination procedure	4	74	5	40			
5 Cluster solution	1	2	3	4	5		
N	11	<b>10*</b>	7	3	30		
Observation tool	87.17	88.53	76.47	50.98	77.75		
Self-efficacy scale	84.37	88.02	80.80	85.76	77.01		
Nomination procedure	24	74	49	12	2		
6 Cluster solution	1	2	3	4	5	6	
N	3	7	20	<b>10*</b>	8	13	
Observation tool	50.98	76.47	72.94	88.53	87.13	87.33	
Self-efficacy scale	85.76	80.80	74.58	88.02	83.59	82.93	
Nomination procedure	12	49	3	74	28	4	
7 Cluster solution	1	2	3	4	5	6	7
N	9	7	<b>10*</b>	13	11	8	3
Observation tool	86.93	76.47	88.53	75	72.86	91.54	50.98
Self-efficacy scale	84.03	80.80	88.02	82.77	69.32	80.47	85.76
Nomination procedure	26	49	74	3	4	2	12

\*Number of expert teachers.

A stable group of ten expert teachers of students with EBD was established in each analysis, comprising 16% of the research population. Regardless of the number of additional clusters, the composition of the group of experts remained the same. Each teacher that is grouped in the cluster of experts met the criterion of scoring high on all three indicators of teacher quality. No teachers in the other clusters scored higher on one or more of these measures.

The descriptive statistics of scores on the five personality dimensions and the three measures of teacher quality in teaching students with EBD, including Score Ranges, Means, Medians, and SD's are presented in Table 5.4. Participants obtained the highest mean scores on the Agreeableness dimension, and the lowest mean scores on the Neuroticism dimension. Their scores on Conscientiousness ranged the most, while those on Agreeableness ranged the least. Maximum scores were merely obtained on the observation tool.

**Table 5.4** Score Range, Means, Medians, and Standard Deviations (SD) of the five personality dimensions and the three measures of teacher quality in teaching students with EBD ( $N = 61$ )

	Score Range	Mean	Median	SD
Teacher personality				
Extraversion	95 - 198	158.54	160	18.82
Agreeableness	134 - 207	181.67	182	15.42
Conscientiousness	105 - 217	176.89	178	19.41
Neuroticism	70 - 170	125.18	126	19.97
Openness to Experience	111 - 203	159.23	162	18.90
Teacher quality				
Observation tool	30 - 68	54.23	54	7.89
Self-efficacy scale	59 - 95	77.77	78	7.88
Nomination procedure	0 - 86	23.66	14	27.85

Table 5.5. shows the results of the analyses regressing the measures of teacher quality on the five personality dimensions. Agreeableness, Conscientiousness, and Openness to Experience predict teacher quality in teaching students with EBD measured with the self-efficacy questionnaire. The relationship between Agreeableness and teacher quality was negative, while the relationships between Conscientiousness and Openness to Experience with teacher quality were positive. None of the dimensions predicted teacher quality as measured with the observation tool or the nomination procedure. The five personality dimensions altogether explained 7.6% of the variance ( $R^2 = .076$ ) in teacher quality in teaching students with EBD as measured with the observation tool; 35.2% of the variance measured with the self-efficacy scale; and 20% measured with the nomination procedure.

**Table 5.5** Results of the linear regression analyses (standardized coefficients) between teacher personality and teacher quality in teaching students with EBD ( $N = 61$ )

Teacher personality	Teacher quality		
	Observation tool	Self-efficacy scale	Nomination procedure
Extraversion	0.09	0.24	0.21
Agreeableness	-0.15	-0.31*	-0.21
Conscientiousness	-0.13	0.39*	0.03
Neuroticism	0.17	0.23	0.01
Openness to Experience	-0.05	0.26*	0.24

\*Correlation is significant at the .05 level.

Since predictive relationships were found between teacher personality and teacher quality in teaching students with EBD as measured with the self-efficacy questionnaire, linear regression analyses were subsequently performed on facet level between the dimensions of Agreeableness, Conscientiousness, and Openness to Experience, and the self-efficacy questionnaire. Table 5.6. presents the results of these analyses, which established a negative predictive relationship between teacher personality and teacher quality in teaching students with EBD for the Agreeableness facet of Modesty and a positive relationship with the Openness to Experience facet of Ideas. Despite a higher coefficient compared to the facet of Ideas, the predictive value of the facet Self-discipline was not significant ( $p = .082$ ).

**Table 5.6** Results of the linear regression analyses (standardized coefficients) between the facets of Agreeableness, Conscientiousness, and Openness to Experience, and the self-efficacy questionnaire ( $N = 61$ )

Agreeableness	Conscientiousness		Openness to Experience		
Trust	0.09	Competence	0.17	Fantasy	0.05
Straightforwardness	-0.08	Order	-0.11	Aesthetics	-0.04
Altruism	-0.10	Dutifulness	-0.12	Feelings	0.16
Compliance	-0.03	Achievement striving	0.19	Actions	-0.18
Modesty	-0.52*	Self-discipline	0.39	Ideas	0.33*
Tender-mindedness	0.15	Deliberation	-0.19	Values	0.13

\*Correlation is significant at the .05 level.

## Conclusion

On the way to more inclusive types of education, many teachers of students with EBD experience feelings of professional inadequacy in the classroom. Inspired by those who bring out the best in their students with EBD under challenging classroom situations, this study addressed the alleged relationship between teacher personality and teacher quality in teaching students with EBD. By means of linear regression analyses, the relationship between the five factors of the FFM of personality and three measures of teacher quality in teaching students with EBD were studied. Relationships among these variables were analyzed on facet level for the relationships found on domain level. Gender differences, the relation between the measures of teacher quality, and the composition of an expert group were also explored.

Although a group of expert teachers could be identified reliably, the proposed relationships between teacher quality and teacher personality were not consistently found. On domain level, relationships were only established between teacher quality measured with the self-efficacy questionnaire and the personality dimensions of Agreeableness, Conscientiousness, and Openness to Experience. These relationships were found specifically for the Agreeableness facet of Modesty and the Openness to Experience facet of Ideas. The higher a teacher's quality in teaching student with EBD, the lower his/her self-reported level of Agreeableness and the higher his/her self-reported levels of Conscientiousness and Openness to Experience.

Furthermore, moderate agreement was found between the measures of teacher quality in teaching students with EBD. The cluster analyses established a stable group of 10 (17%) expert teachers of students with EBD among participants, who all obtained high scores on each of the three measures of teacher quality in teaching students with EBD.

## Discussion

This study established little support for a relationship between teacher personality and teacher quality in teaching students with EBD. If there is actually any relationship between these variables, it is too weak to be of statistical and practical significance. The only confirmed relationships were based on self-report measures of both constructs. Modest links were found between teachers' self-ratings of the personality factors Agreeableness, Conscientiousness, and Openness to experience, and their self-ratings of their efficacy in the classroom. The other measures of teacher quality were not predicted by teacher personality. The findings are therefore more indicative of self-perception than of actual relations between teacher personality and teacher performance.

An interesting aspect of the established relationships concerns the negative relationship for Modesty, which seems to contradict the literature reporting Agreeableness in general

to be positively related with job performance (Mount & Barrick, 1998). This specific effect can perhaps be explained by results from a study by Lord (2007) which indicate that expert teachers of students with EBD tend to not play down their achievements and are not humble. Instead, they are reported to 'go their own way' and 'step aside from the curriculum guidelines' in a strong believe in the efficacy of their incentives (Poulou & Norwich, 2002). Such actions require a high level of self-esteem, which is related to a low level of modesty (Costa & McCrae, 2008).

This study narrowed down the profile of expert teachers of students with EBD by proving that their teaching skills are not consistently predicted by their personality. In search of the intended expert teachers, personality is ruled out as a selection criterion and there is no evidence legitimating attempts to develop specific traits in aspiring and/or ineffective teachers either. When hiring teachers who bring out the best in difficult to teach students, members of application committees should be aware that favorable traits like Altruism and Curiosity, and unfavorable traits like Competitiveness and Conventionality are not predictive of teaching performances in this setting and avoid basing their judgments on unreliable indicators such as an applicant's personality. Such biases are known as halo and horn effects (Thorndike, 1994).

The results of this study do not match those of the review and classification study on the personality traits of expert teachers of students with EBD (Chapter 2), which pointed in the direction of expert teachers of students with EBD having high levels of Agreeableness, openness to Experience, Conscientiousness, and Extraversion, and a low level of Neuroticism. This could be due to the fact that the review and classification study mainly included studies that based their conclusions on interviews and questionnaires rather than observations of actual teacher behavior, which was only done in four of the fourteen reviewed studies. Hence, it is likely that halo effects (Thorndike, 1994) were present in the majority of reviewed studies, much like those that one needs to be aware of when assessing teacher competencies.

Nonetheless, the results of this study strengthen the results reported in Chapters 3 and 4, by successfully incorporating a combination of three measures of teacher quality in teaching students with EBD: teacher self-efficacy beliefs; impressions by special needs support teachers of need supporting teaching styles; and peer perceptions. This combination was developed in Chapter 3, validated with independent observations of teacher behaviors in Chapter 4, and has once more yielded a stable selection of a group of expert teachers. This user friendly and easy to apply procedure can be used to identify expert teachers of students with EBD in the daily education situation, who can serve as role models for their peers and to determine which teachers require additional tools to teach students with EBD effectively.

## References

- Adera, B. A., & Bullock, L. M. (2010). Job stressors and teacher job satisfaction in programs serving students with emotional and behavioral disorders. *Emotional and Behavioural Difficulties, 15*(1), 5–14.
- Almog, O., & Shechtman, Z. (2007). Teachers' democratic and efficacy beliefs and styles of coping with behavioural problems of pupils with special needs. *European Journal of Special Needs Education, 22*(2), 115–129.
- Arnon, S., & Reichel, N. (2007). Who is the ideal teacher? Am I? *Teachers and Teaching: Theory and Practice, 13*(5), 441–464.
- Baltes, P. B., Staudinger, U. M., Maercker, A., & Smith, J. (1995). People nominated as wise: A comparative study of wisdom-related knowledge. *Psychology and Aging, 10*(2): 155–166.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1–26.
- Berliner, D. C. (2005). The near impossibility of testing for teacher quality. *Journal of Teacher Education, 56*(3), 205–213.
- Berry, D., & O'Connor, E. (2010). Behavioral risk, teacher-child relationships, and social skill development across middle childhood: A child-by-environment analysis of change. *Journal of Applied Developmental Psychology, 31*(1), 1–14.
- Billingsley, B. S., Fall, A. M., & Williams, T. O. (2006). Who is teaching students with emotional and behavioural disorders? A profile and comparison to other special educators. *Behavioral Disorders, 31*(1), 252–264.
- Bouchard, T. J., & McGue, M. (2003). Genetic and environmental influences on human psychological differences. *Journal of Neurobiology, 54*(1), 4–45.
- Boyce, C. J., Wood, A. M., & Powdthavee, N. (2013). Is personality fixed? Personality changes as much as 'variable' economic factor and more strongly predicts changes to life satisfaction. *Social Indicators, 111*(1), 287–305.
- Bradley, R., Henderson, K., & Monfore, D. A. (2004). A national perspective on children with emotional disorders. *Journal of the Council for Children with Behavioral Disorders, 29*(3), 211–223.
- Burnett, P. C., & Meacham, D. (2002). Measuring the quality of teaching in elementary school classrooms. *Asia-Pacific Journal of Teacher Education, 30*(2), 141–153.
- Cobb-Clark, D. A., & Schurer, S. (2012). The stability of big-five personality traits. *Economics Letter, 115*(1), 11–15.
- Collinson, V. (2010). *Exemplary teachers, a way of being: Outline of a grounded theory*. Paper presented at the European Conference on Educational Research conference (ECER), Helsinki (August).
- Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology, 93*(6), 1080–1107.
- Cooperrider, D. L., & Srivastva, S. (1987). Appreciative inquiry in organizational life. In: R. W. Woodman, & W. A. Pasmore (Eds.), *Research in organizational change and development* (pp. 129–169). Stamford: JAI Press.
- Costa, P. T., Jr., McCrae, R. R., & Dye, D. A. (1991). Facet scales for Agreeableness and Conscientiousness: A revision of the NEO Personality Inventory. *Personality and Individual Differences, 12*, 887–898.
- Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO PI-R) and the Five Factor Inventory (NEO-FFI): Professional Manual, Odessa: Psychological Assessment Resources Inc.

- Costa, P. T. Jr., Herbst, J. H., McCrae, R. R., & Siegler, I. C. (2000). Personality at midlife: Stability, intrinsic maturation, and response to life events. *Assessment, 7*(4), 365–378.
- Costa, P. T. Jr., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO PI-R). In: G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry, 11*(4), 227–268.
- DFES (2001). *SEN Code of practice*. London: Department for Education and Skills.
- Ericsson, K. A., & Lehmann, A. C. (1996). Expert and exceptional performance: Evidence on maximal adaptations on task constraints. *Annual Review of Psychology, 47*(1), 273–305.
- Fleeson, W. (2001). Towards a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology, 80*(6), 1011–1027.
- Fovet, F. (2009). The use of humour in classroom interventions with students with social, emotional and behavioural difficulties. *Emotional and Behavioural Difficulties, 14*(4), 275–289.
- Gadeyne, E., Ghesquière, P., & Onghena, P. (2006). Psychosocial educational effectiveness criteria and their relation to teaching in primary education. *School Effectiveness and School Improvement, 17*(1), 63–85.
- Gest, S. D., & Gest, J. M. (2005). Reading tutoring for students at academic and behavioral risk: Effects on time-on-task in the classroom. *Education and Treatment of Children, 28*(2), 25–47.
- Goei, S. L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad ‘Omgang met zorgleerlingen met gedragsproblemen’ [Final report study of literature by the Education Council ‘Coping with Students with EBD’]*. Zwolle, the Netherlands: Hogeschool Windesheim.
- Goodman, R. L., & Burton, D. M. (2010). The inclusion of students with BESD in mainstream schools: Teachers’ experiences of and recommendations for creating a successful inclusive environment. *Emotional and Behavioural Difficulties, 15*(3), 223–237.
- Hodkinson, A., & Devarakonda, C. (2011). Conceptions of inclusion and inclusive education: A critical examination of the perspectives and practices of teachers in England. *Educational Futures, 3*(1), 52–65.
- Hoekstra, H. A., Ormel, J., & De Fruyt, F. (2012). *NEO Personality Inventory-Revised (NEO PI-R)*. Amsterdam: Hogrefe.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology, 85*(6), 869–879.
- Jones, H. A., & Chronis-Tuscano, A. (2008). Efficacy of teacher in-service training for attention-deficit/hyperactivity disorder. *Psychology in the Schools, 45*(10), 918–929.
- Kaufman, J. M., & Wong, L. H. (1991). Effective teachers of students with behavioural disorders: Are generic teaching skills enough? *Behavioural Disorders, 16*(3), 225–237.
- Kokkinos, C. M., Panayiotou, G., & Davazoglou, G. M. (2005). Appraisals of student behavior. *Psychology in the Schools, 42*(1), 79–89.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology, 77*(1): 229–243.

- Ledoux, G., Roeleveld, J., Van Langen, A., & Paas, T. (2012). *COOL speciaal: Technisch rapport [COOL special: Technical Report]*. Amsterdam: Kohnstamm Instituut.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality, 60*(2), 175–215.
- McCrae, R. R., & Costa, Jr., P. T. (2008). The Five-Factor Theory of personality. In: O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research*. New York: Guilford.
- McCrae, R. R., & Costa Jr., P. T. (2010). *NEO Inventories: Professional manual*. Lutz: Psychological Assessment Resources.
- Mertens, N. (2010). *De X-factor van de leraar [A teacher's X-Factor]*. Naarden, the Netherlands: Zet & Print.
- Mount, M. K., & Barrick, M. R. (1998). Five-Factor Model of Personality and performance in jobs involving interpersonal interactions. *Human Performance, 11*(2), 145–165.
- Muijs, D. (2006). Measuring teacher effectiveness: Some methodological reflections. *Educational Research and Evaluations, 12*(1), 53–74.
- Muijs, D., Kyriakides, L., Van der Werf, G., Creemers, B., Timperley, H., & Earl, L. (2014). Educational effectiveness, teacher effectiveness and professional learning, and school and system improvement. *School Effectiveness and School Improvement, 25*(2), 231–256.
- Onderwijsraad (2012). *Referentiekader Passend Onderwijs [Frame of reference Appropriate Education]*. Utrecht, the Netherlands: PO-Raad, VO-Raad, AOC Raad, MBO Raad.
- Paunonen, S. V., & Ashton, M. S. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology, 81*(3), 524–539.
- Pijl, S. J., Frostad, P., & Flem, A. (2008). The social position of pupils with special needs in regular schools. *Scandinavian Journal of Educational Research, 52*(4), 387–405.
- Poulou, M., & Norwich, B. (2002). Cognitive, emotional and behavioural responses to students with emotional and behavioural difficulties: A model of decision-making. *British Educational Research Journal, 28*(1), 111–138.
- Prather-Jones, B. (2011). Some people aren't cut out for it: The role of personality factors in the careers of teachers of students with EBD. *Remedial and Special Education, 32*(3), 179–191.
- Reumerman, R. (2010). *Expertleerkrachten in de omgang met probleemgedrag [Expert teachers dealing with problem behavior]*. Proefschrift [Dissertation]. University of Amsterdam.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology, 82*(1), 30–43.
- Schacter, D. L., Gilbert, D. T., & Wegner, D. M. (2013). *Introducing Psychology*. New York: Worth.
- Siperstein, G. N., Wiley, A. L., & Forness, S. R. (2011). School context and the academic and behavioral progress of students with emotional disturbance. *Behavioral Disorders, 36*(3), 172–184.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*(3), 611–625.
- Smits, H. J. (2006). *Ontdek je X-Factor [Discover your X-Factor]!* Vianen, the Netherlands: House of Books.
- Thayer-Bacon, B. J., Arnold, S., & Stouts, J. (1998). *Identification of caring professors in teacher education programs*. Paper presented at the American Educational Research Association conference (AERA), San Diego (April).
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and teacher education, 17*(7), 783–805.

- UNESCO (1994). *The Salamanca statement and framework for action on special needs education*. Paris: UNESCO.
- Van der Ploeg, J. D. (1990). *Gedragsproblemen. Ontwikkelingen en risico's [Behavioral problems. Development and risks]*. Rotterdam, the Netherlands: Lemniscaat.
- Van der Wolf, K., & Van Beukering, T. (2009). *Gedragsproblemen in scholen. Het denken en handelen van leraren [Behavioral problems in schools. Teacher beliefs and actions]*. Leuven/The Hague: Acco.
- Van der Worp-van der Kamp, L., van der, Pijl, S. J., Bijstra, J. O. & Van den Bosch, E. J. (2014). Teaching academic skills as an answer to behavioural problems of students with emotional or behavioural disorders: A review. *European Journal of Special Needs Education*, 29(1), 29–46.
- Weisberg, Y. J., De Young, C. G., & Hirsch, J. B. (2011). Gender differences in personality across the ten aspects of the Big Five. *Frontiers in Psychology*, 2(178), 1–11.



# GENERAL DISCUSSION





## General discussion

School should be the place where all students experience an optimal cognitive and social-emotional development, including students with special educational needs (SEN). A school that propagates that no one will be left out or left behind prepares students for a society based on respect, tolerance, and responsibility for each other. This view, known as 'Inclusive Education', is almost globally endorsed (Unesco, 1994). It aims to include students with SEN in a regular school environment, where they are provided with education adjusted to their specific SEN, and are surrounded by their peers. School then becomes the place where students with and without SEN meet each other, form friendships, and grow up together. Such an educational environment is considered most appropriate for students with SEN to achieve their potential best (Unesco, 1994).

Evaluations of the initial policy indicate that teaching students with emotional and behavioral difficulties (EBD) in particular appears to be a stumbling block for teachers (Goei & Kleijnen, 2009). Many teachers report problems and feel incompetent in implementing this policy in their classrooms, specifically regarding students with EBD (Hofstetter & Bijstra, 2014). They tend to step into pitfalls that loom when teaching students with EBD. Examples of such pitfalls are: 1) focusing on controlling students' disturbing behavior; 2) viewing undesirable student behavior as unchangeable; and 3) attributing a lack of student achievement externally (Van der Worp-Van der Kamp, Pijl, Bijstra, & Van den Bosch, 2014). This puts teachers of students with EBD at risk to stress, burn-out, and stopping teaching (Adera & Bullock, 2010).

Many students with EBD do not achieve their potential due to deficient education. Their learning delays rapidly increase over time and they tend to drop out from secondary education without qualification (Roos & Bloem, 2014; Siperstein, Wiley, & Forness, 2011). There thus is a recognized importance of bridging the gap between the abilities that teacher trainees develop during teacher education and the abilities that teachers of students with EBD require in educational practice. This dissertation examined the alleged relationship between teacher personality and teacher quality in teaching students with EBD. To provide input for teacher professionalization, four studies were performed to answer two overall questions: 1) Can one rely on one's gut feeling about a teacher's ability to teach students with EBD? and 2) Does teacher personality contribute to a teacher's ability to teach students with EBD?

## Summary of study findings

### **Personality traits of expert teachers of students with EBD: A review and classification of the literature**

The exploration of the relationship between teacher personality and teacher quality in teaching students with EBD started with a literature review (Chapter 2). There were no studies in which their personality traits were actually measured with personality tests. Their reported thoughts, feelings, and actions, which according to trait theory stem from personality (McCrae & John, 1992), were selected from 14 studies and then classified according to the dimensions of the FFM of personality (Costa & McCrae, 2008). A consensus model was followed by two independent raters (Quaker Foundation on Leadership, 1999) to classify the variables relating to personality, which led to a consensus on all the variables.

The classification indicated that expert teachers of students with EBD tend to be excitable, optimistic, and energetic, appreciate company, and use humor to break down the barriers between teacher and student (Extraversion); to be cooperative, demonstrate a variety of pro-social behaviors, and establish close relationships with their students (Agreeableness); to have a broad range of pedagogic-didactic teaching skills at their fingertips, want to make a difference to their students' lives, be ambitious and reliable, see life in terms of tasks to be fulfilled, and have strong self-efficacy beliefs (Conscientiousness); and to be curious, flexible, and reflective, and not conform in advance to existing frameworks (Openness to Experience).

None of the variables relating to personality were classified under the dimension of Neuroticism. Except for Neuroticism, the results are in line with general findings on the relationship between personality and job performance (Barrick & Mount, 1991; Hertz & Donovan, 2000). No contradictory evidence was found in any of the reviewed studies, which involved different educational settings (i.e. regular, special, inclusive, primary, secondary), students of different ages (i.e. 1 to 19), and participants from different continents (i.e. North America, Europe, Asia, Oceania). This suggests that the personality profile of expert teachers of students with EBD may be universal.

Despite the fact that most of the findings appear to be in line with the general literature on the subject, the outcomes of this literature study are limited because the variables related to personality reported in the studies were not measured via personality tests nor via renowned measures of teacher quality in teaching students with EBD. To account for this limitation of the reviewed studies, the results of the first study were used as hypotheses for the fourth study (Chapter 5) in which the presumed relationship between teacher personality and teacher quality in teaching students with EBD was explored with the help of actual personality questionnaires, and measures of teacher quality in teaching students with EBD.

## Triangulating measures of teacher quality in teaching students with EBD

A method for identifying expert teachers of students with EBD was developed in this study (Chapter 3), to enable consequent study of their personality traits. The extent was tested to which different informants and measures converge in indicating which teachers are expert in teaching students with EBD. Judgments about a teacher's quality were examined using three information sources working in primary education. Special needs support teachers rated indicators of need supporting teaching based on regularly performed classroom observations. Primary school teachers completed a self-efficacy questionnaire related to teaching students with EBD. The same teachers and head teachers participated in a nomination procedure.

The observation tool was inspired by the self-determination theory (Deci & Ryan, 1985), which prompts that each individual has the psychological needs for competence, autonomy, and relatedness that ought to be met to become fully immersed to a task. In this theory, a distinction is made between three similar dimensions of need supporting teaching: providing students with structure, autonomy, and a context of respect for their perspectives. Each dimension is associated with a specific need in a way that they complement each other (Stroet, Opdenakker, & Minnaert, 2013). The tool includes 17 teacher and student indicators related to need supportive teaching, which are treated as indicators of a teacher's quality.

An adapted version of the Norwegian Teacher Self-Efficacy Scale (NTES) (Skaalvik & Skaalvik, 2007) was completed by primary school teachers. The scale was translated into Dutch and was modified so that items specifically referred to teaching students with EBD. The NTES comprises the subscales of 'Instruction', 'Adapting education to individual students' needs', 'Motivating students', 'Maintaining discipline', 'Cooperation with colleagues and parents', and 'Coping with change and challenges'. Teachers rated the extent to which they believe their teaching of students with EBD is effective on 24 items on a Likert scale ranging from 1 to 4.

A nomination procedure was followed by teachers and head teachers from teaching teams consisting of 8-15 teachers as the third measure of teacher quality in teaching students with EBD. They responded individually to the question: 'Apart from yourself, do you feel there are expert teachers in teaching students with EBD working at this school?'. They were subsequently asked to name the teacher(s) they had in mind. The number of nominations was not restricted. This procedure was applied on the basis of the teachers' general academic knowledge of teacher quality as well as their implicit conception of an expert teacher of students with EBD.

The results indicated a partial agreement on teacher expertise. Evidence for this was provided in two ways. First, the measures showed moderate, significant positive correlations and thus identified related but different dimensions of teacher quality in teaching students

with EBD. Second, the cluster analyses established that a clear group of 10 to 15 of the 137 teachers of students with EBD can be selected by means of applying these measures. The moderate correlations together with the selected group of expert teachers indicated a general consent among teachers themselves, fellow teachers, special needs support teachers, and head teachers on which teachers are expert in teaching students with EBD.

It remained indefinite, though, whether the alleged experts actually show a high ability to teach students with EBD. It could not be ruled out that the informants' perceptions were influenced by a tendency to bend perceptions known as halo and/or horn effects (Thorndike, 1904). It also remained unclear what exactly was measured by the nomination procedure as it depended on teachers' implicit theories about teaching students with EBD, and why the self-efficacy scale and the observation tool had low construct validity despite indications of high reliability. Identifying the best teachers of students with EBD required independent indicators of teacher quality in teaching students with EBD to falsify the outcomes of this study.

### **Observing the teaching skills of alleged expert teachers of students with EBD**

To test whether the corresponding impressions of a teacher's ability to teach students with EBD by teachers and their colleagues correspond with expert behavior in the classroom, the teaching performances of alleged expert teachers of students with EBD were compared to those of alleged non-experts in the third study (Chapter 4). In a cross-sectional design, primary school teachers were observed on effective and inappropriate teacher behaviors using the International Comparative Analysis of Learning and Teaching (ICALT) (Van der Grift, 2007), which comprises 35 items measuring seven domains of generic teaching competencies, and a list of indicators unfavorable to teaching, which was based on a seminal study of the consequences of teacher inappropriate behavior (Brendgen, Wanner, & Vitaro; 2006).

The results indicated a significant difference between the alleged expert and non-expert teachers in their mastery of generic teaching competencies. The alleged experts master the generic teaching competencies to a sufficient to high extent, while alleged non-experts master these to a low to sufficient extent. The alleged experts obtained significantly higher scores on the domains of 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement'. The alleged non-experts did not perform well on 'Adjusting instructions and learner processing to inter-learner differences' and 'Teaching learning strategies'. Four different inappropriate teacher behaviors were demonstrated once by four teachers, of which one was an alleged expert.

The corresponding impressions of a teacher's ability to teach students with EBD by teachers and their colleagues do actually correspond with expert behavior in the classroom.

Regarding the clinical relevance of the results, it must be noted that the teachers who are not ranked in the top of the population when expert teachers are sought for are not automatically doing a bad job. In addition, the ICALT does not include all teaching dimensions and the research sample may have been not completely representative. This study established that the combined use of peer and self-perceptions as indicators of a teacher's ability to teach students with EBD offers an easy to apply, reliable and valid method for identifying expert teachers of students with EBD, which enables further identification of their qualities.

### **Personality traits of expert teachers of students with EBD**

Using the knowledge of the personality traits of expert teachers of students with EBD generated from the literature (Chapter 2) and the validated method for selecting such expert teachers (Chapter 3), the relationship between teacher personality and teacher quality in teaching students with EBD was explored among 74 Dutch primary school teachers in the last study (Chapter 5). Personality was measured using a validated, translated version (Hoekstra, Ormel, & De Fruyt, 2012) of the self-report NEO Personality Inventory – Revised (NEO PI-R) by Costa and McCrae (1992), which involves 240 items measuring the five personality domains of the FFM and six underlying facet scales. Different dimensions of teacher quality were assessed using ratings by teachers themselves and their colleagues.

Modest relationships were found between teachers' self-ratings of their personality traits regarding the domains 'Agreeableness', 'Conscientiousness', and 'Openness to experience' and their self-ratings of their efficacy in the classroom. The relationship between Agreeableness and teacher quality was negative, while the relationships between Conscientiousness and Openness to Experience with teacher quality were positive. The relationships regarding Conscientiousness and Openness to Experience were in line with the general literature on the relationship between personality and job performance (Costa & McCrae, 2008; Hertz & Donovan, 2000) as well as the results from the literature study of the personality traits of expert teachers of students with EBD (Chapter 2).

The other measures of teacher quality were not predicted by teachers' self-ratings of personality. As a relationship was only found between self-report measures, the findings seem more indicative of self-perception than of a relationship between a teacher's personality and a teacher's ability to teach students with EBD. The unforeseen result regarding a negative relationship between the Agreeableness facet of Modesty and teacher quality measured by the self-efficacy questionnaire can perhaps be explained by the fact that expert teachers of students with EBD are reported to not tend to play down their achievements (Lord, 2007), and dare to step aside from the guidelines of the curriculum (Mertens, 2010; Van der Wolf & Van Beukering, 2007), which requires a high degree of self-confidence.

The aim of this study was achieved in that it successfully explored the relationship

between teacher personality and teacher quality in teaching students with EBD. The outcomes established that a teacher's personality does not play a significant role in a teacher's ability to teach students with EBD. The findings mainly implicate that those with the task to hire teachers should be aware that favorable traits like Altruism and Curiosity and unfavorable traits like Competitiveness and Conventionality are not predictive of teaching performances in this setting. They should avoid basing their judgments on unreliable indicators, such as an applicant's personality. Instead, they should focus on actual classroom performance and impressions of themselves and their peers of their abilities to teach students with EBD.

## **Discussion and implications of main study findings**

### **Identifying expert teachers of students with EBD:**

#### **Does personality contribute to a teacher's X-Factor?**

With a nod to today's media, which is constantly looking for people who stand out in the crowd through talent hunts, the term X-Factor was used in this dissertation to express the enigmatic, hard-to-describe quality that contributes to a teacher's excellence while teaching students with EBD. The term X-Factor originally came from the equestrian world, where it was found that a single mutation within a gene located on the X-chromosome of horses caused a larger-than-average-sized heart (Haun, 2001). At that time, the term X-Factor was used to describe the immeasurable personality characteristic of legendary race horses, which gave the horse the ability to do its utmost and not to give up until it crossed the finish line (Persson, 1967). Since a horse's heart size predicts its athletic ability, horses with the X-Factor are highly sought after.

In popular talent hunts, nowadays, individuals who stand out in a crowd owing to an X-Factor are sought for by famous jury members with a renowned expertise in their field. The live studio audience and viewers at home have repeatedly witnessed jury members instantly agreeing in their judgments on a contender. In each edition, the expertise of the contender who eventually won the competition has been undisputed straight from the audition stage. In turn, in the case of an immediate rejection of a contender, the jury members fully agreed on his/her non-expertise straightaway. In each case in between of both extremes, jury members were moderately positive in their judgments. They noticed one or more outstanding skills in these contenders, but their overall performances were not considered undisputed. None of the participants assessed in such a way has ever won a talent hunt.

The findings of this study confirm that what happens in a television studio is comparable to what happens in an inclusive, primary education classroom. In search of expert teachers, evaluations of a teacher's ability to teach students with EBD by teachers themselves, their

peers (fellow-teachers, special need support teachers, head teachers), and independent professional observers converge to a significant extent. Comparing the classroom with the television studio, a teacher's positive self-efficacy beliefs can be compared to a contender's decision to take part in the show because of a positive self-evaluation of his/her proficiency, while perceptions by peer teachers can be compared to responses from the live studio audience and relatives who are convinced about a contender's capabilities, and independent ratings by observers can be compared to those by jury members.

The agreement found between informants suggests that one can rely on shared gut feelings about a teacher's ability to teach students with EBD. The question how to find expert teachers of students with EBD has become easier to answer due to the validation of a procedure involving the combination of peer and self-evaluations of a teacher's ability to teach students with EBD. However, the combined use of these indicators does not provide an easily applicable method to identify expert teachers of students with EBD in all situations where such teachers are sought for, because collecting nominations and peer perceptions, and running subsequent cluster analyses is not always suitable. Therefore, the indicators need to be used in different ways in research settings, teacher application procedures, and teacher coaching procedures.

In research settings, all three indicators of a teacher's quality in teaching students with EBD are applicable. In addition, researchers can run cluster analyses to identify the intended expert teachers among a large population of teachers. In teacher application procedures, self-perceptions can be used. However, nominations and perceptions by peers from the former working environment (i.e. colleagues, special needs support teachers, head teachers) may either be not be available or inappropriate to collect for the benefit of assessing a teacher's ability to teach students with EBD. Members of an application committee may therefore involve additional indicators of an applicant's competencies, preferably observations of his/her tangible teaching skills on video and/or during an actual try-out in either the present or the future classroom.

In teacher coaching procedures, expert (and non-expert) teachers of students with EBD cannot be selected by means of cluster analyses of the three indicators in a single school team. Cluster analyses cannot be performed on small samples such as single school team consisting of a small number of teachers. In addition, it remains unsure whether the indicators and cluster analyses reveal who is an expert teacher and who is not. That is, in a school team consisting of mediocre teachers, a teacher who performs better than his colleagues is not automatically an expert. To select teachers for coaching procedures, it is thus recommended to apply the indicators of teacher's quality and to perform observations of real classroom behavior using the ICALT tool (Van der Grift, 2007), which includes the generic teaching competencies and was developed for the benefit of teacher coaching.

Regarding the ICALT observation instrument, it must be noted that the tool includes a broad range of teaching competencies but perhaps not all the competencies that are acknowledged by now. Possibly, expert teachers of students with EBD have more, yet unknown qualities at their disposals. It is therefore recommended to add student perceptions of a teacher's classroom performance towards students with EBD to the set of indicators of teacher quality which are validated in this study. Students spend the most time with their teachers and possess decisive information about a teacher's proficiency in the classroom. Research on the perceptions of typically developing students is available (Nelson, Ysseldyke, Christ, 2015). Further research may indicate whether the reported qualities are also decisive in teachers of students with EBD.

This is complex, though, because the dependent relationship between a student and a teacher may influence student ratings of a teacher's proficiency in the classroom. In addition, including student perspectives entails the development of adequate tools for students with EBD of different ages, who may show deviant testing behaviors and are not all able to complete a questionnaire at all times (Van der Worp-van der Kamp, Pijl, Post, Bijstra, & Van den Bosch, 2016). The results regarding the indicators of teacher quality in teaching students with EBD can be strengthened by means of exploring whether these work the same way in other countries and other educational settings (i.e. secondary and special education) and whether these can be used to (pre)select teachers during teacher education for a career in teaching students with EBD.

The evidence does not support a relationship between teacher personality and teacher quality in teaching students with EBD. While horses with an X-Factor can be selected based on a deviant X-chromosome, the hypothesis that teachers with an X-Factor in teaching students with EBD can be selected based on their personality was not supported. Caution must thus be applied while assessing a teacher's ability to teach students with EBD because the concept is not explained by ratings of a teacher's personality. With all its consequences, there is a risk of unjustly ascribing qualities, or a lack thereof, to teachers based on favorable or unfavorable personality traits. In situations where expert teachers are sought for and cluster analyses or observations by independent professionals are not an option, one should focus on tangible teaching abilities.

Although the supposed relationship was not found, the possibility remains that teacher personality plays a role in a teacher's quality while teaching students with EBD. Indeed, there is evidence for a sixth factor of personality: the Honesty-Humility Factor (Ashton & Lee, 2007; Ashton, Lee, Perugini, Szarota, De Vries, Di Blas, Boies, & De Raad, 2004). This so called H-Factor of personality includes the facets of sincerity, fairness, greed avoidance, and modesty and has not been captured in the construct of the FFM, which was used to measure personality in this research. The H-Factor shares some but not all traits with the FFM's Agreeableness factor. This begs the question whether a teacher's X-Factor in

teaching students with EBD perhaps has something to do with personality what was not measured in the present study?

This idea is supported by impressions from the test leaders of some of the participants. Ten test leaders had worked with the teachers in various phases of the data collection (i.e. completing a questionnaire, taking part in a nomination procedure, being observed in the classroom). After the data-collections, the test leaders were informed about the status of the teachers they had worked with. At that moment, they freely shared their positive recollections of the teachers who (unknown to the blinded test leaders) turned out to be expert. This was remarkable because they had met many teachers in a short period of time. They described the expert teachers as being interested, sincere, honest, cooperative, friendly, energetic, easy to talk to, inspiring, and charismatic. Possibly, future research may indicate whether a teacher's personality involves an H-Factor which captures some of these traits.

In contrast to personality traits, a teacher's proficiency may also be shaped by variable experiences in one's education history. All teachers experience unique (school) careers. They are schooled in different ways by many teachers, who differ in age, background, experience, and competencies. During teacher education, they witness and are coached by many teacher educators and in-service teachers and have different experiences with students, depending on the classes they happen to teach. Each teacher also makes distinct choices for a specialization and/or extended teacher training. As each teacher has followed his/her own road to (non)success in the classroom, insight in which demographics, role models, career choices, and experiences are decisive in their expertise may contribute to the further unraveling of a teacher's X-Factor and might enable improvements in teacher education.

In addition to emerging questions about the contribution of other personality factors and other variables to a teacher's quality, this study established that expert teachers of students with EBD differ from non-experts in several ways. Experts master generic teaching competencies to a significantly higher extent than non-experts, master generic competencies to a sufficient to high extent, while non-experts master these to a low to sufficient extent, obtain significantly higher scores than non-experts on the domains of 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement', and excel at the domains of 'Safe and stimulating learning climate' and 'Learner engagement', while non-experts perform inadequately on 'Adjusting instructions and learner processing to inter-learner differences' and 'Teaching learning strategies'.

Noticeably, the teaching skills that non-expert teachers are lacking are found to be key strategies to effectively teach students with EBD (Van der Worp-Van der Kamp, et. al, 2016; Yell, Bush, & Rogers, 2014) by providing tailored education, which requires meticulously,

systematically designed instruction (Coleman & Vaughn, 2000). This finding begs the question how to teach the competencies that have been proven to be evident in initial and extended teacher education? If these qualities are not embedded in fixed personality traits, can they perhaps be learned? Methods could be developed to transfer their proficiency on teacher trainees and ineffective in-service teachers. By enabling expert teachers to provide them with evident knowledge, attitudes, and skills, it would be possible to find out to whether their practices make others perfect.

In addition to attempts to equip aspiring teachers with skills that are effective for teaching students with EBD, teachers should be equipped with skills that prevent them from making wrong choices with far-reaching implications for their students. Four instances of inappropriate teacher behavior were observed during the research, which are part of the broader concept of maltreatment against children (Garbarino, Guttman, & Seeley, 1986). It is unclear whether the number of instances is representative for the complete teacher population including its subgroups because Brendgen et. al. (2006) concluded that only a few studies have examined abuse of students by their teacher, which all report different prevalence rates. Nonetheless, teachers should be aware of inappropriate behaviors and the impact of these on their students, including those with EBD, who are the most vulnerable in this respect.

A next topic of discussion concerns the choice to put the focus directly on teachers of students with EBD in general. Although the concept of EBD was defined in this research, another definition could have been used, which distinguished different types of EBD to gain a differentiated insight in a teacher's quality in teaching students with EBD, such as internalizing or externalizing and withdrawn or disruptive behaviors. Such a choice would, however, be improper given the current educational situation in which teachers are working in a classroom full of students with and without SEN, including different types of EBD. Although teaching a student with anxious behavior clearly requires other skills than teaching a student who demonstrates aggressive behavior, an expert teacher of students with EBD is expected to be able to meet the needs of both.

Furthermore, although the findings advocate paying special attention to non-expert teachers, the experts also require specific attention, albeit of a different kind. Teachers who excel while teaching students with EBD are scarce and should be cherished. Currently, there is a large shortage of primary school teachers in the Netherlands. In addition to the recognized importance of educating expert teachers of students with EBD, and developing ways to identify them, it is vital to encourage experts to teach challenging students and to stimulate aspiring teachers who demonstrate a high ability to teach students with EBD during teacher education to further develop their competencies. Moreover, investing in first-class working conditions for expert teachers is evident, which should include proper rewards for the heavy work load and sufficient possibilities for professional development.

Expert teachers of students with EBD are the teachers who are able to successfully provide inclusive education to all students, including the group of students with EBD, which are referred most to special education. Expert teachers are those who can bring out the best in their students with EBD in a regular school environment in the proximity of their primary living environment where they are surrounded by their peers. Although such an environment is not automatically most optimal for all students because for some their SEN are too complex to be met in a regular inclusive classroom (Zweers, 2018), inclusion on a larger scale can likely be realized by expert teachers. By means of sharpening their profile and developing ways to trace them, this research can make a difference in their educational careers and those of their students.

## Conclusion

The research in this dissertation establishes a general prevailing consent among teachers, their peers (i.e. fellow teachers, head teachers, special needs support teachers), and independent professionals on who is an expert teacher in teaching students with EBD. A valid selection method is now available for those in search for expert teachers of students with EBD. However, each of these indicators is not automatically appropriate for application in each setting in which expert teachers are sought for. Selecting expert teachers for empirical research purposes requires another method than selecting such teachers for application and internal coaching procedures.

In addition, the research in this dissertation establishes that teacher personality does not play a significant role in a teacher's ability to teach such students. Knowing that a teacher's personality does not contribute to a teacher's quality in teaching students with EBD stresses the importance of making those with the task of teacher assessment aware of the fact that favorable and unfavorable personality traits are not predictive of a teacher's quality. Instead, they should be taught to base their judgements on perceptions of teachers themselves and their peers and should use additional indicators of a teacher's quality, such as tangible teaching skills in the present or future classroom.

Regarding tangible teaching skills, this research indicates that expert teachers of students with EBD generally master generic teaching competencies to a significantly higher extent than non-experts. Specifically, expert teachers perform better on 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement'. Non-experts perform insufficiently on 'Adjusting instructions and learner processing to inter-learner differences' and 'Teaching learning strategies'. The teaching skills that non-experts lack are reported to be key strategies in teaching students with EBD effectively (Van der Worp-Van der Kamp, et. al, 2016; Yell, Bush, & Rogers, 2014).

This dissertation has sharpened the profile of expert teachers of students with EBD. The findings beg the question how to improve the required competencies to effectively teach students with EBD in initial and extended teacher education? Methods may be developed to transfer the proficiency of experts on teacher trainees and ineffective in-service teachers. By attempting to provide them with evident knowledge, attitudes, and skills, it would be able to find out whether their practices are transferable to the benefit of children with EBD.

## References

- Adera, B. A., & Bullock, L. M. (2010). Job stressors and teacher job satisfaction in program serving students with emotional and behavioral disorders. *Emotional and Behavioural Difficulties*, 15(1), 5–14.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., De Vries, R., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology*, 86(2), 356–366.
- Ashton M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review*, 11(2), 150–66.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26.
- Brendgen, M., Wanner, B., & Vitaro, F. (2006). Verbal Abuse by the Teacher and Child Adjustment From Kindergarten through grade 6. *Pediatrics* 117(5), 1585–1598.
- Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO PI-R) and the Five Factor Inventory (NEO-FFI): Professional Manual, Odessa: Psychological Assessment Resources Inc.
- Costa, P. T. Jr., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO PI-R). In: G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Garbarino, J., Guttman, E., & Seeley, J. (1986). *The Psychologically Battered Child*. San Francisco: Jossey-Bass.
- Goei, S. L., & Kleijnen, R. (2009). *Eindrapportage literatuurstudie Onderwijsraad 'Omgang met zorgleerlingen met gedragsproblemen'* [Final report study of literature by the Education council 'Coping with students with EBD']. Zwolle, the Netherlands: Hogeschool Windesheim.
- Haun, M. (2001). *Understanding the power of the X-Factor: Patterns of heart size and performances*. Neenah: Russel Meerdink Company.
- Hoekstra, H. A., Ormel, J., & De Fruyt, F. (2012). *NEO Personality Inventory-Revised (NEO PI-R)*. Amsterdam: Hogrefe.
- Hofstetter, W., & Bijstra, J. O. (2014). Passend Onderwijs: Zijn we er klaar voor [Appropriate Education: Are we ready]? *Kind en Adolescent Praktijk [Child and Adolescent Practice]*, 3, 132–139.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology*, 85(6), 869–879.
- Lord, W. (2007). *NEO PI-R - A guide to interpretation and feedback in a work context*. Oxford: Hogrefe Ltd.
- Mertens, N. (2010). *De X-factor van de leraar [A teacher's X-Factor]*. Naarden, the Netherlands: Zet & Print.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, 60(2), 175–215.
- Nelson, P. M., Ysseldyke, J. E., & Christ, T. J. (2015). Student perception of the classroom environment: Actionable feedback to guide core instruction. *Assessment for effective intervention*, 41(1), 16–27.
- Persson, S. G. B. (1967). On blood volume and working capacity. *Acta Veterinaria Scandinavica*, 19, 1–189.

- Quaker Foundation on Leadership (1999). *Comparison between Roberts rule of order and Quaker-based consensus methods*. Retrieved, February 2015 from [http://www.earlham.edu/\\_consense/irocomp.shtml](http://www.earlham.edu/_consense/irocomp.shtml).
- Roos, M., & Bloem, M. (2014). *Uit het voortgezet speciaal onderwijs, en wat dan? [Done with secondary special education, and then what?]*. Centraal bureau voor de statistiek.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(3), 611–625.
- Siperstein, G. N., Wiley, A. L., & Forness, S. R. (2011). *Academic and behavioral progress of students with ED served in low income versus high income schools*. Paper presented at the Teacher Educators for Children with Behavior Disorders conference (TECBD), Tempe (October).
- Stroet, K., Opendakker, M., & Minnaert, A. (2013). Effects of need supportive teaching on early adolescents' motivation and engagement: A review of the literature. *Educational Research Review*, 9, 65–87.
- Thorndike, E. L. (1904). *An introduction to the theory of mental and social measurements*. New York: Science Press.
- UNESCO (1994). *The Salamanca statement and framework for action on special needs education*. Paris: UNESCO.
- Van de Grift, W. (2007). Quality of Teaching in Four European Countries: A review of the literature and an application of an assessment instrument. *Educational research*, 49(2), 127–152.
- Van der Wolf, K., & Van Beukering, T. (2007). *Gedragsproblemen in scholen. Het denken en handelen van leraren [Behavioral problems in schools. Teacher beliefs and actions]*. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Van der Worp-van der Kamp, L., van der Pijl, S. J., Bijstra, J. O. & Van den Bosch, E. J. (2014). Teaching academic skills as an answer to behavioural problems of students with emotional or behavioural disorders: A review. *European Journal of Special Needs Education*, 29(1), 29–46.
- Van der Worp-van der Kamp, L., Pijl, S. J., Post, W. J., Bijstra, J. O., & Van den Bosch, E. J. (2016). The effect of systematic academic instruction on behavioural and academic outcomes of students with EBD. *Educational Studies* 42(1), 72–84.
- Yell, M. L., Busch, T. W., & Rogers, D. C. (2014). Teaching students with EBD III: Planning instruction and collecting data to monitor student progress. In: M. L. Yell, N. Meadows., E. Drasgow, & J. Shriner (Eds.) *Evidence Based Practices for Educating Students with Emotional and Behavioral Disorders*. Upper Saddle River: Pearson, Merrill Education.
- Zweers, I. (2018). *Shape sorting students for special education services? A study on placement choices and social-emotional and academic functioning of students with SEBD in inclusive and exclusive settings*. Dissertation. University of Utrecht, the Netherlands.





SAMENVATTING  
SUMMARY IN DUTCH





## Inleiding

School moet de plek zijn waar alle leerlingen – inclusief leerlingen met speciale onderwijszorgbehoeften – een optimale leer- en sociaal-emotionele ontwikkeling doormaken. Een school die leert dat iedereen erbij hoort, bereidt voor op een samenleving waarin sprake is van respect, tolerantie en verantwoordelijkheid voor elkaar. Dit gedachtengoed, internationaal aangeduid als ‘Inclusive Education’, in Nederland als ‘Passend onderwijs’, wordt nagenoeg wereldwijd onderschreven. Het streven is om leerlingen met speciale onderwijszorgbehoeften onderwijs te laten volgen in hun eigen leefomgeving, waar zij in deze behoeften worden voorzien door hierin geschoolde professionals. School wordt dan de plek waar kinderen samen opgroeien en gebruik maken van de expertise vanuit het speciaal onderwijs.

Uit evaluaties van het beleid blijkt dat voor leraren met name het lesgeven aan leerlingen met emotionele en gedragsproblemen een struikelblok vormt. Leraren hebben de neiging om te focussen op het controleren van ‘storend’ gedrag van leerlingen, hun gedrag te beschouwen als absoluut en onveranderbaar en achterblijvende leerresultaten toe te schrijven aan factoren buiten henzelf. Het gebruik van deze ineffectief gebleken strategieën door leraren verhoogt het risico op stress, burn-out en het voortijdig beëindigen van de carrière in het onderwijs. Omdat leerlingen met emotionele en gedragsproblemen niet het onderwijs krijgen dat aansluit bij hun begeleidingsbehoeften, onderpresteren zij, lopen zij leerachterstanden op en verlaten zij vaker dan andere leerlingen voortijdig het voortgezet onderwijs.

Het is dan ook belangrijk om de kloof te dichten tussen de competenties die leraren ontwikkelen tijdens hun opleiding en de competenties die zij behoeven om leerlingen met emotionele en gedragsproblemen adequaat onderwijs te kunnen geven. In dit onderzoek wordt de veronderstelde relatie tussen persoonlijkheid en kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen onderzocht. Er zijn vier studies uitgevoerd om twee overkoepelende onderzoeksvragen te beantwoorden: 1) Kan men vertrouwen op het intuïtieve beeld dat men heeft van de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen? en 2) Draagt de persoonlijkheid van een leraar bij aan diens kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen?

## Samenvatting van de resultaten

### **Persoonlijkheidskenmerken van expertleraren van leerlingen met emotionele en gedragsproblemen: Een review en classificatie van de literatuur**

Het onderzoek naar de relatie tussen persoonlijkheid en kwaliteit van leraren van leerlingen met emotionele en gedragsproblemen startte met een literatuurstudie (Hoofdstuk 2). Uit 14 studies zijn kenmerkende gedachten, gevoelens en gedragingen van expertleraren geselecteerd, die volgens persoonlijkheidstheorieën voortkomen uit persoonlijkheid (McCrae & John, 1992). Deze zijn vervolgens geassocieerd volgens de dimensies van het Five Factor Model (FFM) van persoonlijkheid (Costa & McCrae, 2008). Twee onafhankelijke beoordelaars volgden een consensus model (Quaker Foundation on Leadership, 1999) bij het classificeren van de aan persoonlijkheid gerelateerde variabelen. Dit leidde tot volledige consensus over alle variabelen.

Uit de classificatie bleek dat expertleraren van leerlingen met emotionele en gedragsproblemen opgewekt, optimistisch en energiek zijn, graag gezelschap hebben en humor gebruiken om het ijs tussen zichzelf en leerlingen te breken (Extraversie). Ook zijn zij coöperatief, vertonen pro-sociaal gedrag en onderhouden sterke relaties met hun leerlingen (Altruïsme). Zij beheersen veel pedagogisch-didactische strategieën, willen van betekenis zijn in het leven van hun leerlingen, zijn ambitieus, betrouwbaar en overtuigd van de effectiviteit van hun handelen in de klas (Consciëntieusheid). Tot slot zijn expertleraren van leerlingen met emotionele en gedragsproblemen nieuwsgierig, flexibel en reflectief en durven ze buiten de gebaande paden te treden (Openheid voor nieuwe ervaringen).

Geen enkele aan persoonlijkheid gerelateerde variabele werd geassocieerd onder de dimensie 'Emotionele stabiliteit'. Afgezien van deze dimensie zijn de resultaten van de literatuurstudie in lijn met de algemene bevindingen in onderzoek naar de relatie tussen persoonlijkheid en functioneren op de werkvloer (Barrick & Mount, 1991; Hurtz & Donovan, 2000). Aangezien de studies zijn uitgevoerd in verschillende continenten (Noord-Amerika, Europa, Azië, Oceanië), in verschillende onderwijssettingen (basis en voortgezet onderwijs, zowel regulier als speciaal) en onder leerlingen van 1 tot 19 jaar, suggereren de resultaten dat het persoonlijkheidsprofiel van expertleraren van leerlingen met emotionele en gedragsproblemen universeel is.

Hoewel de resultaten overeenkomen met de algemene literatuur over de relatie tussen persoonlijkheid en functioneren op de werkvloer, leverde dit onderzoek geen definitief maar een voorlopig beeld op. In de eerste plaats zijn de aan persoonlijkheid gerelateerde variabelen niet daadwerkelijk gemeten via persoonlijkheid tests maar globaal ingeschat. Ten tweede is de kwaliteit van de beoogde expertleraren niet gemeten met valide instrumenten. De resultaten van dit onderzoek zijn dan ook niet gebruikt als feitelijke evidentie maar als

hypothese voor de vierde studie (Hoofdstuk 5) waarin de relatie tussen persoonlijkheid en kwaliteit van een leraar is onderzocht via persoonlijkheidsvragenlijsten en gevalideerde maten voor kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

### **Het trianguleren van meetinstrumenten voor kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen**

In deze studie (Hoofdstuk 3) is een methode ontwikkeld om expertleraren van leerlingen met emotionele en gedragsproblemen te vinden ten behoeve van onderzoek naar hun persoonlijkheid. Er is onderzocht in hoeverre verschillende informatiebronnen en meetinstrumenten overeenstemmen in het aanduiden van de beoogde expertleraren. Er zijn drie informatiebronnen gebruikt: Intern begeleiders scoorden indicatoren van behoefte ondersteunend onderwijs op basis van reguliere klasobservaties, basisschool leraren vulden een vragenlijst in waarin ze de effectiviteit van hun onderwijs aan leerlingen met emotionele en gedragsproblemen beoordeelden en dezelfde leraren en directeuren namen deel aan een nominatieprocedure.

Het observatie-instrument is gebaseerd op de zelfdeterminatietheorie van Deci en Ryan (1985), die aangeeft dat elk individu de aangeboren, psychologische basisbehoeften heeft aan competentie, autonomie en relatie teneinde gemotiveerd te kunnen zijn en taakgericht gedrag te kunnen vertonen. In deze theorie wordt onderscheid gemaakt tussen drie dimensies van lesgeven waarin tegemoet wordt gekomen aan deze drie basisbehoeften: het bieden van structuur, autonomie en een context waarin respect is voor leerlingen en hun beleving. Het instrument bestaat uit 17 leraar en leerling indicatoren die gerelateerd zijn aan behoefte ondersteunend onderwijs. Deze zijn gebruikt als indicatoren voor kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

De vragenlijst waarin leraren hun eigen effectiviteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen beoordelen is een vertaalde versie van de Norwegian Teacher Self-Efficacy scale (NTES) (Skaalvik & Skaalvik, 2007). De lijst is zodanig aangepast dat elk item refereert aan lesgeven aan leerlingen met emotionele en gedragsproblemen. De NTES bestaat uit de volgende subschalen: 'Instructie', 'Onderwijs aanpassen aan individuele onderwijsbehoeften', 'Leerlingen motiveren', 'Orde handhaven', 'Samenwerken met collega's en ouders' en 'Omgaan met verandering en uitdaging'. Leraren beoordeelden de mate waarin ze zichzelf effectief ervoeren op 24 items verdeeld over de subschalen op een Likert schaal variërend van 1 tot 4.

Aan de nominatieprocedure namen leraren en directeuren deel van schoolteams die bestonden uit 8-15 leraren. Deelnemers beantwoordden de vraag: "Jezelf buiten beschouwing latend, zijn er naar jouw idee expertleraren in het lesgeven aan leerlingen met emotionele en gedragsproblemen werkzaam binnen het team van deze school?" Na een bevestigend antwoord werd hen gevraagd welke lera(a)er(en) ze hierbij in gedachten

hadden. Het aantal nominaties was niet beperkt. In deze procedure wordt gebruik gemaakt van de theoretische kennis waarover leraren op basis van hun opleiding beschikken en impliciete kennis van kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

De resultaten duiden op een gedeeltelijke overeenstemming over de kwaliteit van leraren in het lesgeven aan leerlingen met emotionele en gedragsproblemen. De instrumenten correleren gemiddeld maar significant positief en meten aan elkaar gerelateerde, niet identieke dimensies van de kwaliteit van een leraar. De cluster analyses bevestigen een duidelijke groep van 10 tot 15 leraren die hoog scoren op de drie instrumenten uit een totale groep van 137. Samen met de geselecteerde groep leraren waarvan zowel de leraren zelf als hun collega's vermoeden dat zij expert zijn, duiden de gemiddelde, significante positieve correlaties op een overeenkomst tussen leraren zelf en hun collega's over wie expert is in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

Het blijft echter onduidelijk of de vermoedelijke expertleraren daadwerkelijk beter in staat zijn om leerlingen met emotionele en gedragsproblemen te onderwijzen. Het is niet uitgesloten dat de oordelen van de verschillende informanten beïnvloed zijn door de neiging om een positief oordeel te vormen over een ander dat gebaseerd is op één positief aspect van deze persoon (halo-effect) of een negatief oordeel dat gebaseerd is op basis van één negatief aspect (horn-effect) (Thorndike, 1904). Ook blijft onduidelijk wat exact wordt gemeten in de nominatie procedure en waarom de zelfbeoordelvingsvragenlijst en het door intern begeleiders ingevulde observatie instrument lage construct validiteit hebben en tegelijkertijd een hoge betrouwbaarheid.

### **Het observeren van vaardigheden van vermoedelijke expertleraren van leerlingen met emotionele en gedragsproblemen**

Om te testen of de overeenkomstige oordelen van leraren en hun collega's over de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen daadwerkelijk overeenkomen met gedrag van een leraar in de klas zijn de vaardigheden van vermoedelijke expert leraren en vermoedelijke non-expertleraren met elkaar vergeleken (Hoofdstuk 4). Effectieve vaardigheden zijn geobserveerd middels het International Comparative Analysis of Learning and Teaching instrument (ICALT) (Van der Grift, 2007). Dit instrument bevat 35 items die zijn verdeeld over zeven vaardigheidsdomeinen. Ongewenst gedrag van leraren is geobserveerd middels een lijst van indicatoren die is gebaseerd op een lijst van Brendgen, Wanner en Vitaro (2006).

De resultaten laten een significant verschil zien in het vaardigheidsniveau van vermoedelijke expert en non-expertleraren. De vermoedelijke experts beheersen de generieke vaardigheden in voldoende tot hoge mate, de vermeende non-experts in lage tot gemiddelde mate. De vermoedelijke experts behalen significant hogere scores

op de domeinen 'Veilig en stimulerend leerklimaat', 'Intensieve en activerende les', 'Leerstrategieën aanleren' en 'Betrokkenheid van leerlingen'. De vermoedelijke non-experts scoren onvoldoende op 'Afstemmen op verschillen' en 'Leerstrategieën aanleren'. Vier keer kwam een ongewenste gedraging voor, drie keer bij een vermoedelijke non-expertleraar en één keer bij een vermoedelijke expert.

De oordelen van leraren zelf en hun collega's over kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen komen overeen met gedrag van de leraar in de klas. Dit betekent echter niet dat leraren die niet het hoogst scoorden per definitief onbekwaam zijn wanneer gezocht wordt naar expertleraren. Dit onderzoek heeft aangetoond dat de gecombineerde toepassing van de oordelen van leraren zelf en hun collega's bruikbare indicatoren zijn van kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Hiermee is een valide en betrouwbare methode ontwikkeld waarmee expertleraren van leerlingen met emotionele en gedragsproblemen kunnen worden geselecteerd.

### **Persoonlijkheidskenmerken van expertleraren van leerlingen met emotionele en gedragsproblemen**

Aan de hand van de boven besproken resultaten is in de vierde studie (Hoofdstuk 5) de relatie tussen persoonlijkheid en kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen onderzocht onder 74 Nederlandse basisschoolleraren. Persoonlijkheid is gemeten met een Nederlandse versie (Hoekstra, Ormel, & De Fruyt, 2012) van de NEO Personality Inventory (NEO PI-R) (Costa & McCrae, 1992). De NEO PI-R bevat 240 items die de persoonlijkheidsdimensies van het FFM meten. De kwaliteit van leraren in het lesgeven aan leerlingen met emotionele en gedragsproblemen is gemeten via oordelen van leraren zelf en die van collega's.

Zwakke relaties zijn gevonden tussen de zelfbeoordelingen van leraren van hun persoonlijkheidskenmerken en hun kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen op de domeinen Altruïsme, Consciëntieusheid en Openheid voor nieuwe ervaringen. De relatie tussen Altruïsme en kwaliteit is negatief, de relaties tussen Consciëntieusheid en Openheid voor nieuwe ervaringen en kwaliteit positief. De resultaten voor Consciëntieusheid en Openheid voor nieuwe ervaringen zijn in lijn met de algemene literatuur over de relatie tussen persoonlijkheid en functioneren op de werkvloer (Costa & McCrae, 2008; Hurtz & Donovan, 2000) en met die van de literatuurstudie (Hoofdstuk 2).

De persoonlijkheid van een leraar blijkt niet bepalend voor de andere indicatoren van kwaliteit van een leraar. Het bestaan van een relatie tussen persoonlijkheid en kwaliteit van een leraar is niet aannemelijk omdat deze slechts is gevonden tussen zelfbeoordelingsinstrumenten. De onverwacht gevonden negatieve relatie tussen het Altruïsme facet Bescheidenheid en kwaliteit van een leraar kan verklaard worden door het

feit dat expertleraren worden getypeerd als mensen die niet geneigd zijn hun resultaten onder stoelen of banken te steken (Lord, 2007) en buiten de gebaande paden van het curriculum durven treden (Mertens, 2010; Van der Wolf & Van Beukering, 2007).

Deze studie heeft aangetoond dat persoonlijkheid geen betekenisvolle bijdrage levert aan de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Degenen met de taak om expertleraren aan te nemen moeten zich er dan ook van bewust zijn dat zowel aantrekkelijke persoonlijkheidstrekken (nieuwsgierig, altruïstisch) als onaantrekkelijke persoonlijkheidstrekken (competitief, conventioneel) geen voorspeller zijn van het vaardigheidsniveau in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Zij kunnen beter gebruik maken van eigen beoordelingen van kwaliteit en die van collega's, waar mogelijk aangevuld met observaties van leerkrachtgedrag in de klas.

## **Discussie en implicaties**

### **Het herkennen van expertleraren van leerlingen met emotionele en gedragsproblemen: Draagt persoonlijkheid bij aan de X-Factor van een leraar?**

Met een knipoog naar de huidige media, waarin men in talentenshows voortdurend op zoek is naar mensen die uitblinken, is de term X-Factor in dit onderzoek gebruikt om de mystieke, moeilijk te beschrijven kenmerken aan te duiden die bijdragen aan de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen. De term X-Factor komt oorspronkelijk uit de paardensport, waar bleek dat een mutatie van een gen op het X-chromosoom van paarden leidde tot een groter dan gemiddeld hart (Haun, 2001). De term werd destijds gebruikt om de onmeetbare eigenschap van paarden te beschrijven waardoor ze tot het uiterste gingen en niet opgaven tot ze de finishlijn passeerden (Persson, 1967).

Tegenwoordig wordt in populaire talentenjachten door deskundige juryleden gezocht naar mensen die zogezegd de X-Factor hebben. Het live publiek en de mensen thuis zijn getuige in situaties waarin juryleden het direct volledig eens zijn over de kwaliteiten van een deelnemer. De show wordt uiteindelijk altijd gewonnen door een kandidaat waarover de juryleden, het publiek en de mensen thuis onmiddellijk unaniem positief oordeelden. In het andere uiterste is men het direct eens over het ontbreken van een X-Factor. In de tussenliggende gevallen oordelen juryleden gemiddeld positief en hebben ze de nodige verbeteringsuggesties. Geen van dergelijke deelnemers heeft ooit een talentshow gewonnen.

De resultaten van deze studie bevestigen dat wat er in een televisiestudio gebeurt vergelijkbaar is met wat er gebeurt in een basisschoolklas. Beoordelingen van de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen

door leraren zelf, hun collega's (leraren, directeuren, intern begeleiders) en onafhankelijke observatoren komen significant met elkaar overeen. Dit betekent dat men kan vertrouwen op de overeenkomende indrukken van de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen. De informatiebronnen zijn echter niet inwisselbaar en kunnen niet worden ingezet in alle situaties waarin gezocht wordt naar experts.

Om een groep expertleraren van leerlingen met gedragsproblemen te selecteren, kunnen de indicatoren worden ingezet in onderzoek, gevolgd door clusteranalyses. In sollicitatieprocedures kunnen zelfbeoordelingen worden gebruikt maar zijn indrukken van collega's niet altijd verkrijgbaar. Indien niet alle informatiebronnen beschikbaar zijn, kunnen aanvullende indicatoren ingezet worden, bij voorkeur observaties van gedrag van een leraar op video of tijdens proefdraaien in de toekomstige klassensituatie. Voor coachingstrajecten is het ICALT instrument (Van der Grift, 2007) het meest geschikt omdat dit speciaal hiervoor is ontwikkeld en omdat de beste leraar in een school team niet per definitie een expert is.

Hoewel het ICALT veel vaardigheden bevat, is het mogelijk niet compleet. Wellicht beschikken experts over meer, nog onbekende kwaliteiten. Het toevoegen van indrukken van leerlingen van het functioneren van hun leraren aan de set van indicatoren is dan ook gewenst. Zij brengen immers de meeste tijd door met leraren kunnen andere kenmerken van goede leraren benoemen dan collega's op de werkvloer of onderzoekers. Naar de percepties van leerlingen zonder emotionele en gedragsproblemen is onderzoek gedaan (Nelson, Ysseldyke, & Christ, 2015). Onderzoek kan uitwijzen of de gerapporteerde kwaliteiten ook van toepassing zijn op expertleraren van leerlingen met emotionele en gedragsproblemen.

Dit is echter ingewikkeld omdat de afhankelijke relatie met een leraar de perceptie van een leerling kan beïnvloeden. Ook is het voor het verzamelen van percepties van leerlingen met emotionele en gedragsproblemen nodig om een geschikt instrumentarium te ontwikkelen dat kan anticiperen op afwijkend testgedrag en het niet in staat zijn om een vragenlijst in te vullen (Van der Worp-van der Kamp, Pijl, Post, Bijstra, & Van den Bosch, 2016). Tevens kan worden verkend hoe de indicatoren werken in andere landen en vormen van onderwijs (voortgezet, speciaal) en of deze gebruikt kunnen worden voor het (voor) selecteren van leraren voor een carrière in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

Omdat de resultaten niet wijzen op een relatie tussen persoonlijkheid en kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen is voorzichtigheid geboden bij het bij het beoordelen van leraren. Het risico bestaat dat bepaalde kwaliteiten of een gebrek daaraan onterecht worden toegeschreven aan leraren op basis van aantrekkelijke of onaantrekkelijke persoonlijkheidskenmerken. Wanneer het niet mogelijk is om de indicatoren van kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen te gebruiken of clusteranalyses of observaties door onafhankelijke experts

uit te voeren, zou men moeten oordelen op basis van waarneembaar gedrag in de klas.

Hoewel de veronderstelde relatie niet is gevonden, kan persoonlijkheid toch een rol spelen in het effectief lesgeven aan leerlingen met emotionele en gedragsproblemen. Er is namelijk bewijs voor een zesde persoonlijkheidsfactor: de Honesty-Humility Factor (Integriteit-Nederigheid) (Ashton & Lee, 2007; Ashton, Lee, Perugini, Szarota, De Vries, Di Blas, Boies, & De Raad, 2004). Deze H-Factor of personality bevat de facetten oprechtheid, redelijkheid, onbaatzuchtigheid en bescheidenheid en maakte geen deel uit van het vijf factoren model dat in dit onderzoek gebruik is om persoonlijkheid te meten. Misschien bestaat de X-Factor van de leraar dan ook deels uit een nog niet gemeten aspect van persoonlijkheid.

Deze gedachte wordt ondersteund door de indrukken die de tien testleiders hebben gekregen van de deelnemende leraren tijdens het verzamelen van de data. Op het moment dat de testleiders enkele weken na de dataverzameling te horen kregen welke leraren als expert uit het onderzoek naar voren waren gekomen, deelden zij spontaan hun positieve indrukken van hen. Dit was opvallend omdat de testleiders in korte tijd met veel leraren hadden gewerkt. Ze beschreven de experts als geïnteresseerd, oprecht, eerlijk, coöperatief, vriendelijk, energiek, spraakzaam, inspirerend en charismatisch. Vervolgonderzoek kan uitwijzen of deze kenmerken van expertleraren hun oorsprong vinden in een H-Factor van persoonlijkheid.

Ook draagt de unieke leergeschiedenis van een leraar bij aan diens kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Elke leraar heeft op vele manieren en niveaus les gehad van leraren(opleiders) die verschilden in achtergrond, leeftijd en ervaring, heeft verschillende ervaringen opgedaan met verschillende leerlingen in verschillende klassen en heeft keuzes gemaakt voor een specialisatie en/of vervolgopleiding. Inzicht in welke factoren (demografie, rolmodellen, opleiding, ervaring) van betekenis zijn in kwaliteit van een leraar, kan bijdragen aan het verder ontrafelen van de X-Factor van de leraar en mogelijkheden opleveren voor het versterken van de lerarenopleiding.

Los van de vervolgvragen over persoonlijkheid en leergeschiedenis heeft dit onderzoek aangetoond dat expertleraren op meerdere punten van non-expertleraren verschillen. Expertleraren beheersen de generieke competenties in significant hogere mate dan niet-experts. Ze beheersen de competenties in voldoende tot hoge mate terwijl non-experts deze in lage tot voldoende mate beheersen. Ook behalen expertleraren significant hogere scores op de domeinen 'Veilig stimulerend leerklimaat', 'Intensieve en activerende les', 'Leerstrategieën aanleren' en 'Betrokkenheid van leerlingen'. Non-experts scoren onvoldoende op de domeinen 'Afstemmen op verschillen' en 'Leerstrategieën aanleren'.

De vaardigheden die non-expertleraren niet beheersen zijn kernvaardigheden in het effectief lesgeven aan leerlingen met emotionele en gedragsproblemen (Van der Worp-Van der Kamp, et. al, 2016; Yell, Bush, & Rogers, 2014). Expertleraren doen dit door instructies

systematisch en gedetailleerd aan te passen aan individuele onderwijsbehoeften van leerlingen (Coleman & Vaughn, 2000). Een relevant onderwerp voor vervolgonderzoek is dan ook het ontwikkelen van methoden teneinde leraren in opleiding en/of ineffectieve leerkrachten te equiperen met de competenties (kennis, houding, vaardigheden) om adequaat les te kunnen geven aan leerlingen met emotionele en gedragsproblemen.

Naast het toerusten van leraren met adequate vaardigheden in het lesgeven aan leerlingen met emotionele en gedragsproblemen zouden leraren ook vaardigheden moeten beheersen die hen ervan weerhouden om ongepast gedrag in de klas te vertonen. Ongepast gedrag heeft verstrekende gevolgen voor leerlingen, specifiek voor kwetsbare leerlingen zoals leerlingen met emotionele en gedragsproblemen (Garbarino, Guttman, & Seeley, 1986). In het onderzoek is vier maal ongewenst gedrag van leraren geobserveerd. Het is onduidelijk of dit aantal representatief is voor de gehele lerarenpopulatie. Desondanks moeten alle leraren moeten worden gemaakt van ongewenst gedrag en de impact daarvan op hun leerlingen.

Een ander onderwerp van discussie betreft de focus op leraren van leerlingen met emotionele en gedragsproblemen. Hoewel het concept is gedefinieerd, hadden een andere definitie kunnen worden gebruikt om te differentiëren tussen verschillende typen emotionele en gedragsproblemen zoals internaliserend en externaliserend gedrag. Deze keuze is bewust niet gemaakt omdat leraren in de huidige onderwijssituatie te maken hebben met een klas vol leerlingen met en zonder extra onderwijszorgbehoeften. Lesgeven aan teruggetrokken leerlingen vraagt wat anders van een leraar dan lesgeven aan agressieve leerlingen maar van een expertleraar wordt verwacht dat hij/zij al deze vaardigheden beheerst.

De resultaten van dit onderzoek pleiten voor extra aandacht voor zowel non-experts als experts. Leraren die uitblinken in het lesgeven aan leerlingen met emotionele en gedragsproblemen zijn schaars en moeten gekoesterd worden. Er is momenteel een tekort aan basisschoolleraars in Nederland. Het is daarom belangrijk dat expertleraren worden opgeleid, methoden om expertleraren mee te vinden worden doorontwikkeld en aangevuld, expertleraren (in opleiding) worden gestimuleerd om les te geven aan uitdagende leerlingen en te investeren in goede arbeidsvoorwaarden voor deze leraren, zoals een passende beloning en mogelijkheden voor verdere professionele ontwikkeling.

Expertleraren van leerlingen met emotionele en gedragsproblemen halen het beste naar boven in leerlingen die het moeilijkst te onderwijzen zijn. Ze komen tegemoet aan hun speciale onderwijsbehoeften waardoor velen van hen samen met hun peers in hun eigen leefomgeving naar school kunnen. Een inclusieve onderwijsomgeving is echter niet optimaal voor alle leerlingen met emotionele en gedragsproblemen. De onderwijsbehoeften van sommige van hen zijn zo complex dat hieraan alleen in het speciaal onderwijs tegemoet kan worden gekomen (Zweers, 2018).

## Conclusie

Dit onderzoek toont aan dat leraren, hun peers (collega leraren, directeuren, intern begeleiders) en onafhankelijke observatoren het eens zijn over welke leraren expert zijn in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Het onderzoek heeft een valide methode opgeleverd waarmee expertleraren van leerlingen met emotionele en gedragsproblemen geselecteerd kunnen worden. De verschillende indicatoren van kwaliteit van een leraar zijn echter niet toepasbaar in elke setting waarin men op zoek is naar expertleraren van leerlingen met emotionele en gedragsproblemen. Het selecteren van deze leraren voor onderzoeksdoeleinden vraagt dan ook een andere procedure dan voor sollicitatieprocedures en interne coachingstrajecten.

Dit onderzoek toont tevens aan dat persoonlijkheid geen betekenisvolle rol speelt in de kwaliteit van een leraar in het lesgeven aan leerlingen met emotionele en gedragsproblemen. Beoordelaars van leraren moeten zich ervan bewust zijn dat aantrekkelijke en onaantrekkelijke persoonlijkheidskenmerken geen voorspeller zijn van kwaliteit in het lesgeven aan leerlingen met emotionele en gedragsproblemen of een gebrek daaraan. In plaats daarvan moeten zij hun oordelen baseren een combinatie van zelfpercepties van leraren en de percepties van hun directe collega's. In situaties waarin niet alle informatiebronnen beschikbaar zijn, is het raadzaam de bevindingen aan te vullen met observaties van gedrag van een leraar in klas.

Wat betreft observeerbaar gedrag van een leraar in de klas heeft dit onderzoek aangetoond dat expertleraren van leerlingen met emotionele en gedragsproblemen in het algemeen significant hoger scoren op generieke lesgevende vaardigheden dan non-experts. Expertleraren scoren significant hoger op de domeinen 'Veilig en stimulerend leerklimaat', 'Intensieve en activerende les', 'Leerstrategieën aanleren' en 'Betrokkenheid van leerlingen'. Non-expertleraren beheersen de vaardigheden 'Afstemmen op verschillen' en 'Leerstrategieën aanleren' onvoldoende. Deze vaardigheden zijn evident in het effectief lesgeven aan leerlingen met emotionele en gedragsproblemen (Van der Worp-Van der Kamp, et. al, 2016; Yell, Bush, & Rogers, 2014).

De bevindingen van dit onderzoek doen de vraag rijzen hoe de vaardigheden die nodig zijn om leerlingen met emotionele en gedragsproblemen adequaat onderwijs te kunnen geven, kunnen worden geïmplementeerd in de lerarenopleiding. Vervolgonderzoek is nodig om methoden te ontwikkelen waarmee leraren in opleiding en ineffectieve leraren in de praktijk toegerust kunnen worden met de kenmerkende competenties (kennis, vaardigheden, attitudes) van expertleraren in het lesgeven aan leerlingen met emotionele en gedragsproblemen.

## References

- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., De Vries, R., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86* (2), 356–366.
- Ashton M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review, 11*(2), 150–66.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1–26.
- Brendgen, M., Wanner, B., & Vitaro, F. (2006). Verbal Abuse by the Teacher and Child Adjustment From Kindergarten through grade 6. *Pediatrics 117*(5), 1585–1598.
- Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO PI-R) and the Five Factor Inventory (NEO-FFI): Professional Manual, Odessa: Psychological Assessment Resources Inc.
- Costa, P. T. Jr., & McCrae, R. R. (2008). The Revised NEO Personality Inventory (NEO PI-R). In: G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Personality measurement and testing* (pp. 179–199). Thousand Oaks: Sage Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum.
- Garbarino, J., Guttman, E., & Seeley, J. (1986). *The Psychologically Battered Child*. San Francisco: Jossey-Bass.
- Haun, M. (2001). *Understanding the power of the X-Factor: Patterns of heart size and performances*. Neenah: Russel Meerdink Company.
- Hoekstra, H. A., Ormel, J., & De Fruyt, F. (2012). *NEO Personality Inventory-Revised (NEO PI-R)*. Amsterdam: Hogrefe.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology, 85*(6), 869–879.
- Lord, W. (2007). *NEO PI-R - A guide to interpretation and feedback in a work context*. Oxford: Hogrefe Ltd.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality, 60*(2), 175–215.
- Mertens, N. (2010). *De X-factor van de leraar [A teacher's X-Factor]*. Naarden, the Netherlands: Zet & Print.
- Nelson, P. M., Ysseldyke, J. E., & Christ, T. J. (2015). Student perception of the classroom environment: Actionable feedback to guide core instruction. *Assessment for effective intervention, 41*(1), 16–27.
- Persson, S. G. B. (1967). On blood volume and working capacity. *Acta Veterinaria Scandinavica, 19*, 1–189.
- Quaker Foundation on Leadership (1999). *Comparison between Roberts rule of order and Quaker-based consensus methods*. Retrieved, February 2015 from [http://www.earlham.edu/\\_consense/rrocomp.shtml](http://www.earlham.edu/_consense/rrocomp.shtml).
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*(3), 611–625.
- Thorndike, E. L. (1904). *An introduction to the theory of mental and social measurements*. New York: Science Press.
- Van de Grift, W. (2007). Quality of Teaching in Four European Countries: A review of the literature and an application of an assessment instrument. *Educational research, 49*(2), 127–152.

- Van der Wolf, K., & Van Beukering, T. (2007). *Gedragsproblemen in scholen. Het denken en handelen van leraren [Behavioral problems in schools. Teacher beliefs and actions]*. Leuven/Den Haag, Belgium/the Netherlands: Acco.
- Van der Worp-van der Kamp, L., Pijl, S. J., Post, W. J., Bijstra, J. O., & Van den Bosch, E. J. (2016). The effect of systematic academic instruction on behavioural and academic outcomes of students with EBD. *Educational Studies* 42(1), 72–84.
- Yell, M. L., Busch, T. W., & Rogers, D. C. (2014). Teaching students with EBD III: Planning instruction and collecting data to monitor student progress. In: M. L. Yell, N. Meadows., E. Drasgow, & J. Shriener (Eds.) *Evidence Based Practices for Educating Students with Emotional and Behavioral Disorders*. Upper Saddle River: Pearson, Merrill Education.
- Zweers, I. (2018). *Shape sorting students for special education services? A study on placement choices and social-emotional and academic functioning of students with SEBD in inclusive and exclusive settings*. Dissertation. University of Utrecht, the Netherlands.

# ABOUT THE AUTHOR





## About the author

Svenja Büttner was born on July 23rd 1975 in Arnhem, the Netherlands, where she completed primary and secondary education as well as teacher training. She won the Wansink prize for her thesis, which yielded a literature overview and an educational game. Svenja studied Social and Behavioral Sciences (Orthopedagogiek) at the Radboud University of Nijmegen. During her master in learning disorders, she did an internship at the Dr. Leo Kannerhuis in Oosterbeek, where she developed and taught programs for the individual schooling of high-functioning adolescents with Autism Spectrum Disorder and group wise social skills training. During her research master, Svenja examined the process of diagnostic decision making and classification. She started working as a special needs support coordinator (Orthopedagoog) at the BegeleidingsCentrum voor Onderwijs en Opvoeding in 2000 in Venlo, where she performed psychodiagnostic research on students in regular and special primary and secondary education, coached their teachers, and provided in-service teachers with extended teacher training on the subject of teaching social skills. In 2004, Svenja became an educator at the department of Pedagogical Studies of the HAN University of Applied Sciences in Nijmegen. In 2007, she became an educator at the department of Teacher Training at the Hanze University of Applied Sciences in Groningen, where she became a PhD-candidate in 2010. Her PhD project concerned the identification of expert teachers of students with emotional and behavioral difficulties (EBD) and was conducted at primary schools in the Northern Region of the Netherlands. Svenja was first supervised by prof. dr. Sip Jan Pijl and dr. Els van den Bosch from the University of Groningen, and dr. Jan Bijstra from the Regional Centre of Expertise for EBD Schools in Groningen. In 2015, dr. Els van den Bosch deceased. In 2016, prof. dr. Sip Jan Pijl retired due to health issues. From then on, Svenja was supervised by prof. dr. Bram Orobio de Castro from Utrecht University and dr. Jan Bijstra. During her PhD, she attended several national and international conferences, among which the European Conference on Educational Research in Berlin, Istanbul, and Porto. She won the Waxman poster prize for the review and classification study on the personality traits of expert teachers of students with EBD. In addition to her PhD duties and duties in teacher education, Svenja worked as a researcher at the Research Center for Talent Development in Higher Education and Society. She co-developed the Measurement Culture of Excellence (MCE), coached teaching teams on transferring good practices from honors to regular education, and co-wrote scientific and conference papers on the concept of Culture of Excellence.

## Identifying expert teachers of students with emotional and behavioral difficulties

As a consequence of the global trend towards more inclusive types of education, an increasing number of students with special educational needs are educated in regular primary schools. A specific challenge for regular primary school teachers is the growing number of students with emotional and behavioral difficulties (EBD). Many teachers are lacking pedagogical and/or didactical skills to act adequately in complex classroom situations while teaching students with EBD. More knowledge is required about how to identify teachers who are able to teach students with EBD effectively and what characterizes them. To this end, teacher personality, teacher behavior, and perceptions of teaching abilities of regular school teacher were studied using multiple methods.

The results provide three main insights: 1) Evaluations of a teacher's ability to teach students with EBD by teachers themselves and their peers (fellow teachers, head teachers, special needs support teachers) are reliable sources for identifying expert teachers of students with EBD as these match evaluations by professional observers, 2) Expert teachers of students with EBD master each generic teaching competency and demonstrate significantly higher levels of the teaching domains of 'Safe and stimulating learning climate', 'Intensive and activating teaching', 'Teaching learning strategies', and 'Learner engagement' compared to less effective teachers, 3) There is no evidence indicating that personality measures can help assess a teacher's quality in teaching students with EBD.

