

Raising the Bar The Competencies of Specialists in Gifted Education

Proefschrift

Ter verkrijging van de graad van doctor aan de Universiteit van Hasselt
door Eleonora Wilhelmina Josepha Maria van Gerven.
Geboren op 31 maart 1965 te Wormer, Nederland

Promotor

Prof. dr. T. Kieboom

Copromotor

Prof. dr. ir. K. Venderickx

Internationaal lid doctoraatscommissie

Dr. M. Sutherland

Doctoraatsjury

Prof. dr. K. Struyven

Prof. dr. A. Bakx

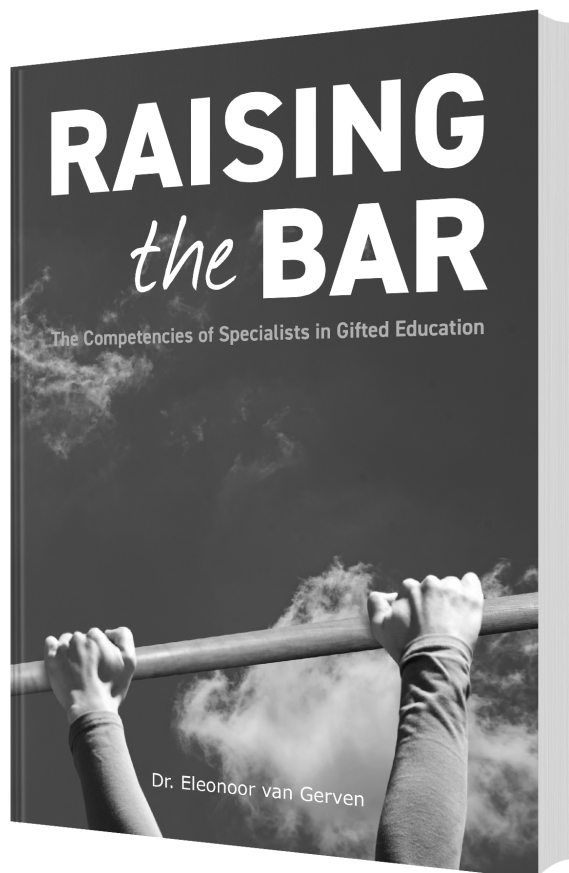
Dr. C. Deitz

Mrs. W. Behrens, MA(Ed)



Raising the Bar
The Competencies of Specialists in Gifted Education

Dr. Eleonor van Gerven



Colofon

Copyright © 2021 by Eleonoor van Gerven

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without the prior written permission of the author.

NUR 190, 841

ISBN: 978-94-0361-786-2

Copy editing: Geraldine Glover

Final editing: Marita Weener

Cover and inside design and lay-out: Sabrina Wakker

Production support: Sabine Kokee

Voor Eugenio

Die mij aanmoedigde om onredelijk te durven zijn en dat vol te durven houden.

"The reasonable man adapts himself to the world around him;
the unreasonable one persists in trying to adapt the world to himself.
Therefore all progress depends on the unreasonable man."

George Bernard Shaw

Content

1	General Introduction	11
1.1	Professional and Social Relevance	11
1.2	A Brief Context of the Position of Giftedness in Dutch and Flemish Education	13
1.3	Objectives	16
1.4	Research Question	17
1.5	Outline of the Dissertation	18
Part 1 Positioning Gifted Education in Primary Schools in the Dutch and Flemish Educational System		22
2	Educational Paradigm Shifts and Effects on Educating Gifted Students	23
2.1	Introduction: The Interdependency of Educational Paradigms	23
2.2	The First Paradigm Shift: The Inclusive Approach	24
2.2.1	The Inclusive Approach	26
2.2.1.1	Segregated Education for Gifted Students	27
2.3	The Second Paradigm Shift: Responding to Educational Needs	29
2.3.1	The Need for Differentiation	30
2.3.2	The System of Response to Educational Needs	34
2.4	The Third Paradigm Shift: New Perspectives on Giftedness	38
2.4.1	Three Paradigms	39
2.5	The Fourth Paradigm Shift: Social-Constructivism and 21st Century Skills	43
2.6	The Fifth Paradigm Shift: Evidence-Informed Teaching	45
2.7	Summarising	49
3	A Theoretical Framework for a Professional Standard in Gifted Education	51
3.1	Introduction	51
3.2	General Teaching Competences	54
3.3	Dublin Descriptors	57
3.4	The Notion of Competence	61
3.5	Learning as a Process of Intrapersonal Adaptation	64
3.5.1	Interaction as a Reason for and the Result of Learning	66
3.5.2	The Situation	68
3.5.3	The Effect	69
3.5.4	The Applied Intervention	70
3.5.5	Skilledge	71
3.6	Summarising	73
Part 2 The Construction of the Competency Matrix		74
4	Methods Used for Literature Review and Empirical Research	75
4.1	Introduction to the Construction of a Matrix	75
4.2	A Brief History	76
4.3	The Construction of a Matrix	77
4.3.1	Cross Domains: Generic Teacher Competencies	77
4.3.2	Cross Domains: Specific Competencies for Giftedness	79
4.3.3	Indicators for Competent Professional Behaviour	80

4.4	The Literature Review Study	81
4.4.1	Focus of the Literature Review	81
4.4.2	Literature Selection	82
4.4.2.1	Global Orientation	82
4.4.2.2	Final Selection	89
4.4.3	Organising Data and Data Analyses	89
4.4.4	Data Presentation	89
4.5	The Empirical Research: Stakeholders' Understandings	90
4.5.1	Focus of the Empirical Research	90
4.5.2	Who are Considered to be Stakeholders?	91
4.5.3	The Research Scenario and Data Collection	93
4.5.3.1	Part One: Information About the Research	93
4.5.3.2	Part Two: The Actual Questionnaire	94
4.5.4	Data Management, Reduction and Analyses	96
4.5.5	Respondents	101
4.6	Summarising	102
5	Domain 1: Theory of Giftedness	103
5.1	Introduction	103
5.2	How Gifted Paradigms Influence Gifted Education in General	103
5.3	Matching Paradigms with a Social-Constructivist Approach to Education	106
5.3.1	How Giftedness Might Interfere with the Learning Process	106
5.3.2	Giftedness and Educational Programming	108
5.3.3	Giftedness, a Social Constructivist Didactic Approach and the Call on Interpersonal Skills	110
5.3.4	Gifted Education and Intrapersonal Understanding	111
5.4	Five Competencies in Domain 1	113
5.5	Selection Rates of Indicators for Competency Domain 1	113
5.5.1	Selection Rates per Group of Stakeholders	115
5.5.1.1	Educational Professionals	116
5.5.1.2	Specialists in Gifted Education	118
5.5.1.3	Parents	121
5.5.2	Significant Differences Between Groups of Stakeholders in Domain 1	123
5.5.4	Comparison Between The Netherlands and Flanders	128
5.6	Summarising	130
6	Domain 2: Seeing Educational Needs	133
6.1	Introduction	133
6.2	Including the Student's Ecological System	134
6.3	Using a School Toolkit for Seeing the Educational Needs of Gifted Students	134
6.4	Seeing Academic Needs	137
6.5	Seeing the Needs Regarding the Student's Cognitive Style	139
6.6	Seeing Interpersonal and Intrapersonal Needs	141
6.7	Five Competencies in Domain 2	144

6.8	Selection Rates of Indicators for Competency Domain 2	146
6.8.1	Selection Rates per Group of Stakeholders	146
6.8.1.1	Educational Professionals	146
6.8.1.2	Specialists in Gifted Education	149
6.8.1.3	Parents	151
6.8.2	Significant Differences between Groups of Stakeholders in Domain 2	154
6.8.3	Common Ground between Groups of Stakeholders in Domain 2	157
6.8.4	Comparison between The Netherlands and Flanders	159
6.9	Summarising	161
7	Domain 3: Understanding the Educational Needs of Gifted Students	163
7.1	Introduction	163
7.2	The Necessity for a Multi-Focused Perspective	163
7.3	Understanding Academic Needs from an Ecological Perspective	166
7.4	Understanding of Cognitive Needs from an Ecological Perspective	171
7.5	Understanding Intrapersonal and Interpersonal Needs from an Ecological Perspective	175
7.6	Five Competencies in Domain 3	176
7.7	Selection Rates of Indicators for Competency Domain 3	178
7.7.1	Selection Rates per Group of Stakeholders	178
7.7.1.1	Educational Professionals	178
7.7.1.2	Specialists in Gifted Education	181
7.7.1.3	Parents	183
7.7.2	Significant Differences Between Groups of Stakeholders	185
7.7.3	Common Ground Between Groups of Stakeholders	187
7.7.4	Comparison Between The Netherlands and Flanders	190
7.8	Summarising	192
8	Domain 4: Meaningful Responses to the Educational Needs of Gifted Students	195
8.1	Introduction	195
8.2	Designing Meaningful Responses is a Joint Venture	195
8.3	Adjusting the Curriculum	197
8.4	The Supportive Role of the Teacher	204
8.5	Five Competencies in Domain 4	207
8.6	Selection Rates of Indicators for Competency Domain 4	209
8.6.1	Selection Rates per Group of Stakeholders	209
8.6.1.1	Educational Professionals	209
8.6.1.2	Specialists in Gifted Education	212
8.6.1.3	Parents	214
8.6.2	Significant Differences Between Groups of Stakeholders	216
8.6.3	Common Ground Between Groups of Stakeholders	219
8.6.4	Comparison Between The Netherlands and Flanders	221
8.7	Summarising	223

9	Domain 5: Assessing the Response to Interventions	225
9.1	Introduction	225
9.2	Communicating about the Results of Interventions	226
9.3	Making Learning Visible	227
9.4	Making Learning Possible	231
9.5	Five Competences in Domain 5	234
9.6	Selection Rates of Indicators for Competency Domain 5	236
9.6.1	Selection Rates per Group of Stakeholders	236
9.6.1.1	Educational Professionals	236
9.6.1.2	Specialists in Gifted Education	239
9.6.1.3	Parents	241
9.6.2	Significant Differences Between Groups of Stakeholders	243
9.6.3	Common Ground Between Groups of Stakeholders	245
9.6.4	Comparison Between The Netherlands and Flanders	248
9.7	Summarising	250
10	A Helicopter View of Stakeholders' Understandings	251
10.1	Introduction	251
10.2	Ranking 300 Indicators	252
10.3	Ranking Categories of Indicators	254
10.4	Comparing The Netherlands and Flanders	258
10.5	The Additional Analyses: Ownership, Educational Partnership and Peer Group Education	262
10.6	Summarising	265
	Part 3 Integrating Theory and Practice	266
11	Conclusions, Discussion and Recommendations	267
11.1	The Position of Gifted Education in The Netherlands and Flanders	267
11.2	Teacher Education and Gifted Education	275
11.3	Competencies, Knowledge and Skills Indicators	277
11.4	Stakeholders' Understanding of the Competencies of the Specialist in Gifted Education	282
11.5	Limitations and Directions for Further Research	285
11.5.1	Limitations	285
11.5.2	Critical reflections	287
11.5.3	Recommendations	287
11.6	Implications for Gifted Education and Teacher Education Programmes	289
11.7	The future of gifted education	291
	Samenvatting	293
	References	298
	Appendices	330
	Dankwoord	507

1 General Introduction

1.1 Professional and Social Relevance

In my daily practice as a teacher educator and as a developer of continuous professional development for teachers in the domain of gifted education, I need a theoretical underpinning to the curriculum that I teach. I approach education from an inclusive perspective.

According to Dutch and Flemish law, teachers are expected to deliver education that stimulates all the students in their classroom to reach for their zone of proximal development. Just like any other student, gifted students are entitled to be educated at that level of challenge; not only academically, but also in other domains of human development. Therefore, gifted students are no exception to what should be considered a teacher's core task. As a teacher educator, it is my job to prepare teachers for that task. Hence, for me, it is important that teachers, graduating from the courses that I teach, feel competent in organising education for gifted students within the context of a regular classroom and in integrating their education into the education of all the students at school.

The courses I teach, match the so-called Dublin Descriptors for higher education (Bologna Working Group on Qualifications Frameworks, 2005; European Commission, 2013). Indicators for competent professional behaviour can be deduced from these descriptors. Combined, these indicators underpin the framework for curriculum construction that I use to develop programmes for educating teachers into becoming specialists in gifted education.

The exit level for graduates of our programme "Specialist in Gifted Education" can be positioned at master's level. During the programme, we place a strong emphasis on a professional approach to evidence-informed teaching, underpinned by current educational theories. As I prepare these teachers for teaching in an inclusive context, interplay between theory and practice outside of the field of gifted education and theory and practice inside the field of gifted education is necessary in the programme itself.

Choices over the didactical approach to the programme are underpinned with different theories about learning and teacher education, that is, theories by Ambrose and Sternberg (2016), Biesta (2007, 2010, 2012, 2014, 2018a, 2018b), Hattie (2013), Korthagen (2004, 2017), Lunenberg et al. (2014), Marzano and Kendall (2007), Maslow (1954), and Vygotsky (1978). These theories offer a framework for both a social-creative constructivist didactical approach and the instructional strategies that encourage teachers to reflect on their professional behaviour. The educational objectives in this programme are based on Marzano and Kendall's New Taxonomy (2007). The strategies used, match the development of skills fit for education in 21st century teaching (European Commission, 2013). Encouragement of the reflective attitude and professional ethical behaviour is supported by working with Korthagen's concept of core reflection (King & Lau-Smith, 2013; Korthagen, 2017) and Biesta's concept of pedagogical virtuosity (Biesta, 2012).

As soon as teacher education programmes focus on the development of a specialism, content-bound educational objectives – aimed at developing that specialism – become mandatory. Research into the theoretical context of gifted education, reveals a broad spectrum of educational needs that are considered to be specific to gifted learners (Bakx et al., 2016; Dai & Chen, 2014; Haenen & Mol-Lous, 2014; Johnsen et al., 2017; Kreger-Silverman, 2013; Plucker et al., 2017; Subotnik et al., 2011; Tomlinson et al., 2009). Based on these educational needs, it is assumed that specific knowledge and skills are required to be a specialist in gifted education (Johnsen et al., 2016). Research into the understandings of stakeholders in the USA, undertaken by Johnsen et al. (2016) to underpin the standards of the NAGC (National Association for Gifted Children), confirms this assumption.

The supposition that teachers need to develop different competencies if they want to educate gifted students successfully is supported by professional communities already working with gifted students (Johnsen et al., 2016).¹ In The Netherlands and Flanders, teachers often express how they would be happy to work with gifted students, if only they knew how to work with them. They state that, although they are fully qualified teachers (graduating at bachelor's degree level), they do not feel qualified to work with this specific group of students (Haenen & Mol-Lous, 2014; Houkema et al., 2018). This raises questions: in what specific aspects of gifted education do these teachers experience a lack of competency, and what would they need to feel enabled to respond in a way that matches the educational needs of gifted students in the context of current educational paradigms?

Between 1997 and 2007, I trained approximately 1000 teachers in short teacher education programmes on gifted education. Before they enrolled in these programmes, they completed a submission form and stipulated the knowledge and skills they wanted to acquire during these courses. In 2008 this resulted in a "Knowledge and skills list", published as an appendix in *Slim beleid*, a practitioner's book for teachers and school management in how to design and implement school policy on gifted education (van Gerven, 2008). In this book, tasks that emerged logically from developing and implementing school policy on gifted education were matched with the competencies mentioned in the "Knowledge and skills list". Stepping stones for school policy were analysed based on a literature study of current literature at that time (Eyre, 2001, 2007; Heller et al., 2000; Renzulli, 1985; Sternberg, 2002). In doing so, those competences that were distinguished were presented thematically.

In 2009, I started developing the teacher education programme "Specialist in Gifted Education" and reanalysed the existing data. The data were organised into seven domains and combined with the seven domains of competencies underpinning the regular professional standard for teachers. This combination resulted in a matrix with 49 competencies specific to specialists in gifted

¹ In January 2020, the World Council for Gifted and Talented Children installed a subcommittee to prepare a position paper on teaching standards for gifted education. Expert delegates from 17 countries hold positions on this committee.

education. For every competency, knowledge and skills indicators, taken from the original “Knowledge and skills list”, were described, making it possible to assess whether or not a competence is developed. In 2011, the latest version of this matrix was published in *Begaafd begeleiden* (van Gerven & Hoogenberg, 2011).

Characteristic of these competencies is that they are contextually bound and seen as changeable over time (Ceulemans et al., 2016; Lunenberg et al., 2014; Merriënboer et al., 2002). In 2018, I concluded that it was time to stop and explore how the idea of the existing matrix dating back to the timeframe 2008-2011 should be adjusted or maybe even reinvented. My urge to do so was ignited by the impact of changes that I had observed in Dutch and Flemish education in general and developments in gifted education in particular. A new matrix would contribute to a well-balanced curriculum for different teacher education programmes about gifted education in general and for courses to become a Specialist in Gifted Education in particular.

1.2 A Brief Context of the Position of Giftedness in Dutch and Flemish Education

According to studies on giftedness and gifted education, gifted students have specific educational needs, resulting not only from their academic abilities but also as the consequences of particular characteristics (Freeman, 2010; Gagné, 2010a; Kieboom & Venderickx, 2017a, 2017b; Kreger-Silverman, 2013; Leavitt, 2017; Peters et al., 2014; Pfeiffer, 2008; Plucker et al., 2017; Subotnik et al., 2011). Perspectives on what these characteristics are and how they influence educational needs vary enormously (Dai & Chen, 2014). It is up to the classroom teacher to meet the needs of every student as effectively as possible within the context of an inclusive classroom (Florian & Black-Hawkins, 2011). This includes the needs of gifted students (Dekker, 2014a), but how this is done depends on how schools and scholars define these needs and define gifted education (Dai & Chen, 2014; Morris Miller, 2008).

In the Dutch and Flemish framework for inclusive education, the structure of a pyramid represents different levels of student support (Ainscow et al., 2006; Audenaert et al., 2015; Clijsen et al., 2007). This pyramid is regularly represented in three layers. However, due to the way schools have organised their student support system, it can best be presented in five layers (van Gerven, 2015). The base of the pyramid represents the largest group of students: based on the similarity of their needs, these students can be clustered in such a way that the teacher can meet their needs through the standard curriculum and standard instructional and pedagogical strategies, without additional interventions or support. The top of the pyramid represents the smallest group of students: compared to the needs of other students, students at this level of support have additional educational needs. In current Dutch and Flemish educational practice, these are often students exhibiting (characteristics of) learning disabilities or developmental problems. In this pyramid of support, the education of gifted students is positioned between those top and bottom layers at levels two, three or four (van Gerven, 2015) (see Chapter 2, Figure 4).

According to the way educational needs are clustered and instructional strategies are used, meeting the educational needs of gifted students is seen as different from the regular strategies used for students at level one (Bakx et al., 2016; Houkema et al., 2018; Kuipers, 2017; Schrover, 2015). However, complex interventions are not necessary to meet the needs of gifted students in all cases (Bakx et al., 2016; Janson, 2017; Roberts & Inman, 2015; Tomlinson et al., 2009; Winstanley, 2010). If possible, classroom teachers respond to these needs themselves (level two) without the additional support of the (special) educational needs coordinator ((S)ENCo) (Peters & Oveross, 2020). Identically to other students, however, there are gifted students whose educational needs exceed the meaningful responses that can be provided by their teacher at level two. The needs of these students become more complex, making it reasonable to assume that the regular classroom teacher requires support to meet these students' needs. For those students and their teachers, at levels three or four, support is provided. For intervention at these levels, that is, special projects or part-time peer-group education or on-the-job coaching for teachers, the specialist in gifted education becomes involved.

The organisation of the support structure in Dutch and Flemish education is such that it creates a situation where there are hardly any educational facilities for gifted students with additional needs that exceed level four, and who do not belong to the group of so-called twice-exceptional learners. Giftedness in itself is not a classification as mentioned in the DSM-5 and, therefore, is rightfully placed outside the area of special educational needs or learning and developmental disorders. Full-time segregated education for gifted students in The Netherlands and in Flanders is not included at the top level of the pyramid of support. That level is reserved for students with specific learning or developmental disabilities. This puts full-time segregated education for gifted learners outside the formal organisation of this support structure. However, in The Netherlands, as a response to the heavy task load of regular classroom teachers, schools are increasingly looking for opportunities to create full-time segregated settings for gifted students to meet their educational needs. This development is seen by some as contradictory to the policy of inclusion as presented by the Dutch government and as described in Dutch educational law (Wet passend onderwijs, 2012). As a result, gifted students and the question of how to address their educational needs in an inclusive environment now has higher priority on the educational agenda. Remarkably, coinciding with an increasing number of opportunities for full-time segregated education for the gifted (Daeter, 2012), there has been a noticeable development, where school boards who have provided these services for some years have concluded that education for gifted students should become more integrated into regular education again. These boards have concluded that the number of students enrolling on full-time programmes is increasing rapidly and that consequently the available resources are not sufficient. As the available resources will not increase, the number of students has to decrease, and a two-step strategy has been chosen. The first step is to set higher admission standards; the second step is to increase the professional skills of regular classroom teachers. Sometimes there is even a third step, which excludes twice-exceptional students from being admitted into

these segregated groups. To meet the needs of these students, there is sometimes the additional solution of separate full-time segregated programmes for twice-exceptional students, which match the structure of the pyramid of support at level five. Currently, this option is being increasingly explored by local school councils.

In Flanders, gifted education has only recently been explicitly mentioned on the educational agenda (Vlaamse Regering, 2019). Segregated schools for the gifted are not formally accepted, although there are initiatives for segregated schools. The legal construction is almost identical to that of The Netherlands, that is, regular schools set up special classes for full-time gifted education. In Flanders most interventions can be placed at levels two and three in the previously described pyramid of support: either implemented by classroom teachers or implemented in the context of special projects or part-time peer-group education.

The pyramid of support can only exist if the bottom layer is widespread and carefully anchored in the educational system in general (Ainscow et al., 2006). This means that, for effective student support, the centre of gravity must be placed at the base layer of the pyramid, directly in the hands of the classroom teacher. Consequently, when the intensity of student support that is needed to meet a student's educational needs cannot be provided at the originally designated level of support, it has to be provided by a professional at the next level (Peters & Oveross, 2020). Alternatively, the professional at the next level provides specific teacher support, in such a way that the gifted learner is still served by the regular classroom teacher in the regular group (Amsing et al., 2009; Kuipers, 2017; LBBO, 2019; Pameijer & van Beukering, 2007; van Gerven & Hoogenberg, 2011; van Meersbergen & de Vries, 2017). In situations where there are too many cases calling on the top levels of the pyramid and basic support is insufficient for a larger group of students, the shape of the pyramid changes into the shape of a fir tree, and the support system becomes unstable and feeble (van Gerven & Weterings-Helmons, 2014).

In daily practice in education, it is easy to recognise this disproportionate pressure at the top levels of the pyramid. Both teachers from in-school special programmes and peer groups of teachers working in programmes organised at council level, report that a large percentage of the students who enrol in their programmes could be relatively easily catered for in the regular classroom (Houkema et al., 2018). Regular classroom teachers nominate these students because they feel that the educational needs of these students differ so much from what they are capable of offering in the regular classroom, and that this justifies the student's participation in these programmes. There appears to be a gap between the needs of gifted students and the services that regular classroom teachers can offer them (Houkema et al., 2018).

In The Netherlands, this has resulted in increasing governmental pressure to bring in gifted education at a higher level of services. Schools feel the pressure of the Dutch school inspectorate to get high results for as many students as possible. Schools are experiencing an increased focus on results aimed mostly at the domains of language arts and spelling, (comprehensive) reading and maths (Blok et al., 2013). Excellence has become a keyword. Education is supposed to

aim for excellence, and the government has made the concepts of excellence and giftedness mutually exchangeable (Dekker, 2014b; Slob, 2018a, 2018b).

1.3 Objectives

This research project aimed to develop a set of coherent recommendations offering a framework for the professional standards of specialists in gifted education. This framework is presented as a competency matrix that can be used within the context of the inclusive approach of primary education in The Netherlands and Flanders. In The Netherlands and Flanders, a specialist in gifted education is likely to have core tasks based in levels two, three and four of the pyramid of support. These tasks can best be compared with the tasks of special educational needs coordinators (SENCo). Therefore, the matrix should match the competencies needed at these levels. This implies that the matrix should not only aim for competencies in educating gifted learners, but also for competencies that support teachers of gifted learners. This is a similar approach to that used for other educational specialists such as SENCo's, specialists in reading, specialists in maths, and specialists in complex behaviour and learning disabilities (LBBO, 2019, n.d.-a). The matrix can be used by institutes for teacher education to design courses for gifted education both at undergraduate and postgraduate level. The matrix can also be used by a specialist in gifted education as a framework or outline for professional behaviour, and, as such, the matrix can be used as an instrument to assess the professional competences of current and future specialists in gifted education.

To translate the competency matrix into daily practice in education, I consider it necessary to have a set of concrete examples of knowledge and skills. These examples are indicators of competent behaviour, and a specialist in gifted education can use these indicators to demonstrate how their professional behaviour and attitudes can be recognised in their actions. Indicators of competences in knowledge and skills can be deduced by analysing existing international literature within and outside of the field of gifted education. In this systematic literature review, empirical research is considered to be equally relevant as the more practically based literature the international community of practitioners uses to design their strategies for gifted education. Teachers of the gifted, specialists in gifted education, and parents of gifted children use the more practically based literature to form their opinion on what they consider as good for gifted education and hence, what are relevant knowledge and skills for specialists in gifted education. To obtain the necessary and widespread support, this research is completed with an empirical section where stakeholders of gifted education are asked to select what, in their eyes, are the most relevant and important examples of competent professional behaviour.

Both the competency matrix and the matching indicators for knowledge and skills are not intended to be used unidirectionally or as a simple checklist. Hence, the empirical part of the research is not focused on the development of a list usable with a Likert-like scale. The research aimed for the development of a knowledge and skills profile that, according to the stakeholders, provides the best match for professional behaviour and approaches of the specialist in gifted

education within the current overall educational paradigms.

Competencies and indicators are stipulated, that offer a specialist in gifted education the professional and discretionary freedom to mould these indicators to match both the context within which they are applied and the individual specialist's perspective of giftedness. As stated before, the Dublin Descriptors form the underlying framework for professional behaviour in education. Professionals should be taught to form their own critical and professional opinion on what is a good perspective of gifted education. Therefore, it is out of the question to direct and prescribe what is to be seen as *the* right perspective of gifted education or the *best* interventions.

1.4 Research Question

Based on the previously described context, the main question of this research is:

Which competencies are necessary to provide gifted education that meets the needs of gifted students in an educational environment in The Netherlands and Flanders, which knowledge and skills are representative of these competencies, and what is needed to develop these competencies?

This main question can be divided into five partial questions.

1. Which developments and shifts in educational theories in The Netherlands and Flanders influence the professional context of a specialist in gifted education?
 - a. Which developments and shifts in educational theories in The Netherlands and Flanders influence the professional context of primary school teachers in general?
 - b. How can we currently position gifted education in The Netherlands and Flanders?
 - c. Which specific topics are, therefore, recognisably of influence on the professional actions and approach of the specialist in gifted education?
2. Which developments in The Netherlands and Flanders regarding teacher education influence the professional actions and approach of the specialist in gifted education?
 - a. What should be reflected in the educational level of the specialist in gifted education and how does this match the international demands for teacher education to which both The Netherlands and Flanders are committed?
 - b. Which factors in current perspectives on teacher education influence the professional standards that can be set for specialists in gifted education?
 - c. Which professional standards of teachers in general, interact with the professional standards set for specialists in gifted education?
 - d. What are the criteria which should be met when stipulating a competency, and how can these criteria form a framework for assessing the quality of the competencies?

3. Which knowledge and skills for the specialist in gifted education are pointed out by the international professional community and international research on gifted education as essential for the optimal development of gifted students?
 - a. What advice is available in international literature for the shaping of gifted education?
 - b. How does this advice fit into the Dutch and Flemish perspective on education in general?
4. How can advice in international research be translated into the Dutch and Flemish educational context?
 - a. What knowledge and skills can be deduced from international research on gifted education, considering the international educational standards for specialist teachers?
 - b. How can these indicators be stipulated to meet the Dublin Descriptors for professional behaviour?
5. What knowledge and skills indicators are considered by Dutch and Flemish stakeholders as the most relevant and important examples of competent professional behaviour of the specialist in gifted education?
 - a. Do different groups of stakeholders differ in their emphasis on specific indicators, and if so, what differences can be found?
 - b. Are there noticeable differences between Dutch and Flemish stakeholders regarding their emphasis on specific knowledge and skills indicators, and if so, what differences can be found?

1.5 Outline of the Dissertation

This dissertation consists of three parts: (1) a wide theoretical and practical context for the matrix; (2) the actual construction of the matrix; and (3) overarching conclusions and recommendations.

In part 1 (Chapters 2 and 3), the theoretical context of gifted education in The Netherlands and Flanders and the theoretical context of teacher education in the Netherlands and Flanders are described. In doing so, I address research questions 1 and 2. Based on this theoretical context I build the outline for the new competency matrix.

In Chapter 2, the position of the education of gifted students in primary schools in the Dutch and Flemish educational system is explained using the context of five significant paradigm shifts in education. These paradigm shifts are not limited to The Netherlands and Flanders. Since the late eighties, these paradigms have determined the international discourse of perspectives on education. By clarifying the interdependency of these five paradigm shifts, the complexity of teaching as an occupation becomes visible. The stratification in the depth of interventions, arising from an internationally accepted continuum of support, makes it apparent that at each level of intervention other competences are required. This stratification does not change when it comes to educating the gifted. It merely creates a context for a specifically aimed development of competences in educating the gifted. Although the context of competence

development is described, it is not the purpose of this chapter to describe the specific competences at each level. It sketches the outline for the framework to develop the description of these competencies.

In Chapter 3, the need for a professional standard for specialists in gifted education is demonstrated. The context for this standard of professionalism is rooted in the European striving for high-quality education. In The Netherlands and Flanders, general teachers are educated at bachelor's degree level (level 6). Teacher-specialists and/or specialists in education are educated at master's degree level (level 7). As specialists in gifted education operate as teacher-specialists, then the prerequisite for this should be an initial teaching qualification, with additional studying at master's degree level to become a specialist in their field of expertise. We explore the demands that are conditional for teacher education at this level: the Dublin Descriptors, the notion of competence and a model for intrapersonal adaptation as the generic approach for teacher-specialists. The word "skilledge" is introduced to express the result of continuous contextual professional development for teacher-specialists. The necessity for a professional standard for specialists in gifted education influences the conditions of education of teachers in this domain of expertise. As a consequence, a professional standard for gifted education should reflect an integrated approach, combining both competence in giftedness and general teaching competencies.

Part 2 is based on an additional literature review study and an empirical study using a questionnaire to better understand teacher-specialists' understanding of the competencies of specialists in gifted education. The literature review study provides the content for the competency matrix and for the matching knowledge and skills indicator list. This provides the answers for research questions 3 and 4. The empirical study provides the data for answering research question 5. Chapter 4 describes the methodology used in this second part of the dissertation. Firstly, the outline for the theoretical review is described. The chapter starts with a description of the intended use of literature to construct the content for the actual matrix and the knowledge and skills list. It describes how literature selection took place and how a narrative review of literature completed the systematic review of literature. Secondly, the outline for the empirical research is described. In this part of the chapter, statistical approaches are described and the thresholds for relevant differences, statistical significance and practical significance are defined. Chapter 4 concludes with an analysis of the population of respondents participating in the conducted empirical research. It was decided to include the final competency matrix and the knowledge and skills indicator list into several appendices for Chapter 4.

Chapters 5-9 each focus on a different domain of the competency matrix. In each chapter the results of the literature review are first presented, then the data analyses of the empirical part of the research. This is the point where the most detailed level of data analysis, per competency of each domain and per group of stakeholders, is presented; displaying data within the context in which they were observed. At this level, conclusions could not be far-reaching. Trends could be observed, but conclusions can only be considered as transferable within a specific group of stakeholders and cannot be generalised about the wider

group of stakeholders or even to both countries. Each chapter comes with a separate appendix, including all the tables being used in that specific chapter. Chapter 5 focuses on the first domain of the matrix: theories of giftedness. Chapter 6 addresses domain 2: seeing the educational needs of gifted learners. Chapter 7 describes domain 3: understanding the educational needs of gifted learners. Chapter 8 addresses domain 4: meaningful responses to the educational needs of gifted learners. Chapter 9 describes the results for domain 5: assessing the responses to interventions in gifted education.

In Chapter 10, the overarching results of the empirical research are presented. General trends observed in the empirical data and reported in their respective chapters are integrated and analysed at a more superficial level. This offers the opportunity to draw conclusions based on an overview of the entire matrix and the complete list of knowledge and skills indicators.

In part three of this thesis, Chapter 11, theory and practice are integrated. In this chapter the results of the research are summarised and discussed, perspectives are offered on the limitations of these results, directions outlined for further research and implications for teacher education programmes are considered.

Part 1

Positioning Gifted Education in Primary Schools in the Dutch and Flemish Educational System

2 Educational Paradigm Shifts and Effects on Educating Gifted Students

2.1 Introduction: The Interdependency of Educational Paradigms

The complexity of being a competent teacher increases rapidly. High quality in education is necessary for every nation to stay or become a significant player in the world economy. Only the best educational concepts are the major keys to social progress and the improvement of prosperity. To match the quality of education with social and economic developments, worldwide new educational paradigms have been, are being and will be introduced. This process is part of our history of education, and also part of the future of education.

According to Kuhn (1962), a paradigm provides a model for the analysis and interpretation of what occurs in reality by a community of practitioners. Hence, the use of a paradigm determines both one's assumptions and one's critical thinking and sets contextual boundaries for problem solving. Teachers can be considered as a community of practitioners (Enthoven & de Bruijn, 2010). As they reflect on their practice (Korthagen, 2017; Loughran, 2002), their practice is influenced by their critical reflections of both theory and daily experiences (Biesta, 2007, 2010, 2012; Carrier, 2015; Cooper et al., 2017; Nelson & Campbell, 2017).

A paradigm can be distinguished from a trend. A trend reflects a general movement in a situation or in the way people behave and does not provide a model for analyses and interpretation. Trends can be explained by looking through the lens of a paradigm to critically review the change in a situation. A paradigm shift arises when a dominant paradigm is considered to be incompatible with new phenomena and facilitates the adoption of a theory or new paradigm (Kuhn, 1962).

At this time in our western society in education, five significant paradigm shifts can be distinguished that affect Dutch and Flemish gifted education. Its process started with the shift to a society based on the concept of inclusion: a society no longer based on the participation of *most* people but on the participation of *all* people. Changes in the educational system are therefore conditional. From striving for an inclusive society, emerges the strive for an inclusive approach to education (Borland, 2005; Mol-Lous, 2011; Rodriguez, 2019). To make this work, we need to shift the way we teach and support (Borland, 2005; Clijsen et al., 2007; Mol-Lous, 2011; van Meersbergen & de Vries, 2017). The concept of responding to educational needs is the second paradigm shift. It replaces the achievement-only oriented pedagogy in education, with a change and solution-focused pedagogy (Haenen & Mol-Lous, 2014), in which *educational needs* replace the concept of *special educational needs* (Oliver, 1996). *Learning* instead of achieving becomes the core business of education. If learning for all is accepted as the central concept in education, then the needs of gifted students should be addressed as well.

A consequence of the paradigm shift in the perspectives of giftedness that has gradually taken place is its influence on the current education of the gifted.

D. Matthews & Folsom (2009) describe this third paradigm shift as the development from a mystery to a mastery perspective. In modern society, giftedness is no longer considered as static but as the result of a developmental process (Freeman et al., 2010; Gagné, 2010a; Lo & Porath, 2017; Lo et al., 2019; Sternberg, 2009; Subotnik et al., 2011).

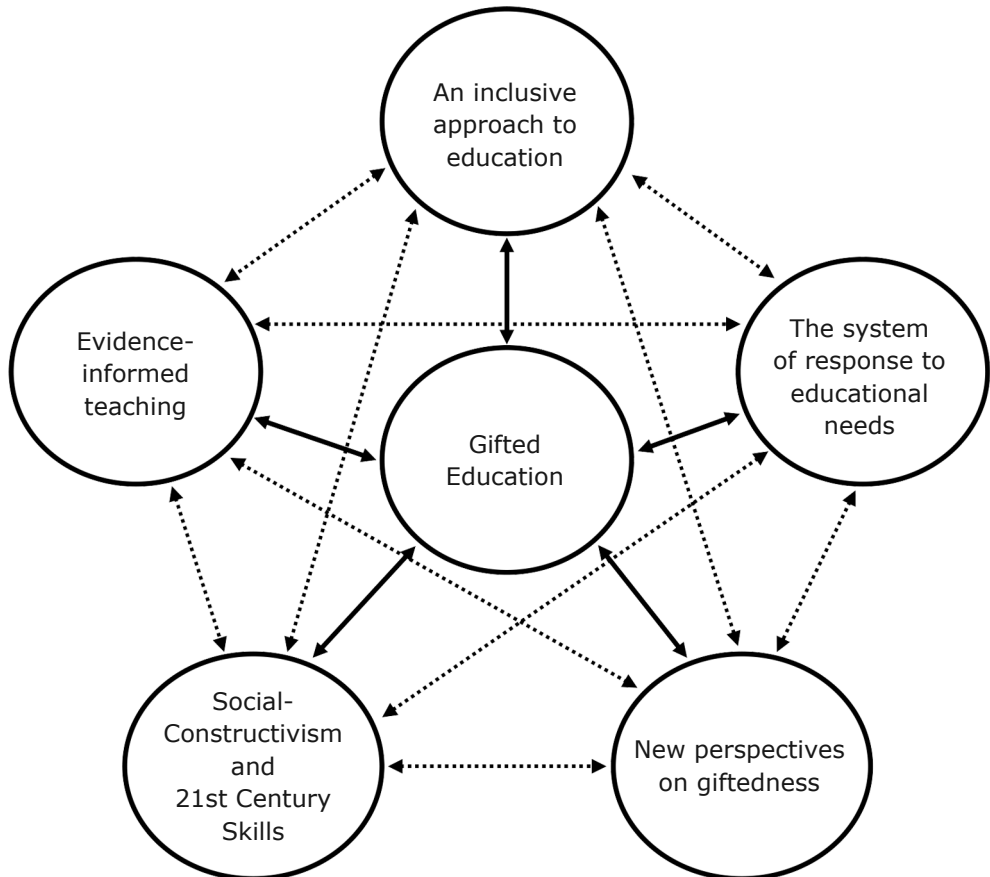
The fourth paradigm shift is a development towards curricular and instructional strategies based on social-constructivism, often referred to as 21st century skills. From the high speed changes in our modern society, has emerged the need to equip people with skills that make it possible for them to adjust themselves to the demands of future society (Marzano & Heflebower, 2012; Schleiger, 2012; Voogt & Pareja Roblin, 2010). Technological, economic and social developments require that we put a strong emphasis on equipping our children with the skills to gather and manipulate knowledge in a way that will be effective in a future society, whatever that future might be (Vermeulen & Vrieling, n.d.).

The fifth, and final, paradigm shift affecting Dutch and Flemish education that is introduced in this chapter is the shift towards evidence-informed teaching. In the last decade, the increasing value of the direct translation of research results into educational practice can be observed (Mol-Lous, 2011; Van den Berg & Suasso, n.d.; Vandenberghe, 2005). This is caused by a growing awareness that in education, many changes were implemented consecutively without the support of evidence that they would provide an enhancement to previous approaches (Onderwijsraad, 2006).

The dynamic of each of the five independent paradigm shifts and their influence on teachers shows the complexity of teaching as a profession in general and gifted education in particular. However, when one realises that these paradigm shifts cannot be seen purely on their own merit but always have to be seen through the interplay of one with another, an even more complex dimension becomes visible. The complexity of these changes is illustrated by the interdependency of the 'Big Five' as shown in Figure 1.

2.2 The First Paradigm Shift: The Inclusive Approach

In education, inclusion is about accepting that every student has an individual educational profile with personal educational needs (Oostdam, 2009; Pameijer & van Beukering, 2007; Peters & Oveross, 2020; van Meersbergen & de Vries, 2017). Teachers learn to see, understand and respond to those needs in a way that enables their students to reach towards their next zone of proximate development (Mol-Lous, 2011). Discussion of the concept of the inclusive approach is relevant within the context of developments in gifted education in The Netherlands and Flanders. In both countries, (part-time) segregated education for the gifted has become increasingly popular (Keeman, 2010; Vlaams Parlement, 2019). This seems contradictory to the inclusive approach and shows a growing polarisation between stakeholders in gifted education.

Figure 1*The Interdependency of "the Big Five"*

Note. Adapted from "The Student's Ecological System" by E. van Gerven, 2015, *Les 2.1. De Cirkel van Zorg en de Ecologie van de Leerling. Post-HBO Registeropleiding tot Specialist Begaafdheid*. Copyright 2015 by E. van Gerven.

2.2.1 The Inclusive Approach

When it comes to education, the difficulty with the concept of inclusion is that an overall definition that is accepted worldwide is lacking. "Inclusion means different things to different people" (Armstrong et al., 2010, p. 29). Inclusion is often defined by what one is doing (Florian & Black-Hawkins, 2011), so instead of one definition, there are as many descriptions of inclusion as there are describers. Ainscow et al. (2006) differentiate between two kinds of descriptions: descriptive and prescriptive definitions. A descriptive definition reports on how inclusion is used in practice, while a "prescriptive definition indicates the way we use the concept and would like it to be used by others" (Ainscow et al., 2006, p. 14).

The underpinning concept of the inclusive approach is a social model of disabilities (Oliver, 1996). In this model, disabilities are seen as a result of the way that society is organised. Logically, reasoning from this perspective means that if thresholds and barriers for individuals with impairments are taken away, only educational needs rather than special educational needs are left. Therefore special educational needs are not defined by the inability of the individual, but by our concept of normality and the boundaries that are set for what is normal and what is not (Borland, 2005; Oliver, 1996). Embracing an inclusive approach means that differences between students' didactical and pedagogical needs have to be accepted (Dijksma, 2007; Mol-Lous, 2011). Florian and Black-Hawkins (2011) state that the perspective of educational needs still refers to the argument that some children "necessarily require something 'different from' or 'additional to' that which is ordinarily available" (p. 815). They state that an inclusive practice refers to a situation where teachers extend and enrich their classroom activities in such a way that participation in these activities becomes available for all students in their classroom.

It is fundamental to appreciate that a change and solution-focused approach based on an inclusive approach is not something one takes on as a project. Projects are defined by reaching a specific goal or target. When it comes to an inclusive approach, one will discover that it is an ongoing process. Its success depends highly on the translation of theory into practice. Ainscow et al. (2006) describe inclusion as:

it [inclusion] is concerned with all children and young people in schools; it is focused on the presence, participation, and achievement; inclusion and exclusion are linked together such that inclusion involves the active combating of exclusion; and inclusion is seen as a never-ending process. Thus, an inclusive school is one that is on the move, rather than one that has reached a perfect state. (p. 25)

In 1994, The Netherlands and Flanders joined the Salamanca agreement. This agreement specifically mentions gifted children: "Schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children" (Unesco, 1994, p. 6).

Both The Netherlands and Flanders have passed laws on inclusion. In The Netherlands, it is common to refer to the act on "Appropriate Education" (Wet

passend onderwijs, 2012) as a synonym for inclusion. Since 2014, in Flanders, reference has been to the so-called “M-Decreet” (Decreet betreffende maatregelen voor leerlingen met specifieke onderwijsbehoeften, 2014); in the foreseeable future, this decree will be replaced with the so-called “Begeleidingsdecreet” (Vlaamse Regering, 2019). With these laws, both governments want to guarantee sufficient education for every child in its environment, or as they call it “in a home near environment” (Amsing et al., 2009; Wet passend onderwijs, 2012; Mol-Lous, 2011).

In The Netherlands, standards for the school inspectorate explicitly include gifted students (P. Wolters, 2009). In the current Flemish M-Decreet there is no explicit mention of gifted students (Vlaams Parlement, 2019). The new Begeleidingsdecreet (support decree) that is currently being prepared is expected to be introduced in 2021-2022. In the new decree explicit attention will be given to gifted and highly able learners (Vlaamse Regering, 2019). The notion of educational needs as the basis for a differentiated and inclusive pedagogy is currently dominant in The Netherlands and Flanders (Mol-Lous, 2011; Pameijer & van Beukering, 2007; van Meersbergen & de Vries, 2017). As a result, the concept of gifted education is seen, in both countries, as a meaningful response to the educational needs of gifted students.

2.2.1.1 Segregated Education for Gifted Students

While the influence of this paradigm shift is towards inclusion, it is important to note that there has been an increasing, fast-growing focus on full-time segregated education for the gifted in both countries. This reflects the seemingly contradictory perspective on the position of education for the gifted in that inclusive educational context. Having said that, it should also be noted that, on their governmental website, the Flemish Department of Education states that full-time segregated education for the gifted is not available (Vlaams Ministerie van Onderwijs en Vorming, n.d.). Only part-time segregated education for gifted students using pull-out programmes is recognised. The following therefore only applies to The Netherlands.

Special primary schools for the gifted were a rarity in The Netherlands in the 20th century (de Boer et al., 2013). At the turn of the 21st century, a few special schools for full-time segregated education for the gifted were introduced (Hoogeveen et al., 2004). They were all funded privately. Most of these schools closed almost as fast as they began. In 2007, a private initiative reintroduced full-time segregated education for the gifted at primary school level (Daeter, 2012; Keeman, 2010). Ignited by their personal experiences, the founders of these Leonardo schools stated that gifted students are better served in a full-time segregated situation of a homogeneous group with students of equal intellectual capacities (Daeter, 2012; Leonardo-onderwijs voor hoogbegaafde kinderen, n.d.). The Leonardo school founders did not consult international research. However, several studies of special programmes for gifted students in the United States, published between 1988 and 2004, showed that there are indeed positive effects to be observed. These studies were recently referred to by Kitsantas et al. (2017).

In The Netherlands, studies by Hoogeveen et al. (2004), Doolaard and Oudbier (2010), and also by de Boer et al. (2013), stated that, although these positive effects were observed in the United States, there was insufficient evidence that the same would apply in The Netherlands. They recommended further research on this topic. A more recent study by Hornstra et al. (2017) on "The effects of full-time and part-time high-ability programs on developments in students' achievement emotions" shows no significant positive effect on students' achievement emotions amongst participants of full-time programmes. The jury is still out concerning the effects of full-time segregated education for the gifted in The Netherlands.

Since 2007 the number of Dutch special schools for the gifted has increased rapidly (Daeter, 2012; Houkema et al., 2018; Keeman, 2010). Although the government prefers an inclusive approach to a segregated approach (de Boer et al., 2013), in The Netherlands full-time segregated education for the gifted is formally recognised. As a way to implement the Act "Appropriate Education" for their gifted students, schools have the right to install full-time segregated classes for the gifted (Dekker, 2014a, 2014b; Rijksoverheid, n.d.). The founders of the Leonardo schools argued adroitly that gifted students could and should be seen as special needs students (Keeman, 2010). They compared the intensity of the educational needs of gifted students with the intensity of the educational needs of traditionally perceived students with special needs. They argued, quite successfully to the general public, that if a teacher cannot respond as optimally as desired for traditional special needs students, it could hardly be expected that this same teacher would be able to do so for gifted students (Keeman, 2010; Mijland, 2010).

In the Dutch discussion on *appropriate education*, these arguments make sense to many people. Parents, teachers, school management teams, and members of school boards argue that aiming for inclusion in day-to-day practice focuses worryingly on how to integrate traditional special needs students in the ordinary classroom (Mol-Lous, 2011; Oostdam, 2009). Advocates for full-time segregated education for the gifted, argue that the effort that is required to make the basic concept of inclusion work, hardly leaves any room to invest equally in yet another group of students with special needs (Smits, 2019). They also argue that, during their initial teacher training courses, teachers do not acquire the necessary skills to cater effectively for the needs of gifted students in regular schools. Research into the quality of the competency of Dutch teachers seems to confirm this claim (de Boer et al., 2013; Mol-Lous, 2011).

The competency matrix for gifted education published in 2011 by van Gerven and Hoogenberg provides an overview of relevant competencies. This matrix is underpinned by the general teaching competencies required of Dutch and Flemish teachers in primary education. The matrix shows a large overlap between general teaching competencies and competencies for gifted education as they are suggested in international literature on gifted education (van Gerven & Hoogenberg, 2011). This overlap shows that the argument that Dutch and Flemish teachers are not equipped to cater for gifted students in their classroom can at least be disputed.

Since complex adjustments are required to respond to the differing educational needs of every student, one cannot argue that being gifted on its own merit is a valid argument for education in a full-time segregated setting (Borland, 2005; Lo & Porath, 2017). Putting the inclusive approach into practice, requires teachers to stretch their current professional abilities; reorganising their actions in a way that meets the student's needs based on a perspective of diversity (Adema et al., 2009; de Boer et al., 2013; Florian & Black-Hawkins, 2011; Haenen & Mol-Lous, 2014; Mol-Lous, 2011; Oostdam et al., 2007; Waslander, 2011).

2.3 The Second Paradigm Shift: Responding to Educational Needs

Educational interventions should be a direct response to the educational needs of individual students. Response to Intervention (RtI) is a translation of this needs-based approach (Coleman & Johnsen, 2011; Mol-Lous, 2011). In The Netherlands and Flanders, this concept is transformed into a change and solution-focused pedagogy. This approach is less dependable in its standardised test results, compared to the general interpretation of RtI. It creates ample opportunities for a broad range of diverse pedagogical and didactical strategies. Seven underpinning assumptions are needed to make this approach successful (van Meersbergen & de Vries, 2017):

- A student's individual educational needs are placed in a central position.
- One can only tune towards a student's needs if one keeps in mind how the interaction between persons and situations affects those needs.
- The teacher makes the difference.
- Aiming for opportunities and chances dominates the intervention strategies.
- Educating is a collaborative process between everyone who is involved.
- All interventions are specifically designed to reach the set goals.
- Interventions are systematically applied and transparent for everyone involved.

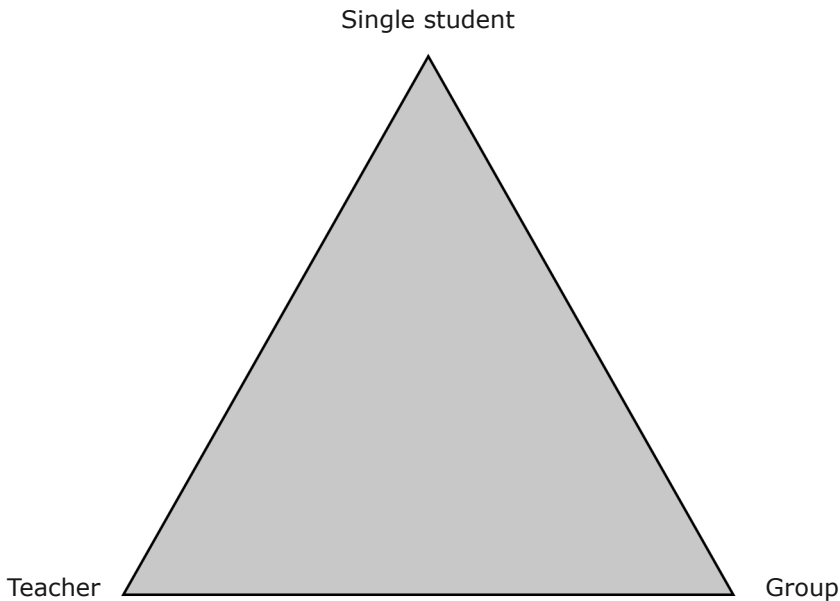
In The Netherlands and Flanders, the concept of a differentiated response to educational needs is not limited to the academic curriculum; it also includes the social-emotional curriculum. Pameijer and van Beukering (2007) pointed out that a differentiated curriculum can only be successful if a differentiated pedagogic strategy supports it. The ability to differentiate requires, therefore, not only managerial and didactic skills but also an extended repertoire of pedagogic and social skills (Bakx, 2015, Meijer, 2004, Pameijer, 2017; Pameijer & Denys, 2018, Schuman & de Vries, 2020; van der Meer, 2016). To make an approach like this work, teachers need to be watching for the student's potential, for factors stimulating the actualisation of this potential and for challenges or limitations in the actualisation of potential (Weterings, 2017). Within the bounds of reality and the bounds of what is reasonable, teachers should be able to respond to those needs based on their professionalism (Pameijer & van Beukering, 2007; Pameijer, 2017; Schuman & de Vries, 2020). However, if a teacher feels that they have hardly any knowledge or have not

developed the right level of skills for educating gifted students, it is not likely that such a teacher will be successful in finding the meaningful educational responses needed by their gifted students (de Boer et al., 2013; Segers & Hoogeveen, 2012; Troxclair, 2013; Vreijns et al., 2018).

A teacher's response to a student's educational needs and a student's response to the interventions is an ongoing process (Pameijer & van Beukering, 2007; Schuman & de Vries, van Meersbergen & de Vries, 2017). As educational interventions are now led by the individual needs of students, the long-used Procrustean approach as a concept of education should be dismissed. The idea of curricular confection with one-size-fits-all strategies cannot underpin teaching approaches any longer (Borland, 2005; Doornbos & Bergman, 1991; Oostdam, 2009; Stevens, 1997). Although basic standards can be stipulated, responding to educational needs implies that within a regular group there will be differences in the way students can meet those standards (Sutherland & Stack, 2014; Tomlinson et al., 2009). There may be students to whom the standards are set far too high, as there may also be students who can exceed these standards easily (Winstanley, 2010). A change in policy should offer enough room to include the education of the gifted in the regular classroom and the regular school. However, this is all based on the assumption that an inclusive approach means that we accept that every student is different (Armstrong et al., 2010; Clijnsen et al., 2013; Florian & Black-Hawkins, 2011; Oostdam, 2009). It is also based on the assumption that teachers have enough means, opportunities, and the competency to respond appropriately for each individual student.

2.3.1 The Need for Differentiation

Dutch educational law (article 8) explicitly states that schools should facilitate ongoing continuous progress for all students (Wet primair onderwijs BES, 2016). In article 1.3 of Flemish educational law (Decreet betreffende gelijke onderwijskansen-1, 2012) the government refers to striving for optimal learning and developmental chances for all students. In the current Flemish coalition agreement (Vlaamse Regering, 2019) this is not only confirmed, but is also applied to gifted learners. The educational process must match the best possible way to develop a student's potential. Differentiation is a basic condition to create options for an inclusive approach in education (Mol-Lous, 2011; Oostdam, 2009) as it creates opportunities to match the curriculum and learning experiences to the learners (Roberts & Inman, 2013). Therefore, the ability to differentiate is one of the most important teachers' competencies, described in the Dutch Teacher Qualification Standard as well as in the Flemish Standard (Onderwijscoöperatie, 2014a, 2014b; Vlaamse Onderwijsraad, 2017). Effective differentiation is intentional and requires effective assessment. Good assessment directs teachers' decisions on how to differentiate. It makes it possible to set educational goals for individual students, which then makes it possible for the teacher to plan matching actions (Hattie, 2013, 2014; Marzano, 2007; Wiliam, 2011). Consequently, the ability to differentiate creates ample opportunities for educating the gifted in the regular classroom (Janson, 2017). "Tuning" is the magic word required when striving to achieve an optimal match

Figure 2*The Equilateral "Classroom" Triangle*

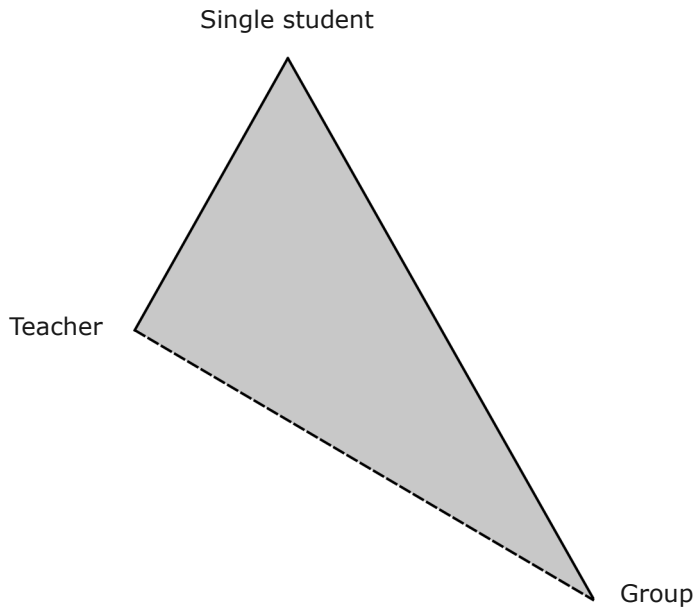
Note. From *Knapzak Praktijkgidsen: Uitdagend Onderwijs* (p. 62) by E. van Gerven, 2014, Leuker.nu. Copyright 2014 by E. van Gerven.

(Kramer & Wildeboer, 2017; Pameijer & van Beukering, 2007; van Meersbergen & de Vries, 2017). Without it, an intervention cannot be successful, because a match between the student's needs and the curriculum would be coincidental. It is important to realise that a differentiated curriculum is meaningless if the curriculum offered is just a selection of different assignments, without the process of tuning the curriculum to the student's needs (Chandra Handa, 2009). In that case, a match between the student's needs and the curriculum is coincidental. If a student's needs are not met, the student is still excluded from an education based on the principles of inclusion. Therefore, differentiation is conditional for inclusion, but that does not apply the other way around. Although responding to individual educational needs sounds logical – it might provide an individual student with an optimal learning environment and with optimal learning opportunities – and differentiation might be the key to all of this, it might also be a good suggestion to listen to the voice of reality. The change and solution-focused approach does not come without limitations to what is possible in day-to-day practice at schools. It only works by the grace of a realistic balance between that which is optimally workable, and that which is optimally desirable (Mol-Lous, 2011; Oostdam, 2009). It is the permanent trade-off between the reality of day-to-day teaching and wishful thinking about

the opportunities every student should have. This balance applies to the “classroom triangle”: the equilateral triangle between the teacher, the entire group of students, and the individual student (van Gerven, 2014). In the equilateral triangle, an equilibrium exists between all three actors. Each actor has the same operational space. Honouring individual differences in the developmental potential of all children in the group secures equal opportunities. Within the same context, the teacher’s “individual professional space” is as important as the student’s opportunities to develop. This concept of the educational equilateral triangle, as shown in Figure 2, is an analogy to the “golden triangle” developed by Broersen and Spreij (2009).

Figure 3

When the Focus on a Single Student has Become Too Intense



Note. From *Knapzak Praktijkgidsen: Uitdagend Onderwijs* (p. 63) by E. van Gerven, 2014, Leuker.nu. Copyright 2014 by E. van Gerven.

If, as a result of differentiation (either at the time of the intervention, in the depth of the intervention, or in the diversity of the intervention), a teacher has to focus intensely on one student, the equilibrium is disturbed. This is symbolised, in Figure 3, by the reduced distance on the triangle between the teacher and the individual student. As a result, all three actors have to give up some of their “personal space”. In practice, this means that the teacher has less

time to divide amongst the other students. It also means that the teacher has fewer opportunities to use as many different didactical approaches as might be fruitful for the other students. It might also be less fulfilling for the teacher themselves. The appeal to their professional skills becomes somehow unidirectional, because of the focus on only one student. The teacher loses the diversity and the variety that are optimal requirements for inclusive practice. They also lose the diversity and variety needed for professional satisfaction related to the tasks reflecting all their students.

In The Netherlands and Flanders, two strategies for differentiation are used: (1) "convergent differentiation" and (2) "divergent differentiation". Convergent differentiation means that standard educational objectives, set for the entire group of students, are applied in a three-tiered structure (20%-60%-20%), based on Bell curve distribution. According to Meijer (2004), it acknowledges the natural differences between the characteristics of individual students. Divergent differentiation means that the response to a student's educational needs is as individualised as possible. It aims to create a personalised educational continuous process, in which each student has an individualised exit profile (Mol-Lous, 2011; Oostdam, 2009).

The concept of convergent differentiation is open to four points of criticism. Firstly, in reality, a Bell curve rarely applies to any classroom population. The idea of a normal distribution of abilities applies only if large numbers are involved. In a group of only 23-25 students, there is a decreased chance that a normal distribution curve can be observed. As a result of this, teachers do not experience the Bell curve in the reality of their daily practice. In fact, they may experience a relatively large group of students that have different needs than can be met within the three-tiered structure.

The second point of critique is that, in reality, even the subgroups based on the Bell curve are not as homogeneous as that way of grouping might suggest (Lo et al., 2019; Ziegler et al., 2017). A closer look at Tier 3 shows differences that may have been missed before. Gagné (2010a) states that gifted students lie in the top 10% of all students. Hence, it could be concluded, that gifted students lie in the top half of the group of students that have the potential to function at least at Tier 3. The problem is that Tier 3 has a ceiling based on the average abilities in Tier 3 and not on the abilities of the gifted students. Consequently, the educational goals and opportunities offered at Tier 3 are only a partial match to the abilities of gifted students.

The third point of criticism, regarding the concept of convergent differentiation, is that average and below average students gain more from this concept than gifted students. In a system of convergent differentiation, age peers are unlikely to act as role models or be relevant sparring partners when it comes to academic achievement. Gifted students can, however, gain from a homogeneous grouping that is the result of divergent differentiation, which provides them with the opportunity to learn from other able students (Kitsantas et al., 2017).

The fourth and final point of critique regarding the concept of convergent differentiation is that this kind of differentiation does not offer many opportunities to acknowledge natural differences, compared to the opportunities offered by divergent differentiation. Based on theories of Stevens (1997) and

Doornbos (1991), Oostdam (2009) suggests that it is important to do justice to mutual differences between students in order to be adaptive to the different needs they have. The construction of tiered goals, used for the concept of convergent differentiation, ignores the surplus of natural abilities of gifted children. How can one strive for excellence in education if the way education is organised crops the opportunities to excel?

Based on these points of criticism it seems rational to opt for divergent differentiation. Divergent differentiation provides opportunities for an optimal match between a student's needs and the education offered to stimulate the ongoing continuous progress of a child's development (Mol-Lous, 2011). The glass ceiling that exists in the approach of convergent differentiation does not exist in this approach. So, it provides for the opportunity of the optimal match between the student's needs and the education offered, to stimulate the ongoing continuous progress in the child's development (Tomlinson et al., 2009; Winstanley, 2010). Hence, this way of differentiation seems to offer more opportunities for the education of gifted students, not only in full-time segregated education for the gifted but also in a regular classroom (Janson, 2017; Lo et al., 2019).

However, a strong objection to divergent differentiation is that it stretches the teacher's capacity for classroom management above and beyond what might be seen as fair and reasonable (Kuipers, 2017; Mol-Lous, 2011). Secondly, advocates of convergent differentiation point out that, to be effective, the administrative workload of divergent differentiation requires too much time, which could be better invested in "real" teaching.

2.3.2 The System of Response to Educational Needs

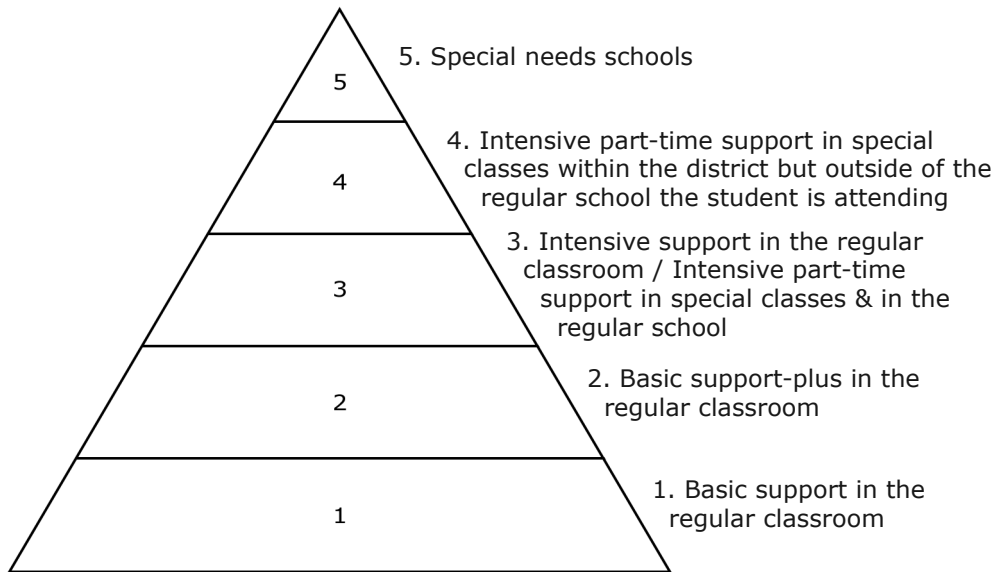
In The Netherlands and Flanders, educational needs are ranked based on the complexity for teachers to respond to those needs. This ranking can be graphically represented in a pyramid (Armstrong et al., 2010). Every level in the pyramid represents another level of intensity in the way that the educational system responds to a student's needs. The intensity of support can be seen as a reversed continuum (Armstrong et al., 2010). The more complex a student's needs are, the more intense the support must be to sort, affect, and stimulate individual development. The required skills to recognise and understand a student's needs become more complex if the needs increase to the next level of complexity (Peters & Oveross, 2020). Without the ability to recognise, to understand, and to interpret a student's needs, a teacher cannot respond effectively.

This construct of achievement, the identification of needs, and a matching, meaningful response in support apply both in a heterogeneous setting (regular schools) and a homogeneous setting (full-time education and pull-out programmes for the gifted). Each student has a unique profile based on personal traits and natural capacity. The student's ecological system influences this profile (Lo et al., 2019; Mol-Lous, 2011; van Meersbergen & de Vries, 2017; van Meersbergen & Jeninga, 2012). This interaction results in a unique educational profile (van Gerven & Hoogenberg, 2011; Ziegler et al., 2017). Therefore, the

idea should be dismissed that all students within a homogeneous setting have the same educational needs.

Figure 4

Continuum of Educational Needs and Support



Note. From *Knapzak Praktijkguidsen: Uitdagend Onderwijs*, by E. van Gerven, 2014, Leuker.nu. Copyright 2014 by E. van Gerven.

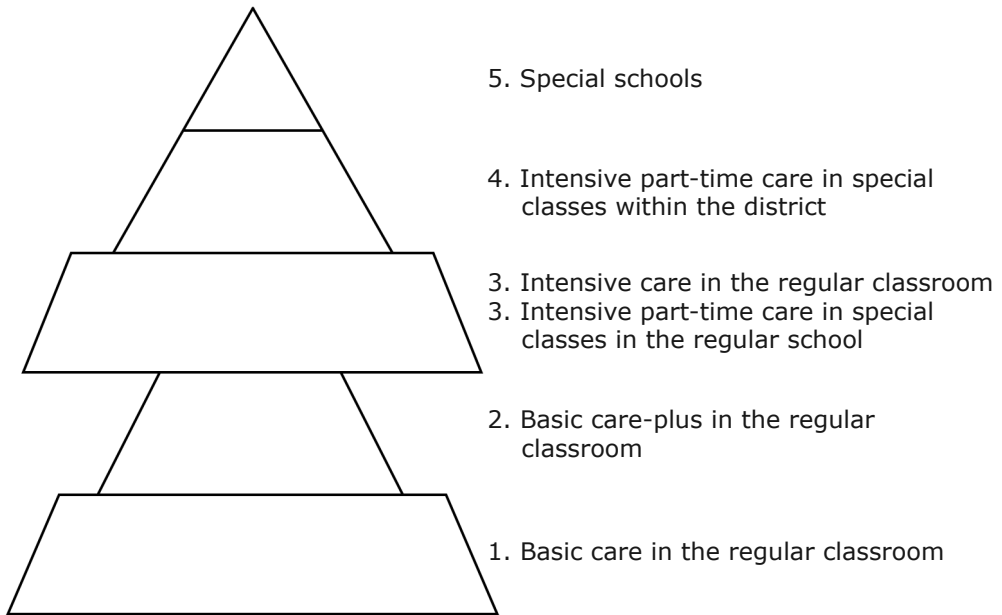
Figure 4 shows a pyramid of support regarding gifted education in The Netherlands and Flanders (van Gerven, 2014). This pyramid is almost identical to the way overall educational support in both countries is organised (Prodia, 2012; van Gerven, 2014). The two bottom levels of the pyramid of support represent the basic support provided in every classroom. Every school is allowed to design its unique concept of basic support (levels 1 & 2). Level 1 represents the regular curriculum. Level 2 is the variation in the regular curriculum allowed to be applied within certain limits as the teacher sees fit for the student. The extent to which school management has confidence in their teaching staff determines how strictly they set these limits. Level 3 represents the support provided by the school's special educational needs coordinator (SENCo) when adjustments at level 2 are not sufficient and intensified support is needed. This support is additional or can be an alternative to what is offered at level 2. Support at this level is the adjustment towards a far-reaching kind of differentiation. Interventions at level 3 can be split into two kinds of support: support that helps the teacher to see and understand educational needs, and

support that helps the teacher to provide an effective and meaningful response towards those needs. Both kinds of support aim to help the teacher, focus on what the teacher needs to become self-sufficient, and what the teacher needs to support or guide the student.

Additional support provided by level 4 is taken care of by district SENCo's. These district SENCo's are often teachers who specialise in a particular field of learning and behavioural problems. Interventions at this level can be aimed at supporting the in-school SENCo, the teacher or the student. Everything that applies for level 3 support applies for level 4 support as well. The major difference between the tasks of both types of educational advisors lies within the complexity of the cases, or the unicity of a problem, that is, the combination of giftedness with a specific learning or behavioural disorder. Level 5 refers to placement in special needs classes and is mostly reserved for students with learning and/or behavioural disabilities.

The application of the pyramid of support varies for each school. With reference to the education of gifted students, the stability of this pyramid of support is still weak in The Netherlands and Flanders. The characteristics of each school determines the shape and stability of their pyramid of support. The stability of the pyramid increases if the number of students who need support at the next level of intensity decreases per layer. The more competent teachers become, the wider the possible layer that they can serve. In 2012, Segers and Hoogeveen concluded that, within the context of the Dutch educational system, the competences that are needed by teachers to serve gifted students effectively were almost undiscovered ground. In 2013, de Boer et al. claimed that "in most cases, teachers lack the knowledge and understanding of how to differentiate and align their curriculum to the pedagogical and didactic needs of gifted students." In 2014, Haenen and Mol-Lous stated that, due to a curricular gap in basic Dutch teacher education, the education of the gifted was still unexplored ground. They all recommended that an inventory of necessary teacher competences for educating the gifted should be made. In *Slim beleid*, van Gerven (2008) published a preliminary list of teacher competences to get school policy on educating the gifted on track. In 2011 a revised list was published in *Begaafd begeleiden* (van Gerven & Hoogenberg, 2011). This list was placed in a matrix and combined with basic teacher competences as described by the SBL (Stichting Beroepskwalificaties Leraren – Foundation for Professional Teaching Standards) (Ministerie Onderwijs en Wetenschappen, 2006).

The adaptability of the pyramid of support is also affected by the school's student population. If the basic needs of the student population already call highly on a teacher, it is less likely that this teacher can respond individually to the needs of a large group of students. This is where the effect of the disturbance of the equilateral triangle takes its toll. Therefore, defining whether interventions belong to level 2 or level 3 is different in every school. When, for some reason, interventions for gifted students at level 2 are insufficient or difficult to organise, the call on level 3 to become more actively involved becomes more intense. Figure 5 visualises how this affects the stability of the pyramid.

Figure 5*Continuum of Educational Needs and Support Out of Balance*

In more advanced teacher education courses on educating the gifted, participants express their discontent about the instability of the pyramid of support at their schools. They stress that, often, half of the students in their pull-out programmes could be served in the regular classroom, provided that the teacher has developed the necessary competences. Instead, their caseload as specialist teachers becomes heavier and more complex, resulting in a decreasing quality of care provided by these special programmes.

There are no statistics available, regarding the education of the gifted, that reflect the stability of the pyramid of support for Dutch and Flemish schools. However, the assumption that this pyramid is likely to be more stable in Dutch schools than in Flemish schools can be made when taking into account the following facts:

- The Dutch government invests in the education of the gifted (Slob, 2018a, 2018b).
- Education for the gifted is explicitly mentioned in Dutch education laws.
- Dutch schools invest a serious amount of money in the professionalisation of their teachers around the topic of giftedness.
- There are several intensive teacher education courses on educating the gifted in The Netherlands. Most of them require a time investment of 100-280 hours; one requires an investment of 450 hours.

- There is a Dutch professional society for formally accredited “specialists in gifted education” that stratifies their members by different degrees of professionalism, based on their previous education (LBBO, n.d.-b).
- Up until 2019, the Flemish government has not invested explicitly in education for the gifted.
- In Flemish educational law, there is no explicit reference to gifted students, but there is to students with disabilities (Decreet betreffende maatregelen voor leerlingen met specifieke onderwijsbehoeften, 2014). Starting at the beginning of the school year 2021-2022, the “Begeleidingsdecreet” will be introduced. In this decree, gifted learners will be mentioned as a group of students having additional educational needs to be addressed by schools.
- Until recently, there was hardly any budget for Flemish schools to invest in the professionalisation of their teachers (Hovius & Van Kessel, 2010). Therefore, it is likely that ongoing professionalisation regarding the topic of giftedness was not highly prioritised. However, this also seems to have changed as a result of the current coalition agreement. In the coalition agreement the necessity for teacher education and continuous professionalisation is stressed as conditional to the government’s new plans.
- There are no educational programmes for teachers in Flanders to become specialists in gifted education that match the intensity and in-depth level of those that are available in The Netherlands (Vreijns et al., 2018).

2.4 The Third Paradigm Shift: New Perspectives on Giftedness

In 2005, in *Conceptions of Giftedness* (Sternberg & Davidson), James Borland published a chapter titled “Gifted education without gifted children: The case for no conception of giftedness”. Borland successfully raised the discussion about the relation between the concept of inclusion in modern education and the definition of giftedness. He argues that it is no longer valid in modern education to use a conception of giftedness to underpin selection procedures, to determine which student can or cannot participate in alternative educational arrangements (i.e., enrichment classes, pull-out programmes, etc.). He refers to the fact that there is no universal conception of giftedness, and that this means that selection procedures are inequitable by nature.

Borland’s argument was not about ignoring the educational needs of gifted students. It was, that the definition of giftedness becomes more or less a non-issue when goal-differentiated curricula and instructions are organised. According to Borland, goal-differentiated curricula and instruction could create commodious opportunities for all students to fulfil their potential. In an article in 2017, Janson describes several opportunities to create an educational environment where this becomes possible. In these settings, the need to define separate groups of students by their potential in order to respond to their educational needs is no longer necessary. Borland (2005) states, “Were we to set as our goal the creation of schools in which curricula and instruction mirrored

the diversity of students found in classrooms, and were we to achieve this goal, the only legitimate aim of gifted education would be achieved" (p. 13). Borland was clearly not the only one who noticed the need for change in perspectives on giftedness and gifted education. It was only a year later that D. Matthews and Foster (2006) published their book *Being Smart About Gifted Education*. In it, they presented an analysis of a paradigm shift that was taking place regarding the conceptions of giftedness, and described the earlier mentioned shift from a mystery-perspective on giftedness towards a mastery-perspective on giftedness. In this chapter it is important to explain both ends of this theoretical continuum, before going into the consequences of this paradigm shift in relation to the context of educating gifted students in The Netherlands and Flanders.² The continuum is considered from an overall perspective and without going into details.

2.4.1 Three Paradigms

The question of "what is giftedness" is discussed worldwide. A wide range of different opinions can be noted (Ambrose & Sternberg, 2016; Balchin et al., 2009; Collangelo & Davis, 2003; Dai & Chen, 2014; Freeman et al., 2010; Kreger-Silverman, 2013; Lo & Porath, 2017; Pfeiffer, 2008; Shavinina, 2009; Subotnik et al., 2011). The fact that Sternberg, at the 15th ECHA conference in Vienna (March, 2016), explicitly mentioned that the identification of gifted students was still as much a hot topic at conferences about giftedness as it was thirty years ago, demonstrates that a united answer to the question "what is giftedness" still lies beyond the horizon. In 2012, Cohen gave a plausible and not to be misunderstood explanation for the lack of a joint conceptualisation:

There is also dogmatic insularity in hanging on to one's interpretation of the term. Each definition is 'gospel to St. Guru' perpetuated by proponents whom each stay in their own silo, claiming theirs is the correct one. Their definition is learned and touted by new learners (their students), who defend their teachers' definition, or create their own, perpetuating the lack of coherence in defining their terms. (p. 26)

In 1996, Morelock distinguished two different groups of perspectives on giftedness; she refers to them as The Talent Development Movement and The Columbus Group Movement. Dai and Chen (2014) refer to both perspectives as different paradigms: the gifted child paradigm and the talent development paradigm. If we make a comparison between D. Matthews and Folsom's and Morelock's dichotomy, several similarities can be perceived. In this comparison, the perspective of gifted child paradigm is the equivalent of D. Matthews and Folsom's mystery perspective. The talent development paradigm represents the mastery perspective.

² At this point, I would like to stress that it is not my place, nor my intention, to determine which perspective on giftedness is "the best perspective". This short sketch of perspectives is merely to show that there is a relation between the notion of what teacher competences need to be developed and the different perspectives of giftedness. A different perspective requires different competences.

The Columbus Group describes giftedness as “an asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity” (Columbus Group, 1991 as cited in Morelock, 1996). Their threshold to label a person as gifted is 2 SD above average. This sets the standard at an IQ of 130. This threshold is based on a normal distribution of intelligence, and it implies that two-three percent of the population might be called gifted. The higher the IQ, the more this asynchronous development will manifest itself (Kreger-Silverman, 2013). In the gifted child paradigm, giftedness can best be seen as a “state of being”. A person is born gifted, and signs of giftedness can be noticed from a very early age onwards. Gifted children can be recognised by specific personality traits combined with an advanced intellectual development. The Columbus Group’s notion of giftedness is highly influenced by Dabrowski’s theory of overexcitabilities. Overexcitabilities can best be described as an intense reaction to external and internal stimuli (Ackerman, 2009). The strong relationship between overexcitabilities and IQ in this concept of giftedness affects what are to be seen as indicators for giftedness (Kreger-Silverman, 2013). In this perspective on giftedness, insufficient justice is given to the complexity of being gifted if the focus is only on high achievement (Dai & Chen, 2014). Therefore, Kreger-Silverman (2013) states critically about her opponents in the Talent Development Movement that “The equation of giftedness with achievement seems to resonate with educators more than with parents” (p. 25). She states that the behavioural indicators are more important than isolated academic achievements. With regard to teacher competency, this means that the ability to observe and correctly interpret behavioural patterns prevails over selection through academic achievements (Haenen & Mol-Lous, 2014). This also implies that to make education successful for gifted children, a fine-tuned response to individual strengths and weaknesses within the context of this asynchronous development is of the highest importance.

Exponents of the talent development paradigm define giftedness as a concept of constructivism, a result of a developmental process where an individual’s developmental potential as a key variable interplays with the pedagogic-didactic environment and with personal effort, in a way that demonstrates exceptional achievements (Cohen, 2012; Dai & Chen, 2014; Gagné, 2010a; Heller, 2010; Lo et al., 2019; Renzulli, 1985; Sternberg, 2002; Subotnik et al., 2011).

The threshold to be labelled gifted is set at 1.3 SD above average (IQ 120). This implies that about 10% of people can be called gifted (Gagné, 2010a), but IQ is not to be seen as the sole predictor of giftedness. Other indicators of giftedness mentioned by exponents of the talent development paradigm are creativity, motivation and perseverance, strong task orientation, and goal-oriented behaviour. However, IQ and previously observed high achievements are seen as the most reliable indicators of giftedness. Compared to the exponents of the gifted child paradigm, exponents of the talent development paradigm have more reservations about indicating behaviour. They state that, from the majority of indicators mentioned in the gifted child paradigm, it cannot be said beyond any doubt that this behaviour can only be the result of a high IQ:

Too often, behaviours like maladaptive perfectionism, feelings of being different, or extreme sensitivity and intensity have been put forward as defining characteristics of giftedness, whereas these behaviors may, in fact, be outcomes of the interaction between gifted children and their home, community and school environment as a result of or independent of the 'gifted' label. (Subotnik et al., 2011, p. 10)

Although both paradigms represent opposing sides of the mystery vs mastery continuum, there is a third and relatively new paradigm on the rise: the differentiation paradigm. The international strive for inclusive education would appear to favour the differentiation paradigm as a way of thinking. Dividing the world into educational "haves and have-nots" is no longer appropriate (Borland, 2005; Dai & Chen, 2014; Lo & Porath, 2017; Lo et al., 2019). Therefore, in this paradigm, the identification of giftedness as a state of being or as a selection criterion for alternative educational arrangements is no longer relevant. The differentiation paradigm focuses on optimal interplay between child and the educational environment, to provide meaningful educational responses that encourage talent development. Within this context, D. Matthews and Foster (2006) presented an education-based definition of giftedness: "Giftedness is exceptionally advanced subject-specific ability at a particular point in time such that a student's learning needs cannot be well met without adaptations to the curriculum" (p. 28). In this educational needs-based concept of giftedness, it is only logical that education has the highest results if it is conceptualised as providing a dynamically responsive curriculum match for the educationally advanced (Lo et al., 2019).

With regard to educational interventions, all three paradigms stress the need to respond to individual differences between gifted students and to tune into their individual profiles of strengths and weaknesses (Dai & Chen, 2014; Kreger-Silverman, 2013; Subotnik et al., 2011). This implies that they all feel that the educational needs of gifted students are likely better served in an educational environment based on divergent differentiation. Therefore, competence in seeing and understanding educational needs and in creating meaningful educational responses goes hand in hand with the ability to acknowledge and recognise the individual needs of gifted students (Lo et al., 2019). Responding to those needs requires an ability in effective classroom management, and the ability to adjust the curriculum in a way that best serves the individual developmental opportunities of students (Calahan & Hertberg-Davis, 2018; Johnsen et al., 2016; Rogers, 2007).

In The Netherlands and Flanders, teachers are aware of the fact that there are different definitions. However, they are unaware of the different theoretical fundamentals which underpin these definitions. It is almost unknown that each perspective on giftedness has its own separate indicators, separate educational goals and consequently separate educational strategies (Dai & Chen, 2014). Consequently, communication and processes of decision making are often blurred. Every school is allowed to define giftedness differently (van Gerven, 2017). In day-to-day practice, even within one team of teachers, several interpretations of a chosen definition can exist without the team being aware of it. This can result in a seemingly arbitrary selection of who is to be labelled as

gifted or not (de Boer et al., 2013; Doolaard & Oudbier, 2010; Haenen & Mol-Lous, 2014).

If asked, teachers will summarise the personal traits of the gifted based on the gifted child paradigm. However, when it comes to selecting students for enrichment activities, they base their decisions on achievements, leave the earlier mentioned personal traits outside of their scope and limit the concept of educational needs of gifted students solely to curricular interventions (Slim! Educatief, Postgraduate Teacher Education Course Specialist in Gifted Education, personal communication/class discussions during modules 3 and 4, January-March, 2017, January-March 2018; January-March 2019; January-March 2020). Where they strive for an educational approach based on the concept of a differentiated response to individual educational needs for most students in their classroom, they move away from that approach when dealing with gifted students. Their pedagogical and didactical responses are mostly based on the concept of a "one-size-fits-all-gifted-students-curriculum". Standard pre-set coursework for students who are identified as gifted has become increasingly popular, leaving ideological convictions regarding optimal differentiation behind on the shelf (Kuipers, 2017).

The somehow unconscious ambivalence towards what it is to be defined as gifted often results in a Babylonian confusion between teachers within a team; teachers and parents; and even between teachers and specialists in gifted education (van Gerven, 2017). Available observation lists do not always lead to clarity. Dutch toolkits for teachers to identify gifted children all use a different theoretical model to underpin their tools (de Bruin-de Boer & Kuipers, 2011; Houkema, 2009; van Gerven & Drent, 2012). They all use one or more of the models based on the talent development paradigm, but they leave the chosen perspective after explaining it in the manual of their toolkits. It is possible to ascertain this by analysing the observation lists. The items on these lists are mostly consistent with behaviour as described within the gifted child paradigm on giftedness (Kreger-Silverman, 2013), and divided into categories as distinguished in the talent development models. In Flanders, Prodia (2012) published a protocol for teachers to help identify gifted students. In a similar way to the Dutch toolkits, it starts from the perspective of the talent development paradigm and, although the observation list is organised in a way that connects with Heller's theory on giftedness (2010), the behaviour described in the list originates from a more eclectic perspective. It incorporates characteristics described by the talent development paradigm, and personal traits described by the gifted child paradigm.

The use of these observation lists brings with it the risk of a circular argument about who is to be labelled as gifted. Students displaying these characteristics are labelled as gifted based on the toolkits guidelines, and the toolkits guidelines in how to label these students as gifted are based on the display of these traits. Successfully using any of the observation lists, requires the awareness of personal preference for a specific paradigm. Within this theoretical context, it requires an accurate knowledge of the overall characteristics on these lists and their association with the resulting educational needs. It also requires the skill to interpret student behaviour displayed in a meaningful educational environment,

within the context of these characteristics, and it requires the competency to create a stimulating learning environment that creates the opportunity for students to actualise these characteristics in a way that makes it possible to observe this behaviour. Whereas the paradigm shift worldwide is moving from the more mystery-oriented perspective towards a more mastery-oriented perspective and the differentiation paradigm is definitely on the rise, in The Netherlands and Flanders, mystery and mastery perspectives are becoming more and more intertwined. In this light, it is interesting to see how popular Dweck's theory (2006, 2017) on mindset is in both countries, because it creates an opportunity for those who adapted the gifted child paradigm to shift to a more mastery-oriented perspective, without letting go of the origins of the gifted child paradigm. After all, Dweck's theory is the perfect example of a mastery-oriented perception. Individual responsibility regarding one's personal development and the linked attitude to internally attributing successes and failure can be seen as the perfect steering mechanism for self-actualisation. An integrated perspective like this can be recognised in Kieboom and Venderickx's (2017) theory of giftedness. By integrating both ends of the continuum of perspectives on giftedness, they might become the new leaders in the Dutch and Flemish educational field regarding the definition and description of the notion of giftedness, because their perspective seems to appeal to parents as well as teachers. It is important to note, as a healthy criticism at this time, that the personal traits, as they are mentioned in this concept of giftedness, have not yet been objectively proven as being solely the result of a high IQ. A counter-argument may be that the traits are recognised in all the dossiers in their practice and that we might assume that all ravens are black until proven otherwise.

The educational effects of the rise of the differentiation paradigm cause serious concern amongst parents, teachers and Dutch and Flemish specialists in gifted education. The increasing number of segregated schools for full-time education for the gifted as discussed in paragraph 2.2.1.1 can be seen as a counter-reaction towards this democratisation of the concept of giftedness.

Inclusion versus segregation, responding to educational needs, the call for differentiation and the changing perspective on giftedness have to be seen within the context of another major paradigm shift in education: the movement towards social-constructivism educational strategies.

2.5 The Fourth Paradigm Shift: Social-Constructivism and 21st Century Skills

The fourth paradigm shift is demonstrated by a fast-emerging need to adjust education to the development of 21st century skills. In The Netherlands and Flanders, a traditional approach to education is no longer seen as sufficient (Onderwijsraad, 2014; Vlaams Ministerie van Onderwijs en Vorming, n.d.; Unesco, 2015). The high-speed development of knowledge and skills, and the increasing emphasis on technology, requires that people should be able to adjust themselves at the same pace (Onderwijsraad, 2014; Vlaams Ministerie van Onderwijs en Vorming, n.d.). Therefore, education should be modified by

adjusting the traditional didactics to modern requirements (de Bie, 2016). This means a shift from a knowledge-transfer based didactic towards a knowledge-construction based didactic, also referred to as constructivism. This shift is a complex process. Knowledge-transfer can be a straightforward process. The knowledge and skills to be taught are known, as is how the results of the learning process can be assessed. Knowledge-construction, however, is not that straightforward. Process and results can vary enormously. Educational objectives are not always easy to stipulate because often new knowledge is constructed, and qualitative criteria to assess this new knowledge are difficult to predict (Marzano & Kendall, 2008).

While learning, this new didactic requires the application of different skills from those that were required by the traditional way of teaching. Marzano and Heflebower (2012) distinguish cognitive and conative skills that need to be developed by students. The Onderwijsraad, the Dutch National Board for Educational Advice (2014) points out three domains of skills: thinking skills, social skills, and metacognitive skills. In its report *Van lerensbelang* (the importance of learning) the Flemish Ministry of Education describes 14 different categories of skills that can be clustered as thinking skills, social skills, metacognitive skills and IT-skills (Bambs et al., 2016). Although there is a difference in terminology, all approaches focus on the same behaviour. For daily practice in education, it means that teachers have to teach children how to become self-regulating, creative and critical thinkers, able to solve relatively complex problems in a social context that requires them to be active participants and effective team players, with the ability to reflect on their behaviour as the trigger for processes and results (Vermeulen & Vrieling, n.d.). Due to the digitalisation of information and communication, the development of ICT skills should also be part of this modern curriculum (SLO, n.d.).

In paragraph 2.3.2, the concept of a differentiated response to educational needs was introduced. With the shift towards a social-constructivist approach to education, the necessity for differentiation becomes more compelling than ever. Not only does curriculum content have to be taught, but all students have to be equipped with a broad set of self-regulating, social and metacognitive skills (Ylvisaker & Feeney, 2014; van der Donk et al., 2015). Hence, the individualised teacher's response is conditional to its success (Kroesbergen et al., 2017). These skills have to be developed and internalised over a long period. A condition of developing these skills, is the taking on of all different kinds of assignments and projects in various educational contexts (Meltzer, 2018; Stoeger & Ziegler, 2011). Each student has their own strengths and weaknesses in these skills (Anderson et al., 2014; Barkley, 2012). This implies that this new didactic depends not only on a student's capacity and efforts but also very much on the teacher's capacity and attitude (Onderwijscoöperatie, 2014; Vlaamse Onderwijsraad, 2017). The teacher's ability to model preferred behaviour is crucial.

The so-called 21st century skills are not new in education (Thijs et al., 2014), nor are the necessary teacher competences (Mol-Lous, 2011). What is new is the fact that these 21st century skills are valued as important for everybody, and not only for the higher educated (Unesco, 2015). Following international

politics, the Dutch and the Flemish governments, therefore, concluded that these skills should be developed by all students and that this learning process should be started at a very early age (Onderwijsraad, 2014; Vlaams Ministerie van Onderwijs en Vorming, n.d.). This conclusion affects the profession of teaching. To adjust their didactics to what is required by a social-constructivist approach to education, teachers first have to develop these 21st century skills themselves (Vermeulen, 2016; Vlaams Ministerie van Onderwijs en Vorming, n.d.; Voogt & Pareja Roblin, 2010).

Many similarities can be observed between the social-constructivist approach and the mastery-oriented perspective on the development of giftedness. Taking these similarities into account, it might be concluded that, provided there is sufficient teacher support, the skills aimed for could be a proper match for the way a lot of gifted students learn (Schrover, 2015). However, no paradigm is introduced without healthy criticism. Although this approach might appear to be a good fit for a lot of gifted students, based on the individual educational profiles of gifted students, there is not enough evidence that it is good for all gifted students. This conclusion brings the focus onto the last paradigm shift.

2.6 The Fifth Paradigm Shift: Evidence-Informed Teaching

In 2006, the Onderwijsraad, the Dutch National Board for Educational Advice wrote, "Research can provide a more reliable judgement on the appropriateness of methods and approaches, and can prevent the continuing of ideological discussions and 'trial and error'" (pp. 9-10). The advice to assign ideology and personal professional experiences (based on N=1) as secondary to generic proven principles, showed the direction of future discussions for new pedagogical and didactical approaches. Objectified knowledge prevails above the professional experiences of teachers. Although personal professional experiences were not completely excluded when it comes to determining "what works" (Onderwijsraad, 2006), they were marginalized. Evidence-based teaching became dominant in the discourse on the quality of education (Biesta, 2007; Diery et al., 2020).

In The Netherlands and Flanders, the discussion on strategies for evidence-based teaching is dominated by the research of John Hattie and Robert Marzano (Hattie, 2013, 2014; Hattie & Yates, 2015; Marzano, 2007, 2011). Their perspective includes a strong emphasis on data-driven education. That implies that students' results on standardised tests are considered to be the most relevant information for underpinning planned educational strategies (Hattie, 2013; Marzano, 2007). Data walls based on standardised test results are being used to help teachers to differentiate between their students by dividing their test results into three tiers (convergent differentiation). Educational goals and instructional strategies are different for each tier. The data wall is considered to be the step between the database of test results in the student assessment system and the teacher's action plans for clustering students based on the educational needs that can be deduced from this information (Kappen & Förren, n.d.).

Figure 6

Continuum of Evidence



Note. From *What Makes a Practice Best? Evidence Based Recommendations in Gifted Education*, by A. Robinson, 2015, World Council of Gifted and Talented Children, 21st World Conference, Odense, Denmark. Copyright 2015 by A. Robinson.

Although student assessment and standardised testing are without a doubt a solid starting point for planning educational goals (Chandra Handa, 2009; Roberts & Inman, 2015), this does not necessarily mean that standardised tests should be the only information teachers are using to underpin their educational strategies (van Meersbergen & de Vries, 2017). Voicing can be an effective strategy to gather additional information and the results of that process might be considered data as well (Pameijer, 2017; Mayes et al., 2019). In teacher education courses teachers report that the use of portfolios is becoming a more often taken approach as well (Slim! Educatief, Postgraduate Teacher Education Course Specialist in Gifted Education, personal communication/class discussions during modules 3 and 4, January-March 2017, January-March 2018; January-March 2019; January-March 2020). For teachers, the fast-growing emphasis on the concept of evidence-based teaching has had a major impact (Van Braak et al., 2008; Vandenberghe, 2005). They needed to be enabled to use empirical

evidence productively (European Commission, 2007), and although they were expected to integrate empirical evidence with their teaching experience, their personal (individual) professional experiences seemed to be less valued than before (Biesta, 2007). They had to learn how to accept that *good for one* does not automatically mean that it is *good for all*, or even *good for most*. Research by Diery et al. (2020) suggests that students in teacher education are more likely to accept information derived from their daily practice than research-based sources of knowledge, and that they are more motivated to learn from these practical resources. This information tells us how teachers weigh the importance of their personal experiences and how complex it is for teacher educators to teach them to accept research-based sources of knowledge.

The process of learning how to use and value (empirical) evidence is widely discussed amongst teacher-educators (Diery et al., 2020; Simpson, 2020). In 2015, at the biannual conference of the World Council for Gifted and Talented Children, Robinson presented a hierarchy of evidence. She distinguished three separate levels of evidence. The first level is referred to as *soft evidence* or wisdom. At this level, the evidence is shaped by the personal experience of one professional with one student. Advice obtained at this level should be seen as a personal recommendation. The evidence for advice at this level lacks theoretical underpinning and is mostly shaped by trial and error (Robinson, 2015). The second level of evidence is referred to by Robinson as *best practice*. Best practice differs from common practice. In this context, best practice refers to a theoretically underpinned approach, applied within clear conditions but with the flexibility to adjust as seen fit. At level three, *hard evidence* forms the top level Robinson's hierarchy and is referred to as evidence-based. The level of stringency in the application of conditions and set rules is at its highest on this top level. This stringency has its roots in the field of medicine. Biesta (2007) states that, at this level, effective interventions are those that prove to have a positive causal relationship between the intervention and the response; he argues that a singular focus on effectiveness leaves the most important question of "effective for what" undiscussed.

So in light of using this hierarchy, it is therefore a valid question to ask, what can be considered as reliable evidence and whose evidence counts (Nelson & Campbell, 2017)? To what extent does the evidence gathered from overarching research prevail over evidence gathered by teachers in their daily practice? The complexity of evidence-based education leaves additional factors out of the scope, suggesting that what has been proven effective for most, is also effective in individual cases. It leaves undiscussed whether *effective* is a synonym for *good*; it is just assumed that it is a synonym. However, that also should be discussed (Biesta, 2012; Korthagen, 2017; Mol-Lous, 2011). Teacher-educators stress the importance of teachers also having to learn how to weigh when, from a change and solution-focused pedagogy, *good for one* should prevail over *good for all* (Biesta, 2007, 2012; Mol-Lous, 2011). Moreover, as a parallel process, teachers have to be enabled to distinguish when an approach is based on prejudice towards a group of students and to dismiss such an approach even when they feel personally attracted to it based on personal experience (Biesta, 2007).

Instead of evidence-based teaching, a better concept might be evidence-informed teaching. This last concept leaves room for teachers to make professional judgements about individual cases, based on different types of evidence and the different contexts in which this evidence needs to be applied (Nelson & Campbell, 2017). Evidence-informed teaching does not provide a recipe book. Sharples (2013) interprets it as being about integrating professional expertise with the best external evidence from research, to improve the quality of practice. Professional expertise does refer the teacher's professional ability "to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that includes reflecting on social and ethical responsibilities linked to the application of their knowledge and judgements" (Bologna Working Group on Qualifications Frameworks, 2005, pp. 68).

The paradigm shift towards evidence-informed teaching brings two issues to light that are influencing the position of gifted education in The Netherlands and Flanders. The first issue has to do with the quality of postgraduate teacher training regarding gifted education. In order to meet current European standards in teacher education (Bologna Working Group on Qualifications Frameworks, 2005), the quality of teacher education is crucial (European Commission, 2007, 2013). The ability to make well-judged evidence-informed decisions, requires that teachers should be taught how to do this responsibly while staying true to their professional values (Biesta, 2012; Diery et al., 2020; Campbell et al., 2017). An important aspect affecting the quality of teacher education is the use of an evidence-informed approach by teacher educators in their courses (Diery et al., 2020; Pillen, 2018). This calls for qualified teacher educators who are more experienced in research and teaching and who are able to implement the use of reliable evidence (Diery et al., 2020, Lunenberg et al., 2014). This is where the paradigm shift towards evidence-informed teaching influences the position of gifted education in The Netherlands and Flanders. As not all specialists in giftedness involved in continuous professional development of teachers are qualified teacher educators, it raises questions about how, in the first place, that affects the quality of evidence-informed teacher education in courses for continuous professional development and, in the second place, how that affects the quality of gifted education. In other words, how do we ensure that gifted education is not based on quicksand?

The second issue regarding the paradigm shift towards evidence-informed teaching, is raised by the question of whether there is sufficient evidence to accept that proposed strategies for gifted education match the Dutch and Flemish social-economical and educational context. When it comes to gifted education, existing research about what works and what does not work is mostly based on projects in countries other than The Netherlands and Flanders (de Boer et al., 2013; Doolaard & Oudbier, 2010; Haenen & Mol-Lous, 2014; Hoogeveen et al., 2004; Mooij et al., 2007; Segers & Hoogeveen, 2012). Although that does not mean that this knowledge cannot be adopted, it prevents a one-on-one transferral of ideas. For every proven strategy, one has to take into account that there might be differences between the educational and social context within which the strategy is applied (Biesta, 2007, 2012). There may also be

differences in the underlying concept of giftedness, cultural assumptions as to what should be set as educational goals, and in what is defined as good *in* education and good *for* education. Not only is the development of giftedness systemically influenced, but education is as well (van Meersbergen & Jeninga, 2012). Evidence of what works and what does not is highly dependent on the context within which this proof is gathered, applied and valued. Thus, the most interesting question is not whether a strategy for gifted education works or not, but is about the conditions for its application and the underlying normative concept of what a good education is, and in what context these students can best be served.

2.7 Summarising

In this chapter, Dutch and Flemish education of the gifted is positioned within the context of five interplaying significant paradigm shifts, all affecting Dutch and Flemish education. The interaction between the five paradigms, relating to the call on the expertise that each paradigm places on teachers, demonstrates the complexity of teaching in general and of teaching the gifted especially. Dutch and Flemish school administrations are free to decide how they think these students are served best.

As a result of the inclusive approach, the education of gifted students should be integrated into every school's practice (Dekker, 2014a, 2014b; Slob, 2018a; Vlaams Parlement, 2019). This calls highly on the teacher's ability to differentiate in pedagogics and didactics and requires well-developed managerial skills (Janson, 2017; Kuipers, 2017). The diversity of their students' educational profiles also calls on the teacher's creative problem-solving skills. To determine what strategies will work, or what the best intervention is under specific conditions, a further required competency is the teacher's ability to critically weigh their options (Biesta, 2012; Korthagen, 2017). Hence, a condition of competence is not just a declarative knowledge of giftedness but also a declarative knowledge of different educational strategies (de Boer et al., 2013; Haenen & Mol-Lous, 2014; Hoogeveen et al., 2004; van Gerven & Hoogenberg, 2011). To be able to put this knowledge into use, teachers need to develop perspectives on giftedness and align their actions with regard to their chosen perspectives (Dai & Chen, 2014).

The way educational needs call on a teacher's handling capacity, taking into account how other students also call on this capacity, determines the level of support they choose as a response to the needs of the gifted student. The width of the existing support-pyramid depends, therefore, on a school's population, the level of professionalism of the teachers, and the managerial options school administrators have. As a result of this, the level of support used to respond to the educational needs of gifted students may differ for all schools. Even within a teaching team, there will be differences between what each teacher can offer. It requires managerial responsibility to develop a continuum of support with the highest balance to circumvent possible inequalities in the care of students due to the different capabilities of a teaching team.

From the interdependency of the educational paradigms, five main domains of teacher competencies can be inferred as explicitly influencing the education of gifted students. (1) Concepts of giftedness: the need for in-depth knowledge of the theoretical perspectives on giftedness and gifted education and the ability to apply this knowledge contextually in educational practice. (2) Seeing educational needs: the change and solution-focused pedagogy for seeing and profiling the educational needs of gifted students. (3) Understanding educational needs: it is imperative to interpret and understand the educational needs of gifted students within their ecological context, within an interactive system of the student, the teacher, the curriculum, physical learning environment, the family, and peers. (4) Responding to educational needs: effective education requires meaningful responses to the educational needs of gifted students from a contextual and developmental perspective. In so doing, (learning) process and (learning) results are equally important. (5) Assessing the responses to interventions: tuning into a student's needs requires the competence to monitor the process of responding meaningfully to a student's educational needs and the ability to interpret the student's responses to these interventions contextually.

Taking into account the fact that basic teacher competencies for The Netherlands and Flanders are already prescribed by law, competence in the domains mentioned above should always be described in relation to those basic teacher competencies. It is recommended, therefore, that a competency matrix should be constructed which combines both sets of competencies.

3 A Theoretical Framework for a Professional Standard in Gifted Education

3.1 Introduction

In The Netherlands and Flanders, there are several perceptions of the notion of *specialist in gifted education*. These perceptions differ in the level of in-depth knowledge that has to be developed, the kind of knowledge that has to be developed, the theoretical underpinning of this knowledge, the terminology that is used, and the professional background of the specialist. Placing the growing awareness of the needs of gifted students within an historical context explains this phenomenon. In the mid-eighties of the last century, parental self-help organisations carefully started to raise awareness of their gifted children. In 1985, Bekina (n.d.), the association for parents of gifted children was founded in Flanders. In 1987, Pharos, a Dutch equivalent association was founded. In 1994 Hint, and in 1999 Choochem, both parental groups, were also established (van den Heuvel, 2007). Parents of gifted children noticed that their children did not get an education that stimulated them to actualise their intellectual potential. As parents, they developed practically based insights into “what worked” in education for their children and “what did not work” for them. Joining parenting groups gave them a voice in society that could no longer be ignored. During the same period, giftedness became a topic for Dutch university scholars. Prof Dr Pieter Span and Prof Dr Franz Mönks focused their respective researches on the notion of giftedness and its influence on education and upbringing. Both founded centres of expertise that were supported by their respective universities.³ Parents and schools could ask for their advice in raising or educating a gifted child. The first efforts for teacher education were, therefore, initiated by expert-parents and psychologists. In the mid-nineties, an increasing number of parents and teachers approached local and regional special educational needs coordinators (SENCo’s) with their questions about what to do with gifted students in education. In response, these consulted professionals enhanced their knowledge, for example, by joining conferences of international organisations such as the European Council of High Ability and the World Council for Gifted and Talented Children. Based on this expertise, these professionals started to deliver workshops and training courses for teachers. This movement in the Dutch professional field caused a snowball effect. Giftedness was placed on the educational agenda. In 1997, The Dutch Centre for Gifted Studies (CBO) joined forces with Antwerp University to open the Flemish Centre for Gifted Studies, coordinated by dr Tessa Kieboom, who became its Director in 2001. The centre fulfilled a similar need to its Dutch counterpart. It played an important role in the education of Flemish teachers in gifted education and in the support of parents bringing up their gifted children.

³ Prof Dr Span started PABU – currently Pieter Span Expertise Centre (Utrecht University). Prof Dr Mönks started the Centre for Gifted Studies-CBO (Radboud University).