Identifying gifted children and their learning needs in the Dutch primary school context

Master Educational Sciences and Technology

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Summary

In today's Dutch education, Dutch primary school teachers have trouble identifying gifted children as gifted and anticipating the needs of the gifted. As a result, not all Dutch gifted primary school children receive appropriate education. This study explored the ways in which giftedness professionals identify gifted children and the differences among them. Teachers and coaches specialized in giftedness (N = 22) were interviewed about the giftedness characteristics and educational-related differences among gifted children which they have perceived in their daily practice. Besides, the participants' opinion was asked regarding the Revised Profiles of the Gifted and the Talented, a tool for identifying the gifted and anticipating upon their needs (Betts & Neihart, 2010). The characteristics and differences mentioned by the participants have been compared with the model of Betts and Neihart (2010). The main findings show that the giftedness professionals identified 14 giftedness characteristics and 5 different distinctions among gifted children. They also recognised 1 of the Betts and Neihart profiles, i.e., the Challenging Creative. The mentioned giftedness characteristics and distinctions among gifted children do show overlap with the Betts and Neihart profiles. However, the profiles do not mention: extremely gifted children with an IQ above 145, autonomy as a standard need of gifted children, and situational characteristics. When using the Betts and Neihart profiles, teachers should be aware that not every gifted child can be categorised into a profile.

Keywords: giftedness, profiles, education-related differences, characteristics, learning needs

Problem Statement

In today's Dutch education, not all Dutch gifted primary school children receive appropriate education (Slob, 2018). In general, the Dutch school system focuses on the average student and supports those children who perform below average (De Boer, Minnaert & Kamphof, 2013; Mooij, 2019). Although the government (Dekker, 2014) raises awareness regarding giftedness by funding and policy measures, Dutch gifted children are not reaching their full potential (OECD, 2016; Mooij, 2019). Because the governmental acts mostly focus on gifted children who already have been identified, non-identified gifted children do not directly receive better, or more appropriate, education. By not receiving appropriate education, gifted children can develop behavioural problems, which can lead to underachievement or drop-outs (De Heer, 2017; Mueller & Winsor, 2018; Tielen & Nellen, 2015).

The main cause for not receiving appropriate education is that teachers have trouble identifying gifted children as gifted (Bakker & Busato, 2008; De Heer, 2017). Because the teachers do not have sufficient knowledge about giftedness' characteristics (De Heer, 2017; Slob, 2018), they identify gifted children based on intuition, which is often influenced by misunderstandings and prejudices (De Monitor, 2018; Bakker, Van Kessel & Sikkes, 2008; Berman, Schultz & Weber, 2012; Heyder, Bergold, & Steinmayr, 2018). This way, some types of gifted children are not identified as gifted because teachers often form an important source within the identification process of giftedness (De Heer, 2017; Tourón & Freeman, 2018). As teachers also lack knowledge about the learning needs of gifted children and the skills needed to respond to these needs (Smeets, Ledoux, Regtvoort, Felix & Mol Lous, 2015), it becomes hard to provide identified gifted children with appropriate education (Dekker, 2014; OECD, 2016; Slob, 2018).

In order to help teachers provide gifted children with appropriate education, this study explores the current ways in which Dutch giftedness professionals identify gifted children and the differences among them. By describing the giftedness characteristics and the differences among Dutch gifted children that appear in educational practice (education-related differences), awareness about the differences among the gifted and their learning needs will be created. Based on the characteristics, differences, and needs of the gifted, teachers can develop educational goals for gifted children. This way, it becomes easier for teachers to provide appropriate education for the gifted.

As previous research by Betts and Neihart (2010) has shown that there are different types of gifted children, this study also aims at examining whether similarities can be found between the Dutch school context and the model of Betts and Neihart (2010). This way, it becomes evident whether the Betts and Neihart profiles can be used within the Dutch school context.

Theoretical Framework

There is no consensus about the definition of giftedness, as giftedness is a multifaceted and a developmental construct (Reis & Renzulli, 2009; MacFarlane, 2018). It has often been associated with an advanced intellectual capacity (Ziegler & Heller, 2000; Subotnik, Olszewski-Kubilius & Worrell, 2011), but with the increase in research more characteristics have been attributed to giftedness. For example, creativity has often been mentioned as an indicator of giftedness, referring to the development of new ideas and solutions. Task commitment has also frequently been marked as a giftedness indicator, including motivation and perseverance (Renzulli, 1984; Sternberg, 2003). Other less mentioned characteristics are perfectionism (Rice & Taber, 2018), hypersensitivity, sense of moral justice, and a critical attitude (D'Hondt & Van Rossen, 2018; Kieboom, 2003, 2016; Smith & Wood, 2018). It is evident that so many characteristics complicate the construction of an overall definition of giftedness.

Furthermore, the developmental aspect of giftedness also contributes to the lack of consensus on the definition. Giftedness is influenced by multiple developmental factors, such as personality characteristics and environmental conditions (Gagné, 2005; Kieboom, 2003; Reis & Renzulli, 2009). Some personality characteristics, e.g., the ability to cope with stress and to manage expectations, can have a positive influence on the manifestation of giftedness. Several environmental conditions, such as a non-stimulating school climate and bad quality of instruction, can have a negative influence on the manifestation of giftedness (Heller, 2004). As gifted children display different personality characteristics and experience different environmental conditions, it is evident that the gifted form a heterogeneous group (Reis & Renzulli, 2009). This makes it difficult, as a non-giftedness expert, to identify a gifted child.

Primary school teachers are rarely giftedness experts, for they do not have sufficient knowledge about giftedness (Bakker & Busato, 2008; De Heer, 2017; Slob, 2018; Smeets et al., 2015). Their lack of knowledge is caused by the fact that most teacher training programmes do not have the time or expertise to explicitly address giftedness (De Heer, 2017). This forces teachers, who strive to correctly identify and anticipate upon gifted children, to follow post-graduate or in-service courses. Unfortunately, due to time constraints, about half of the teachers are not offered this opportunity (Koenen, 2017). As a result, teachers lack knowledge about the giftedness' characteristics, the learning needs of the gifted, and the skills needed to provide appropriate education (De Heer, 2017).

Because the teachers lack knowledge about giftedness, they have trouble identifying gifted children as gifted and anticipating the gifted (De Heer, 2017). Their lack of knowledge causes them to often identify and anticipate upon gifted children based on their intuition, which is often influenced by misunderstandings and prejudices (Acar, Sen & Cayirdag, 2016; Bakker, Van Kessel & Sikkes, 2008; Berman, Schultz & Weber, 2012; Heyder, Bergold, & Steinmayr, 2018). For example, they believe that

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gifted children as a homogeneous group are creative and socially awkward (Bakker et al., 2008; Reis & Renzulli, 2009). Another example of a misunderstanding about giftedness is the belief that gifted children do not need any help, as they will make it on their own (Berman et al., 2012; De Boer et al., 2013; De Heer, 2017). These misunderstandings and prejudices regarding giftedness' characteristics can lead to wrong approaches regarding the identification of and anticipating the gifted children.

When focussing on the belief that gifted children as a homogeneous group are creative and socially awkward (Bakker et al., 2008; Reis & Renzulli, 2009), teachers accordingly recognize children as gifted when they show creative expression and have trouble connecting with others. Since these children are full of energy and often challenge the teachers, teachers view them as rebellious and having discipline problems. Therefore, teachers want these children to conform, when they actually need support for their creativity and less pressure to conform. This way, teachers take a wrong approach by focussing on their problematic behaviour, instead of addressing the learning needs of these children. In the literature these children are referred to as 'Challenging Creative' (Betts & Neihart, 2010; De Heer, 2017).

When focussing on the belief that gifted children do not need any help and will make it on their own (Berman et al., 2012; De Heer, 2017) teachers accordingly recognize children as gifted when they seem to be independent, successful and hard-working. Since these children achieve well on exams and show appropriate behaviour, teachers do not offer them any challenges or support in risk-taking. Although this might seem to address their needs, part of these children are in truth eager for approval, extrinsically motivated, anxious to fail, and very self-critical. They actually need to be challenged, take risks, become independent, and develop their creativity. Since their needs are not addressed, they adjust themselves in order to meet others' expectations. In the literature they are referred to as 'Successful Adjusted' (Betts & Neihart, 2010). Some of the gifted children that show task commitment and achieve well on exams, are ambitious, intrinsically motivated, willing to fail, and very self-directed. Although these children are good self-regulators and are seen as capable and responsible, they also need support in risk-taking and in managing their stress level. However, teachers often take a wrong approach as they are not supporting them in risk-taking and managing their stress level. In the literature they are referred to as 'Autonomous Learner' (Betts & Neihart, 2010).

Whereas the abovementioned examples show how teachers can take wrong approaches in the anticipation upon identified gifted children, there are types of gifted children that are not identified as gifted by teachers. As mentioned earlier, there are several personality characteristics or environmental conditions that influence the manifestation of giftedness (Heller, 2004; Reis & Renzulli, 2009). For example, there are gifted children who feel unsure about themselves and their giftedness. Because they are afraid that their intellectual potential (and additional achievement)

stands in their way to fit in with their peers, they are denying their giftedness. They reject challenges and achieve average (or below average). In the literature they are referred to as 'Underground' because they tend to blend in with the other children (Betts & Neihart, 2010). This way, teachers often do not identify these children as gifted because they do not stand out.

Another example of gifted children, who are not always identified as gifted, is the group of gifted children with a learning- or behavioural disorder. They receive bad marks and have an inconsistent working method. They appear chaotic, suffer from learned helplessness, and intense frustration (Betts & Neihart, 2010). Because their learning- or behavioural disorder makes it harder to identify them as gifted, their giftedness is usually overlooked (Betts & Neihart, 1989). Since they do not receive any support for their giftedness, they might develop depression or an anxiety disorder (Neihart, 2004; Tielen & Nellen, 2015). In the literature these children are referred to as 'Twice Exceptional', as they are gifted and have a disorder (Betts & Neihart, 2010).

At the same time, some gifted children are not identified as gifted because they show defensive and reckless behaviour. Since they cause disruptions in class and show low achievement, teachers view them as rebellious and may be afraid of them. As teachers find it hard to confront them and keep them engaged in school, these children tend to drop out of the school system. In the literature they are referred to as 'At-Risk', for the fact that they are at risk for dropping out of the school system (Betts & Neihart, 2010).

The aforementioned ways in which the behaviour and feelings of gifted children can differ are based upon the Revised Profiles of the Gifted and the Talented (Betts & Neihart, 2010). This model describes the six 'profiles' of giftedness, each containing different behavioural characteristics, feelings, and needs. The model also indicates the identification, adult perception, and home- and school support per profile. By applying the model, it "increases awareness among educators [...] of differences among gifted children and provides guidelines for identifying gifted children" (Betts & Neihart, 1988, p. 248). It is important to make teachers aware of these differences among gifted children, as it will help determine the learning needs of gifted children (Berman, Schultz & Weber, 2012). By identifying gifted children and their learning needs, educational goals can be developed. By optimizing students' learning through appropriate educational goals, appropriate education is facilitated (Stambaugh & Ford, 2015).

In order to help teachers provide gifted children with appropriate education, this study explores the current ways in which Dutch giftedness professionals identify gifted children and the differences among them. By describing the giftedness characteristics and the differences among Dutch gifted children that appear in educational practice (education-related differences), awareness about the differences among the gifted and their learning needs will be created. As Betts and Neihart (2010) have described different types of gifted children, this study also aims at examining whether

similarities can be found between the Dutch school context and the model of Betts and Neihart (2010). This way, it becomes evident whether the Betts and Neihart profiles can be used within the Dutch school context.

Research questions and model

How do Dutch giftedness professionals identify gifted primary school children and their differences? In order to answer this question, the following sub-questions have been raised:

1. Which giftedness characteristics, related to Dutch gifted primary school children, are mentioned by professionals?

2. Which education-related differences, related to Dutch gifted primary school children, are mentioned by professionals?

3. How do the mentioned giftedness characteristics and differences relate to the profiles of Betts and Neihart?

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Method

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Participants

Fifteen primary schools offering full-time gifted education and 46 coaches specialised in giftedness were invited to participate in this study. The response rate was 29.51%, which led to a sample of 22 professionals. Of this sample, 13.6% ($n = 3$) of the professionals worked as a gifted education teacher, 50.0% ($n = 11$) worked as a coach specialised in gifted children, and 36.4% ($n = 8$) worked in both fields. The teachers ($M = 3.17$), coaches ($M = 7.91$), and those who worked in both fields ($M = 9.94$) have guided between 20 and 600 children. All participants were female and had finished at least one study focussing on giftedness. Most participants (86.36%) attended one of the post-HBO Talent Counsellor tracks at Novilo (apprentice or master), which contains a one year program focussing on the application of giftedness theories in education. Other training programs were the post-HBO Master SEN (27.27%), WO Bachelor & Master Orthopedagogy (13.64%), post-HBO ECHA (9.09%), and post-HBO Slim Educatief (9.09%). Informed consent was actively obtained for audio recording the interviews and anonymously processing the data.

Instruments

The semi-structured interview consisted of two tasks and eight questions, that were divided among three different sections. Accordingly, the first five questions applied to the first section 'Experience and background'. In this section, participants were asked about their working experience and (educational) background regarding giftedness. Questions, such as 'How long have you been working with gifted children?', 'How would you describe giftedness?' and 'What training programmes or courses have you been studying related to giftedness?' were asked.

The second section, called 'Comparing gifted children', contained a task and a few related questions. First, the participants had to write down on separate cards the names of approximately 10 children that they had been guiding for the past year. Second, the participants had to sort the name cards 2 to 3 times into different groups. These groups, created by the participants, were based on shared similarities or differences. After each sorting, participants were asked about their reasons for making this (sub)division ('Why did you make this subdivision?'). Additional questions were asked about the specific groups that were created ('On what kind of characteristics does this group differ from the other group(s)?' and 'What are the specific needs of this group and how do you take these into account?').

The last section, called 'Profiles of Betts and Neihart', contained a task and three questions. The participants were presented with the Dutch translated version of the Betts and Neihart Profiles. They were asked to sort the name cards into the Betts and Neihart Profiles. When participants were not able to sort some of the name cards into the profiles, they were asked why they had difficulty to sort the name cards. After sorting, participants were asked about their opinion regarding the Profiles ('What are the advantages of this kind of classification?' and 'How do you use these profiles in daily practice?').

In the last section, participants were also asked about their opinion regarding the statement 'According to Betts and Neihart (1988), 90% of all gifted children can be classified as Successful Adjusted'. However, this question was not included in the analyses for two reasons. First, the question has been misinterpreted as the answers of the participants were very different and ambiguous. Second, Betts and Neihart have recently refuted the percentage since they now believe that the majority of all gifted children is distributed over the other types of giftedness (NTCN, 2015).

Procedure

Data collection took place during the second semester of the school year (i.e., April, May, and June). The interviews were held at the most convenient locations, ranging from schools and offices to homes and restaurants. The interviews had a duration of approximately 60 minutes and were audio recorded.

At the beginning of the interview, the participants received an introduction explaining the general purpose of the interview, pointing out the different sections and addressing the length of the interview. The interview started with questions on background and experience, continued with the 'Card sorting task' and a task related to the profiles of Betts and Neihart and ended with thanking the participant and asking permission for further contact.

Analyses

After conducting the interviews, the audio recordings were coded using ATLAS.TI 8. A conventional content analysis was used to analyse the recordings. With this type of analysis approach, 'codes are defined during data analysis' (Hsieh & Shannon, 2005, p. 1286). First, the data analysis started with the process of open coding, in which passages were highlighted that appeared to contain the key concepts per interview question. During this process, these key concepts emerged from the data, rather than using a literature-based framework. The highlighted segments contained one key concept per segment and varied in size (i.e., from one word to a couple of sentences) (Padgett, 2016). The length of these segments was determined by the discussed topic, i.e., in case of a subject change the temporary segment was cut off and a new segment was created.

In the first section, the focus was on the characteristics of Dutch gifted primary school children. A segment was created when a giftedness characteristic was discussed and was labelled as specific as possible. In the second section, the focus was on the education-related differences among gifted children. Segments were created when characteristics of different children were mentioned that formed a contradiction or continua. In the third section, the focus was on the opinions about and the application of the Betts and Neihart profiles in the Dutch school context. Segments were created when an opinion was expressed towards the profiles. The labels for the initial codes described the content of the segment as specific as possible. When segments contained similar concepts, the same initial code was assigned to both segments.

Subsequently, the initial codes were organised into 33 categories based on related concepts (i.e., axial coding, Padgett, 2016). During this process, the giftedness characteristics mentioned in the literature (i.e., high IQ, perfectionism, creativity, hypersensitivity, critical attitude, and a sense of moral justice) formed inspiration in labelling the categories. New categories were created when at least four participants mentioned codes from that category. Codes with a corresponding meaning were merged in the same category (e.g. *'being able to think quickly'* and *'quick thinkers'* were both merged into 'High IQ').

During the selective coding process, categories were compared based on similarities and relations (Padgett, 2016). For example, the category 'Critical Attitude' was changed into 'Inquisitive Attitude' since this matched better with the underlying codes. As participants often mentioned certain characteristics as a result of a mismatch, a distinction was made between standard giftedness characteristics and situational giftedness characteristics.

A second coder assessed 10% of the data (i.e., two interviews with a total of 122 minutes). The interrater reliabilities on the three interview sections, as measured with Krippendorff's α, were .84, .95, and .85, respectively. The overall interrater reliability, as measured with Krippendorff's α, was .91.

Within the radar charts, distinctions are displayed as continua on separate axes. To indicate the extent to which a distinction is present within a profile, a three-point-scale was used (0 = not present, 1 = partly present, and 2 = always present). The subject for analysis was the description of the profiles as mentioned by Betts and Neihart (2010).

Results

Giftedness characteristics

In order to answer the first sub-question 'Which giftedness characteristics, related to Dutch gifted primary school children, are mentioned by professionals?', participants were asked 'How would you describe giftedness?'. The answers to this question have been categorised in nine standard characteristics and five situational characteristics. The standard characteristics can be found to a greater or lesser extent within every gifted child, whereas the situational characteristics only appear within in non-stimulating situations.

Standard characteristics. Table 1 shows an overview of the nine different standard giftedness characteristics that were mentioned by the participants.

Table 1

Standard Giftedness Characteristics, Number of Participants Mentioning Characteristics and Corresponding Percentages of Total Participants

Variable	*n*	%
Hypersensitivity	19	86.36
High IQ	18	81.82
Creativity	17	77.27
Inquisitive Attitude	11	50.00
Perfectionism	10	45.45
Sense of Moral Justice	8	36.36
Asynchronous Development	6	27.27
Autonomy	5	24.79
Task Commitment	4	18.18

Based on Table 1, it appears that Hypersensitivity (*n* = 19), High IQ (*n* = 18) and Creativity (*n* = 17) were the most often mentioned characteristics of giftedness. Hypersensitivity (*n* = 19) refers to *'being extremely sensitive'* and *'quickly over-stimulated'.* This manifests itself in *'five different overexcitabilities: (…) physical, sensual, intellectual, imaginational, and emotional'*. Physical

overexcitabilities can be found within children who *'show restless behaviour'* and *'are constantly fidgeting'*. Sensual overexcitabilities refer to *'being sensitive to sounds'* but also *'being triggered by labels in your clothes (…) and seams in your socks'*. Some children even *'refuse to wear underwear'*. Intellectual overexcitabilities address children that *'want to know everything'* but also children *'who worry a lot'*. In combination with giftedness, it also points towards the advanced intellectual capacity of gifted children. Imaginational overexcitabilities are shown by children *'who daydream'*, *'have imaginary friends'* and *'who can deeply sympathize with movies'*. Emotional overexcitabilities are characterised by extreme emotional behaviour, for example children who are *'just angry become extremely mad'*. Children who show this behaviour, *'often hear they are too [sensitive]'* and that *'they shouldn't exaggerate'*.

Even though High IQ (*n* = 18) was often mentioned, it should be noted that the majority of the participants (17) had a sceptical attitude towards High IQ as a stand-alone indicator for giftedness. Arguments, such as *'some [gifted] children haven't taken an IQ test'*, *'an asynchronous development might influence the IQ score'*, and *'[an IQ] test is only taken at a particular moment in time'*, show that High IQ is not preferred as a stand-alone indicator of giftedness. As a consequence, 17 of the 18 participants that mentioned High IQ named at least two other characteristics as well.

Creativity (*n* = 17) involves a different way of thinking, as gifted children *'search for associations'*, *'think ahead'*, *'learn top-down'* and *'think out of the box'*. Gifted children *'think creative, as they produce different solutions, see different possibilities and make different associations. They really think differently than other children'*. Top-down learning means *'that they need some sort of framework to put the gathered information in'*. Gifted children often *'think visual'*, *'have a special sense of humour'*, and *'look at the world with a different perspective'*.

Inquisitive Attitude (*n* = 11) describes gifted children who are *'critical'*, *'curious'* and *'ask many questions'*. They have *'a well-developed analytical ability'* and *'can think logically'*. *'Gifted children who constantly ask critical questions are viewed as annoying or irritating even though that is not the child's intention'*.

Perfectionism (*n* = 10) forms for gifted *children 'both a special talent and a danger, (…) [also referred to as] healthy perfectionism and unhealthy perfectionism'*. Healthy perfectionism can be found within *'gifted children who think systematically and who can tell you in detail what the state of affairs is'*. Unhealthy perfectionism manifests itself when gifted children '*aim too high, want to feel competent, constantly think they have to perform well and have a desire for appreciation*'.

Sense of Moral Justice (*n* = 8) refers to *'feeling socially involved'* and *'worrying about social problems'*. Gifted children who have a strong moral compass can *'get very mad when they receive undeserved punishment'. [This] can lead to serious quarrels'*.

Even though Task Commitment (*n* = 4) has often been related to giftedness in the literature, it was only mentioned by four participants during the interviews. According to the participants, gifted children *'want to learn'*, *'are passionate'* and *'get excited about higher order thinking tasks'*. They *'take effort'* and *'have good working strategies'*.

Autonomy (*n* = 5) and Asynchronous Development (*n* = 6) formed new characteristics because they did not fit within the literature based categories. Autonomy was mentioned when the participants talked about *'the huge desire for autonomy and making your own decisions'* and *'being non-conformist'*. Asynchronous Development was referred to by the participants as *'a disharmonic [profile] that (…) is a gap between performance and verbal skills'*. According to participants, it can *'often [cause] a lot of frustration [for the child]'* because the verbal skills are often further developed than the performance skills. It may also help gifted children to *'understand grown-ups' sense of humour'*. Additionally, the asynchronous development might be very complicated for teachers, parents, and experts, as *'you are continuously switching, at what level should I address her?'*.

Situational characteristics. The participants also repeatedly named five characteristics that gifted children show in non-stimulating situations (see Table 2). Based on Table 2, it becomes evident that Underachievement (*n* = 11) was most often mentioned as a situational characteristic. Underachievement was referred to as those situations in which *'advanced cognitive capacities are present, but not (…) visible'*. In these situations, it is possible *'that a child already has so much frustration that it doesn't show its [intellectual] potential on a test'*. A negative consequence arises as underachieving gifted children *'are sometimes not identified as gifted when being examined by a psychologist who isn't specialised in giftedness'*.

Table 2

Situational Characteristics, Number of Participants Mentioning Characteristics and Corresponding Percentages of Total Participants

Variables	*n*	%
Underachievement	11	50.00
Internalising behaviour	8	36.36
Fear	8	36.36
Externalising behaviour	6	27.27
Demotivation	4	18.18

Internalising behaviour (*n* = 8) and Externalising behaviour (*n* = 6) form two different *'reactions to the mismatch related to society [and education]'*. Internalising behaviour is described as

'neurotypical adjustment [to society]' and *'making sure you fit in and don't stand out'*. Gifted children with internalising behaviour can *'already lose their individuality when they reach school-age'*. Gifted children who are double-labelled can *'have internal struggles (…) because they suffer from [their disorder], causing their intellectual potential to be less obvious'*. Externalising behaviour is referred to as *'problematic behaviour'*, *'showing restless behaviour'* and *'being rebellious'*. This behaviour is often shown in case a gifted child *'is bored'* or when they *'don't want to make certain school tasks as they don't see the point of it'*.

Fear (*n* = 8) is a collective term that encloses *'fear of failure'* and *'being cautious'*. According to the participants, gifted children can be *'afraid of challenges'* and *'starting with something new'*. Because these children often *'think ahead, it can become difficult for them to oversee everything. Sometimes they worry too much'*.

Although Demotivation (*n* = 4) was only mentioned by a few participants, it *'is one of the things [gifted children endure, as they] have trouble with motivation'*. Demotivation can show itself by a *'lazy behaviour [or] boredom'* and can manifest itself when *'gifted children do not receive any challenge'*. When gifted children are stuck in their learning process, *'[they] will not only lose perseverance, (….) but motivation as well'*.

The situational characteristics as mentioned in Table 2, are influenced by Mismatch related to society (*n* = 2) or Mismatch related to education (*n* = 6). The first one, Mismatch related to society, refers to a situation in which the gifted child has *'difficulty adapting to the average. [He doesn't know] whether he has to adjust or whether he can be himself'*. In this situation, the gifted child *'feels he is being misunderstood or has trouble understanding society'*. The second situation, Mismatch related to education, indicates *'that there is no balance between what they [gifted children] receive [at school] and what they want [to learn]'*. According to participants, this imbalance is caused by the fact that *'they [gifted children] don't receive proper education'*. Whereas at school, subjects are taught *'step by step, in small parts'* and *'bottom-up'*, gifted children *'learn top-down'*. Receiving bottom-up focused education *'is very hard for gifted children because they constantly look for associations'*.

Education-related differences among gifted children

In order to answer the sub-question 'Which education-related differences, related to Dutch gifted primary school children, are mentioned by professionals?', participants were asked to sort 10 gifted children into different groups based on shared similarities or differences. After sorting, participants were asked 'Why did you make this subdivision?', 'On what kind of characteristics does this group differ from the other group(s)?', and 'What are the specific needs of this group and how do you take these into account?'. The answers of the participants have been categorised into six different distinctions (see Table 3).

Table 3

Differences Among Gifted Children, Number of Participants Mentioning Differences and Corresponding Percentages of Total Participants

Variable	*n*	%
Internalising- VS Externalising behaviour	17	77.27
Continuum of Independence	10	45.45
Twice Exceptional VS 'normally' gifted	8	36.36
Underachievers VS Achievers	7	31.82
Fixed- VS Growth Mindset	5	22.73
IQ <145 VS IQ> 145	5	22.73

Based on Table 3, it appears that the distinction between Internalising- and Externalising behaviour (*n* = 17) was frequently mentioned. Children who show Internalising behaviour *'don't really show themselves at school, (…) [and] become a little bit invisible'*, whereas children who display Externalising behaviour *'can have tantrums (…) [or] (…) become restless, which suggests ADHD'*. Children displaying Internalising behaviour as well as children displaying Externalising behaviour both *'need a safe and structured environment'* in which they '*are identified and acknowledged'*. Additionally, teachers 'should indicate to them [children displaying Internalising behaviour] that they are allowed to be themselves'. Furthermore, children displaying Externalising behaviour also 'have a need for autonomy', 'elbow room', but also 'must learn to indicate their boundaries'.

The continuum of Independence (*n* = 10) describes the extent to which gifted children are able to work independently at school. It ranges from *'motivated hard workers'* to *'dreamers (…) who have no concentration or motivation at all'*. Children who can work independently have well-developed executive functions and are able *to choose (…) what they need in order to achieve their goals'*. Since they *'have a need for challenge'* and *'autonomy'*, it is useful to *'stimulate ownership'* by *'letting them make their own planning'*. This way, teachers only have to '*check upon their working method'* from time to time. Children who cannot work independently often *'have underdeveloped self-regulation skills'* or *'executive functions'*. As they '*have trouble starting with their school tasks'*, they *'need structure'* and *'top-down guidance'*. To stimulate them, teachers can offer them *'a gradual build-up of workload'* and *'rewards for their work'*.

The contrast between 'normally' gifted children and Twice Exceptional gifted children (*n* = 8) is that Twice Exceptional gifted children for example also *'have dyslexia'* or *'Autism Spectrum Disorder'*. Twice Exceptional gifted children often *'have their own educational arrangements'*, which

'address their disorder related needs'. Only three of the eight participants who made this distinction also mentioned (the profiles of) Betts and Neihart.

The difference between Underachievers and Achievers (*n* = 7) is characterised by achievement that either does or does not match the intellectual potential of a gifted child. Therefore underachievers are both *'children who don't show their intellectual potential at school'* and children *'who achieve [good scores] but below their true intellectual potential'*. Underachievers often *'lack executive functions'*, *'have a fixed mindset'*, and *'overprotective parents'*. They *'need recognition and acknowledgement'* in order to *'develop self-regulation skills'*. In contrast, achievers *'achieve according to what you expect from their intellectual potential'*. By *'providing exercises outside of the school curriculum'*, achievers' *'need for challenge'* is addressed. To stimulate *'ownership'*, teachers should refer to these challenging exercises as a child's *'special task, instead of extra work'*.

The contrast between Fixed mindset and Growth mindset (*n* = 5) distinguishes those whose mindset is solid and obstructive (*'I can't do this'*) and those whose mindset is fluid which leads to *'compliant behaviour'* and *'self-confidence'*. Gifted children with a fixed mindset have *'trouble with self-reflection'*, *'fear of failure'*, and *'display a passive attitude'*. Since they *'view learning as nonsensical'*, teachers should *'help them get through the learning pit'*, and *'provide process-oriented feedback'*.

The distinction between gifted children with an IQ-score below 145 and an IQ-score above 145 (*n* = 5) is based on the differences in characteristics that participants mentioned. Gifted children with an IQ-score above 145 are referred to as *'extremely gifted'* because they *'have extreme needs'*; they are *'very hypersensitive'* and have *'an extreme need for autonomy'*. Being very hypersensitive, these children *'need guidance with emotion regulation'*, *'metacognition'*, and *'sense of moral justice'*. Although they *'want extra challenges'* because of their need for autonomy, they *'need guidance related to structure and planning'*.

Relation giftedness characteristics, differences, and the profiles

In order to answer the question 'How do the mentioned giftedness characteristics and differences relate to the profiles of Betts and Neihart?', the aforementioned giftedness characteristics and education-related differences among Dutch gifted primary school children are compared with the Betts and Neihart profiles. Furthermore, the participants have been asked about their opinion regarding the Betts and Neihart profiles ('What are the advantages and disadvantages of this kind of classification?' and 'How do you use these profiles in daily practice?). Subsequently, the participants have been asked to sort the 10 gifted children into the Betts and Neihart profiles.

Giftedness Characteristics. The results of the comparison of the giftedness characteristics mentioned by the participants and the characteristics Betts and Neihart profiles can be found in Table 4. Based on Table 4, it appears that the profile of the Challenging Creative has the most

overlap, as it contains six of the standard giftedness characteristics. The Twice Exceptional profile contains only one of the mentioned giftedness characteristics, whereas the rest of the profiles contains two or three giftedness characteristics.

Table 4

Mutual Similarities Between Standard Giftedness Characteristics and Profiles

Variable	Successful Adjusted	Challenging Creative	Underground	At Risk	Twice Exceptional	Autonomous Learner
Hypersensitivity		x				
High IQ						
Creativity		x	x	x		
Inquisitive Attitude		x				
Perfectionism	x					
Sense of Moral Justice		x	x			x
Asynchronous Development		x			x	
Autonomy						x
Task Commitment	x	x		x		x

      Task commitment is the most frequent giftedness characteristic within the profiles. Although a high IQ forms a common characteristic of all the profiles, it is not explicitly mentioned as a characteristic within the Betts and Neihart profiles.

Situational Characteristics. Besides the common giftedness characteristics, the participants also mentioned five situational characteristics that gifted children show in non-stimulating situations. The results of the comparison of the situational characteristics with the characteristics of the Betts and Neihart profiles can be found in Table 5. Based on table 5, it becomes clear that besides the Autonomous Learner every other profile contains situational characteristics.

Table 5

Mutual Similarities Between Situational Characteristics and Profiles

Variable	Successful Adjusted	Challenging Creative	Underground	At Risk	Twice Exceptional	Autonomous Learner
Underachievement	x		x	x	x	
Internalising behaviour		x	x			
Fear	x		x			
Externalising behaviour		x		x	x	
Demotivation				x		

The Underground and At-Risk profiles show three of the situational characteristics, whereas the Successful Adjusted, Challenging Creative, and Twice Exceptional profiles show two of the situational characteristics. Underachievement is the most frequent situational characteristic within the profiles, whereas demotivation is the least common characteristic within the profiles.

Differences among gifted children. The differences among Dutch gifted primary school children, as mentioned by the participants, have been categorised into six distinctions (i.e., Internalising- VS Externalising behaviour, Continuum of Independence, Twice Exceptional VS 'normally' gifted, Underachievers VS Achievers, Fixed- VS Growth Mindset, and IQ <145 VS IQ> 145). When comparing these distinctions with the Betts and Neihart profiles, it becomes evident that the profiles contain different elements of these distinctions. By plotting the distinctions per profile, six radar charts were created (see Figure 1). This way, each chart represents a multidimensional view of the profiles in a practical form for comparing.
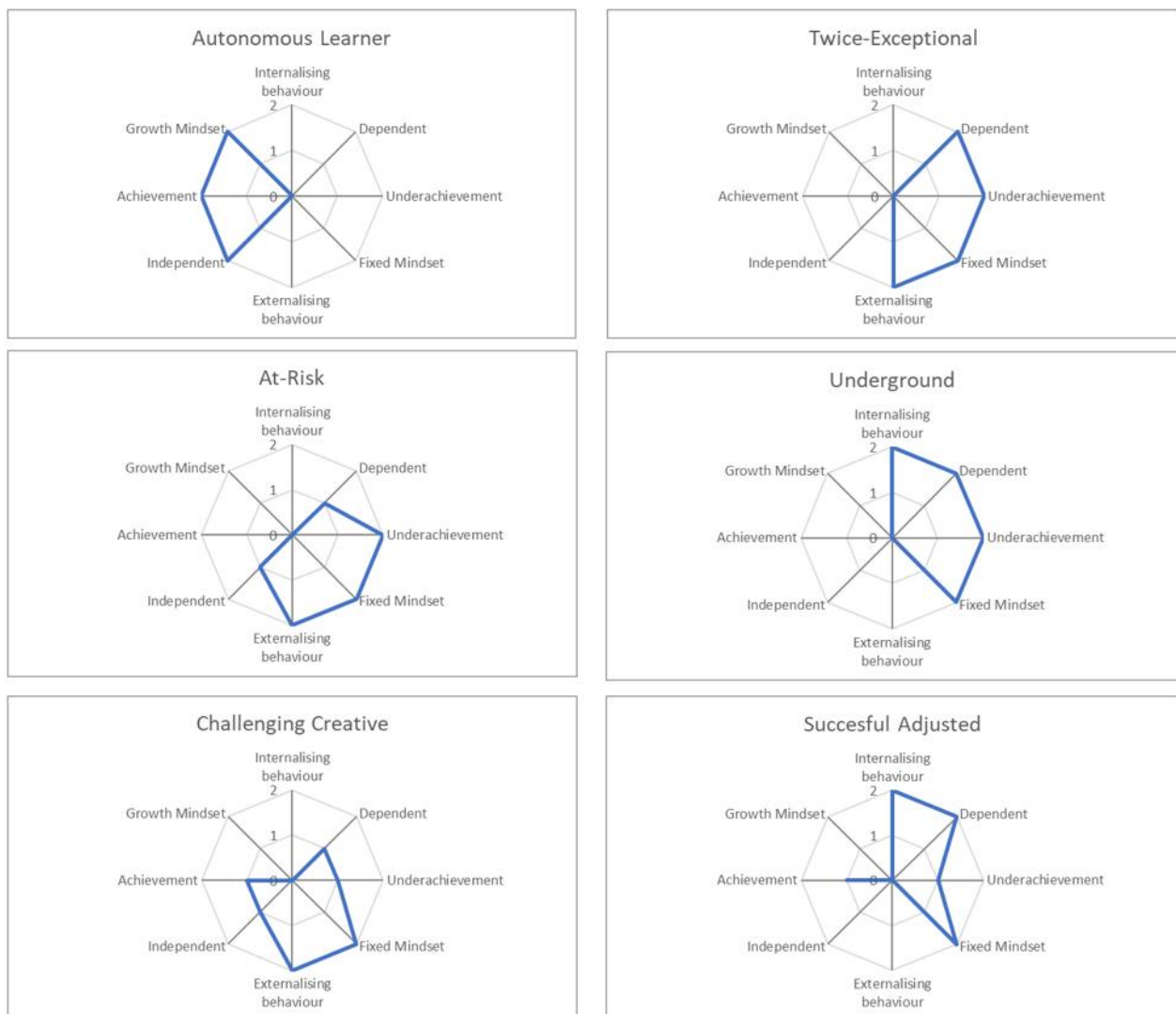

Figure 1. Radar charts displaying the extent to which the distinctions are present within the profiles.

As shown in Figure 1, the Autonomous Learner profile is the only profile to display a growth mindset, achievement, and an independent working attitude. Gifted children within this profile are willing to fail and learn from it, seek challenge, and work independently.

Interestingly, every other profile contains underachievement, a dependent attitude, and a fixed mindset. For example, the Twice Exceptional profile demonstrates inconsistent work, shows learned helplessness, and is prone to discouragement. In addition, the distinction between Twice Exceptional and 'normally' gifted is depicted within the profiles, as the Twice Exceptional profile forms a separate profile. Furthermore, gifted children within this profile display externalising behaviour as they are intensely frustrated and very angry.

In contrast, the Underground profile shows internalising behaviour as gifted children within this profile feel insecure and have a diminished sense of self. Their underachievement and fixed mindset are illustrated by their rejection of challenges, ambivalent attitude towards achievement, and the fact that achievement can be seen as betrayal of their social group. Because they feel unsure and pressured, they show a dependent working attitude.

Some profiles show elements of both sides of a continuum. For example, the At-Risk profile shows both dependent and independent behaviour. Since gifted children within this profile pursue interests outside the school curriculum, they show an independent working attitude when engaging with tasks related to these interests. However, since school tasks are often not related to their interests, they become dependent as they do not know how to deal with it. They have developed a fixed mindset, as they have a poor self-concept and unrealistic expectations. In addition, they show externalising behaviour as they are resentful and angry. Their underachievement is depicted by the fact that they have low academic achievement.

Another example of a profile showing both sides of a continuum is the Successful Adjusted profile. This profile seeks for the teachers' approval, causing achievement as well as underachievement. This way, a gifted child works hard to meet the teacher's expectation but does not take any risks due to a fear of failure. Together with a complacent and dependent working attitude, this type of gifted child develops a fixed mindset and internalising behaviour.

The Challenging Creative profile shows both sides of two continua, i.e., Achievement VS Underachievement and Independent VS Dependent. This profile shows both an independent working attitude when engaging with tasks related to interests outside the school curriculum and a dependent working attitude when engaging with school tasks. At the same time, this profile only achieves when he is offered creative opportunities, which means he underachieves when he is not offered these opportunities. Gifted children within this profile are impatient, defensive, express their impulses, challenge the teacher, which is in short, externalising behaviour. Their fluctuating self-esteem adds to their fixed mindset.

The distinction between an IQ below 145 and an IQ above 145 cannot be found within the Betts and Neihart profiles.

Participants' opinions regarding profiles. The opinions of the participants related to the Profiles of Betts and Neihart have been grouped in different categories (see Table 6).

Table 6

Opinions on Profiles of Betts and Neihart and Number of Participants Mentioning Opinions

Opinions on Profiles of Betts and Neihart	N
Advantages	
Creates awareness of multiple types of giftedness	014*
Offers guidelines for guiding gifted children	8*
Disadvantages	
Not every gifted child can be categorised	19
Model needs explanation	1
Profiles are negatively formulated (especially At-Risk)	1
Guidelines per profile are very bluntly	1
Application	
To create awareness	15*
I use it indirectly/unconsciousness	5
To offer guidelines for guiding gifted children	2*
I don't use it	1

Note. Advantages (*n* = 20), Disadvantages (*n* = 22), Application (*n* = 21).* indicates that two participants provided multiple answers within a category.

Based on Table 6, it becomes evident that most participants like the Profiles of Betts and Neihart for its ability to create awareness among teachers and parents (*n* = 14). The Profiles *'form a clear overview of all the different aspects of giftedness, making it easier to recognize them'*. The model also *'helps with indicating identifying behaviour'* and shows *'the possible risks per profile'*. As the Profiles also offer guidelines for guiding gifted children (*n* = 8), the model can be used to find out *'what needs are linked to which profile'*.

One of the disadvantages of the profiles is that not every gifted child can be categorised (*n* = 19). Overlap between the profiles and the fact that *'by changing the situation, the behaviour of a gifted child can change'*, makes it hard to categorise every child. Other mentioned disadvantages are that the *'model needs explanation'*, *'the advice per profile is very short and bluntly'* and that *'the profiles are negatively formulated, especially the At-Risk profile'*. It is therefore important to also *'focus on the context'* and *'learning needs'*.

The application of the Profiles by the participants is dominated by the ability to create awareness (*n* = 14). This ability can be used to *'communicate with schools'*, *'parents'* and *'colleagues'*. Furthermore, the profiles can be used to *'motivate gifted children by helping them recognise their profile and showing them to which other profiles they can develop'*. When a gifted child is transferred to another school, the Profiles can also be used to *'determine the needs of a specific gifted child'*.

In Table 7, the descriptive statistics can be found of the classification all participants made during the name card sorting task. Based on Table 7, it appears that the Challenging Creative (*M* = 2.10) and the Successful Adjusted (*M* = 2.06) are the most occurring profiles as 20.98% and 20.59% of the name cards were assigned to these profiles respectively. The At-Risk (*M* = 1.26) and Underground (*M* = 1.18) contain the least amount of children, as 12.63% and 11.80% of the name cards were sorted into these profiles respectively. One reason for this could be that Underground children are often *'unnoticed at regular schools'* because they tend to *'deny their own giftedness'*.

Table 7

Average Number of Children Assigned to a Profile and According Percentages of Total Number of Children

Variable	*M*	%
Challenging Creative	2.10	20.98
Successful Adjusted	2.06	20.59
Autonomous Learner	1.71	17.05
Twice Exceptional	1.69	16.95
At-Risk	1.26	12.63
Underground	1.18	11.80

Note. Total number of name cards (*N* = 220).

According to 13 participants, the Autonomous Learner can be seen as the *'ideal state'* in which gifted children can find themselves. These children are the closest to *'being themselves, as they show their true self'* and *'understand themselves'*. Since these children work independently and receive good grades that match their advanced intellectual capacity, they apparently know what they need in order to learn. It should be noted, however, that these children *'also need guidance'* and *'attention'* as they *'constantly push themselves in order to excel, which causes a lot of stress'*. Related to the earlier mentioned Mismatch with education, one participant wondered whether it is even possible for gifted children to develop themselves into an Autonomous Learner in the Dutch school system.

Discussion

This study explored how giftedness professionals identify gifted children and their differences in the Dutch school context. By investigating which giftedness characteristics and differences among gifted children are identified by Dutch giftedness professionals, the learning needs of the gifted became apparent. By comparing the mentioned giftedness characteristics and differences with the Betts and Neihart profiles, the mutual similarities became apparent. Below the findings regarding characteristics, differences, and application are discussed in more detail.

Giftedness characteristics

First, the characteristics related to Dutch gifted primary school children, as mentioned by the participants, have been categorised into nine giftedness characteristics and five situational characteristics. In accordance with the literature (D'Hondt & Van Rossen, 2018; Ziegler & Heller, 2000; Kieboom, 2004, 2016; Olszewski-Kubilius & Worrell, 2011; Renzulli, 1984; Sternberg, 2003; Subotnik, et al., 2011), this study found hypersensitivity, a high IQ, creativity, an inquisitive attitude, perfectionism, and a sense of moral justice as common characteristics of giftedness. These findings suggest that a high IQ no longer forms a stand-alone indicator, however, it still forms a standard giftedness characteristic. Hypersensitivity, a high IQ, and creativity were most often mentioned by the participants. A possible explanation for this might be that these characteristics are easy to observe. A high IQ can be measured with an IQ test, hypersensitivity often stands out as hypersensitive children show specific behaviour when they are over-stimulated, and creativity appears when children come up with new ideas which are out of the box and sometimes a bit strange. Further research should investigate whether these characteristics are indeed easy to observe, as well as the observability of the other mentioned giftedness characteristics.

Although mentioned in the literature (Renzulli, 1984; Sternberg, 2003), task commitment was not often mentioned by the participants as a giftedness characteristic. A possible explanation for this could be that Dutch gifted children display less task commitment behaviour when they are not stimulated or challenged by their teacher in their area of interest (Bakx, 2019). The results show that gifted children who pursue interests outside the school curriculum can show task commitment when they engage with tasks related to these interests. However, since school tasks are often not related to their interests, they will not show task commitment behaviour (Drent & Van Gerven, 2012). For example, the Challenging Creative profile will show task commitment when creative opportunities are offered. Unfortunately, teachers often ignore or eliminate these opportunities, since they are perceived as disruptions (Siegle, 2018). Another explanation could be that the situational characteristics, as a consequence of non-stimulating situations, mask the degree of task commitment within a gifted child. For example, when a child shows externalising behaviour due to non-stimulation, teachers might not notice the children's task commitment because the externalising

behaviour is overwhelming. This way, teachers do not tend to provide challenging material to these children, which maintains the non-stimulating situation (Siegle, 2018).

Interestingly, an asynchronous development was often mentioned as a giftedness characteristic. As gifted children have an advanced intellectual capacity, social or emotional problems may arise due to a 'gap' created by a quick intellectual development and a normal social-emotional development (Rinn & Majority, 2018). According to the literature, this 'gap' can be found among extremely gifted children with an IQ above 145 and Twice Exceptional gifted children (Pfeiffer & Prado, 2018; SLO, 2018). The results show that a combination of an advanced intellectual capacity and social or emotional problems can cause frustration within the child. This frustration can arise when teachers have incorrect expectations of a gifted child with an asynchronous development. For example, teachers might believe that these children will make it on their own as they seem to be very intelligent due to their developed verbal skills (Berman et al., 2012; Drent & Van Gerven, 2012). On the other hand, the results show that teachers might also address these children in a very childish manner because they show very young behaviour. As a result, an asynchronous development is often combined with frustration, anger or insecurity (Rinn & Majority, 2018).

Interestingly, autonomy was also found to be a giftedness characteristic, as a majority of the participants mentioned that every gifted child has a need for autonomy. Gifted children want to be self-confident, independent, and self-regulated, as shown in the Autonomous Learner profile (NTCN, 2015). Unfortunately, this need for autonomy is often not addressed, because teachers do not anticipate this need. On the one hand, teachers tend to focus on the more explicit (problematic) behaviour (e.g., Dyslexia in the case of the Twice Exceptional profile) (De Heer, 2017). On the other hand, when teachers do identify the need for autonomy, they tend to let go these children because they believe they will make it on their own (Berman et al., 2012). This way, these children are not monitored and challenged, which will cause demotivation and stress.

Besides the standard giftedness characteristics, the participants also mentioned situational characteristics that gifted children show in non-stimulating situations. When gifted children are not stimulated, they tend to display underachievement, fear, demotivation or internalising- or externalising behaviour (Mueller & Winsor, 2018; Tielen & Nellen, 2015). These situational characteristics have a negative influence on the demonstration of giftedness and can dominate the behaviour of gifted children.

Summarising the abovementioned findings, nine standard giftedness characteristics and five situational characteristics have been mentioned by the participants. From the standard giftedness characteristics, hypersensitivity, a high IQ, and creativity have been mentioned most often by more than half of the participants. A possible explanation could be that hypersensitivity, a high IQ, and creativity are easy to observe within the Dutch school context. An inquisitive attitude, perfectionism,

sense of moral justice, asynchronous development, autonomy, and task commitment were less mentioned. An asynchronous development often occurs with frustration because teachers have incorrect expectations of gifted children with an asynchronous development. Task commitment is probably not often observed as a giftedness characteristic due to non-stimulation within the Dutch school context. As a consequence of non-stimulating situations, Dutch gifted children can display underachievement, fear, demotivation or internalising- or externalising behaviour. Although autonomy is mentioned as a standard giftedness characteristic, Dutch gifted children generally are not addressed in this need.

Educational-related differences

Second, the education-related differences among Dutch gifted primary school children have been categorised into six distinctions. In accordance with the literature (Foley-Nicpon & Kim, 2018; Leikin, Leikin & Waisman, 2017; Mueller & Winsor, 2018; Rinn & Majority, 2018; Siegle, 2018), this study found Internalising- VS Externalising behaviour, Continuum of Independence, Twice Exceptional VS 'normally gifted', Underachievers VS Achievers, Fixed- VS Growth Mindset, and IQ<145 VS IQ>145 as distinctions between gifted children. These findings suggest that addressing the differences between gifted children based on these distinctions is well-founded.

The distinction between Twice Exceptional and 'normally' gifted points out that the Twice Exceptional profile is much more complex compared to the other profiles (Foley-Nicpon & Kim, 2018). Due to this complexity, either their giftedness or their disability is often overlooked. Teachers can address their needs by offering a specialised educational arrangement that focusses on their strengths but also has accommodations for their disability (Foley-Nicpon & Kim, 2018).

The distinction between an IQ below 145 and an IQ above 145 is often referred to as the difference between 'normally' gifted and extremely gifted (Leikin, Leikin & Waisman, 2017). Extremely gifted children are very vulnerable, have trouble connecting with peers (Roedell, 1984; Silverman, 2018), and display an asynchronous development (Pfeiffer & Prado, 2018). Teachers can address their needs by offering a lot of challenges fitting with their interests, to prevent boredom and underachievement (Silverman, 2018).

Summarising the abovementioned distinctions, the five distinctions (i.e., Internalising- VS Externalising behaviour, Continuum of Independence, Twice-Exceptional VS 'normally gifted', Underachievers VS Achievers, Fixed- VS Growth Mindset, and IQ<145 VS IQ>145) appear to be well-founded distinctions for addressing the differences between gifted children.

Relation giftedness characteristics, differences, and the profiles

When comparing the giftedness characteristics with the Betts and Neihart profiles, it appears that the profile of the Challenging Creative contains six of these characteristics (i.e., hypersensitivity, creativity, inquisitive attitude, sense of moral justice, task commitment, and an asynchronous

development). This finding suggests that the Challenging Creative profile is the easiest to identify, as most participants mentioned its characteristics as typical giftedness characteristics. Besides, the results of the card sorting task showed that the Challenging Creative is one of the most common profiles in the Dutch school context. This implies that the other profiles are more difficult to identify because they do not display the typical giftedness characteristics as mentioned by the giftedness professionals. This makes it difficult for teachers with little knowledge about giftedness to identify gifted children as gifted from the other profiles. As the results show that it can be hard to categorise every gifted child due to overlap between the profiles, this could result in not providing appropriate education for gifted children who have not been identified. When teachers are using the Betts and Neihart profiles as an identification tool, they need to become aware of the possibility of overlooking the other giftedness profiles. Without being aware of this possibility, gifted children from the other profiles are less likely to receive appropriate education. Further research should investigate whether the Challenging Creative profile is indeed the easiest to identify in the Dutch school context.

Besides the common giftedness characteristics, the participants also mentioned situational characteristics that gifted children show in non-stimulating situations. When gifted children are not supported in their needs, they tend to display underachievement, fear, demotivation or internalising- or externalising behaviour (Mueller & Winsor, 2018; Tielen & Nellen, 2015). When comparing the Betts and Neihart profiles, it becomes clear that besides the Autonomous Learner every other profile contains these situational characteristics. As these situational characteristics are caused by a mismatch with education or society, these findings suggest that besides the Autonomous Learner, every profile is prone to a mismatch. As gifted children can show behaviour from other profiles by changing environmental conditions, teachers can remedy a mismatch by altering a part of the conditions, i.e., focussing on their learning needs (Betts & Neihart, 1989; De Heer, 2017; SLO, 2015).

As mentioned earlier, the categorised distinctions among Dutch gifted children have been plotted per profile in radar charts. The radar charts show that besides the Autonomous Learner profile every other profile contains underachievement, a dependent attitude, and a fixed mindset. According to the literature (Siegle, 2018), these three elements are often related to each other. Their underlying needs can be fulfilled when teachers identify them, offering them structure and top-down guidance. These children also need help with improving their self-regulation skills and executive functions, as well as improving their self-concept. Because children with a fixed mindset, a dependent attitude and underachievement tend to show internalising- or externalising behaviour, teachers should address their behaviour, mindset, and attitude of these children in order to stimulate achievement, an independent attitude, and a growth mindset. Further research should investigate the influence of several interventions, focused on behaviour, mindset, and attitude, on internalising- or externalising behaviour.

When focussing on internalising behaviour, it appears to be most common within the Underground and Successful Adjusted profiles. As both profiles want to conform to others (i.e. teacher, peers or parents), seek approval, and do not accept challenges, they often develop a sense of insecurity and self-doubt. Teachers can address their needs by identifying the children's struggles and help them focus on their strengths (Mueller & Winsor, 2018).

Externalising behaviour can be found within the Twice-Exceptional, At-Risk and Challenging Creative profiles. Whereas the At-Risk and Challenging Creative profiles feel misunderstood by the teacher, the Twice-Exceptional profile has trouble understanding himself. Al three profiles have a low self-concept, are often creative, and have an inconsistent working method. Teachers can address their needs by offering them a structured and safe environment, understanding, and some elbow room. In order to create a structured and safe environment, teachers and children should learn to indicate their boundaries.

Some profiles show both sides of a continuum, e.g., the Successful Adjusted and Challenging Creative profile show achievement as well as underachievement. Both profiles experience pressure to conform, causing the Successful Adjusted profile, towards conforming to the teacher's expectation. This way, he works hard for the teacher's approval but does not take any risks due to fear of failure (Siegle, 2018). It might seem that this type of gifted child achieves as he receives good grades, but in truth, he underachieves as he is extrinsically motivated and does not perform to his true intellectual potential. On the other hand, the Challenging Creative profile only achieves when he is offered creative opportunities. Unfortunately, teachers often ignore or eliminate these opportunities, since they are perceived as disruptions (Siegle, 2018). Furthermore, the low emotional self-confidence within the Challenging Creative profile may lead to underachievement (Zeidner, 2018). Teachers can address their needs by identifying them as they reduce the pressure to conform. To stimulate these children to achieve, teachers should provide support in planning, developing self-regulation skills, and reducing obstacles when offering challenging material (Siegle, 2018).

The findings show that the Autonomous Learner profile is the only profile that contains achievement, a growth mindset and an independent attitude. According to the literature (Worrell & Dixson, 2018), these three elements are often related to each other. Teachers can address their needs by offering challenges and the opportunity to make their own planning. This stimulates ownership and autonomy.

The distinction between Twice-Exceptional and 'normally' gifted can also be found within the Betts and Neihart profiles, as the Twice-Exceptional form a separate profile. This type of gifted children is also identified as a separate group in the Dutch school context and, when identified, receives a special educational arrangement (SLO, 2018).

Surprisingly, it seems that the extremely gifted children do not fit within the Betts and Neihart Profiles. Therefore, teachers should be aware of the fact that these children might be overlooked when using the profiles as an identification tool. Further research should investigate the needs of the extremely gifted as well as how to provide them with appropriate education.

Lastly, it should be noted that most participants only use the Betts and Neihart profiles to create awareness among teachers and parents. Although the model forms an interesting tool to offer guidelines for guiding gifted children, not every gifted child can be categorised and guided by using the model.

Limitations

In this study, 22 professionals participated with different backgrounds and working areas, 3 giftedness teachers, 11 giftedness coaches, and 8 coaching teachers, respectively. When generalising the results of this study, it would be better to have a more equal divided participant group. As the participants all followed a similar (practical) training program regarding giftedness, their opinions regarding the profiles might be equalised by the training program. Therefore it would be interesting to repeat the study with a more diverse group of participants, to see whether participants who have followed more different (and theoretical) training programs would provide the same results.

Furthermore, since the participants are all giftedness professionals, their opinions regarding the profiles might also be influenced by their experience and background. Therefore it would be interesting to repeat the study with primary school teachers who have less experience with and a background in giftedness education.

In addition, this study partly focused on the Betts and Neihart profiles (2010). This means that the terminology used in this study has been influenced by the terminology used in the Betts and Neihart profiles (2010). Since there are also other classifications of giftedness, it would be interesting to find out whether if using another model or tool during the interview will lead to different results.

Conclusion

This study explored how giftedness professionals identify gifted children and their differences in the Dutch school context. The results show that giftedness professionals can identify 14 giftedness characteristics and five different distinctions among gifted children. From the 14 characteristics, six characteristics can be found within one profile that is the most frequent within the Dutch school context, i.e. Challenging Creative. This suggests that teachers with little knowledge of giftedness do perceive giftedness characteristics, even though they are not fully aware that they belong to a gifted child. This offers possibilities for retraining teachers to become giftedness professionals.

The mentioned giftedness characteristics and distinctions among gifted children do show overlap with the Betts and Neihart profiles. However, there are some aspects in which the mentioned characteristics and differences contrast in relation to the profiles. First, it should be noted

that extremely gifted children with an IQ above 145, are not addressed within the profiles. Second, the profiles do not explicitly mention autonomy as a standard need of gifted children. Third, although the mentioned situational characteristics appear in every profile besides the Autonomous Learner profile, they are not explicitly mentioned as such within the profiles. Fourth, not all gifted children can be categorised into a profile. When using the Betts and Neihart profiles, teachers should be aware of these contrasting aspects in order to provide appropriate education.

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Appendix A Codebook

Giftedness characteristics	Hypersensitivity	High IQ	Creativity
	- overexcitabilities - daydreaming - living in a fantasy world - feeling lonely - knowing when it's allowed to express themselves - desire for relatedness - different way of receiving and processing signals - feeling or noticing everything - attention to detail	- IQ around 130 - fast information processing - cognitive talented - being smart - advanced intellectual capacities - have a lot of knowledge - easily remembering	- thinking and behaving differently - being out of the box - generating new and useful ideas - having a special sense of humour - divergent thinking - visual thinking - being associative - thinking ahead - limit-testing - desire to create
	Inquisitive Attitude	**Perfectionism**	**Task Commitment**
	- being critical - analytical ability - being curious - asking questions - logical thinking	- perfectionism - desire for feeling competent - aiming (too) high - desire appreciation - detailed reporting	- perseverance - taking effort - want to learn - being driven/passionate - motivation - getting excited about higher order thinking tasks - good working strategy
	Sense of Moral Justice	**Asynchronous Development**	**Autonomy**
	- sense of moral justice - worrying about social problems - receiving undeserved punishment	- disharmonic profile - gap between performance and verbal skills - advanced developed cognitive/social skills and low developed motoric skills - appearing younger because of emotions and behaviour	- autonomy - non-conformist - making your own decisions
	Underachievement	**Internalising Behaviour**	**Fear**
	- underachieving - having advanced intellectual capacities but not showing them	- internalising behaviour - internal struggle - being invisible - adjusting - losing individuality	- fear of failure - being cautious - being scared - panicking - worrying
	Externalising Behaviour	**Demotivation**	

- externalising
  Behaviour
- behavioural
  problems
- showing restless
  behaviour
- being rebellious

- being lazy
- having no motivation
- being bored

Differences among gifted children	Internalising- VS Externalising behaviour	Twice-Exceptional VS 'normally' gifted	Continuum of Independence
	- Internalising VS Externalising - Rebellious VS Adjusted - Anger/rage VS Fear - Fight VS Flight response - Extreme behaviour VS Invisible	- Double labelled - Twice-Exceptional - Double Special	- Independent VS Needs guidance - Degree of Ownership - Hard workers VS Dreamers - Getting started easily VS Trouble getting started - Degree of developed executive functions - Motivated to work hard VS Not motivated
	Underachievers VS Achievers	**Fixed- VS Growth Mindset**	**IQ <145 VS IQ> 145**
	Good school performance VS Bad school performance	- Fixed Mindset – Growth Mindset - Obstructing/hindering mindset VS Compliant - Ik kan het niet – Ik kan het wel	- Extremely gifted - IQ above 145
Opinions on Betts & Neihart's profiles	**Advantage**: Creates awareness of multiple types of giftedness	**Advantage**: Offers guidelines for guiding gifted children	**Disadvantage**: Not every gifted child can be categorised
	Disadvantage: Model needs explanation	**Disadvantage**: Profiles are negatively formulated (especially At-Risk)	**Disadvantage**: Guidelines per profile are very bluntly
Application: I do not use it	**Application:** Om te zorgen voor bewustwording	**Application:** I use it indirectly/unknowingly	**Application**: To offer guidelines for guiding gifted children

Appendix B Interview Scheme

Section - Time	**Content**	
Introduction 0.00-0.03	*Introduce:*	Jeannette Goudsblom master student Educational Sciences & Technology UTwente
	Warming-up:	Appreciate participation interview
	Subject:	Thesis regarding differences among gifted primary school children
	Purpose:	Find out whether there are differences among gifted primary school children, and whether these differences can be categorised
	Length of the interview:	Approx. 40 to 60 minutes
	Question types:	Experience and background related to the guidance of gifted children, comparing the gifted children that have been guided, categorising differences among gifted children
	Reporting:	Results will be reported anonymously within the thesis
	Anonymity:	Interview is confidential, answers will be anonymised
	Recording:	Recording with mobile phone, if approved. Otherwise only handwritten notes
	Questions:	Do you have any questions?
Experience and background 0.03-0.15		First I would like to ask you some questions regarding your experience with gifted children and your background.
	Question 1:	When discussing giftedness, how would you describe giftedness?
	Additional question in case of teacher:	Based on which characteristics are gifted children selected to participate within your school/pull-out class?
	Question 2:	How long have you been working with gifted children?
	Question 3:	How many gifted children have you guided?
	Question 4:	In what context have you been working with gifted children?
	Question 5:	What training programmes or courses have you been studying related to giftedness?
Comparing gifted children 0.10-0.45	*Card sorting task*	To discover the differences among gifted children, I would like to ask you to write down the names of 10 gifted primary school children that you have been guiding the past year.
	[Provide participant with post-its]	
	When participant is finished writing:	I would like to ask you to sort the name cards into groups, based on shared similarities or differences. You are allowed to make multiple classifications.

	When participant has no inspiration or does not understand task:	For example, you could make a classification based on gender, age, behaviour, feelings, attitude, needs, etc.
	After each sorting:	Why did you make this classification?
	Per group:	- On what kind of characteristics does this group differ from the other group(s)? - What are the specific needs of this group and how do you take these into account?
Profiles of Betts and Neihart 0.45-0.57		Besides your classification there are also other types of classification possible.
	[Present participant with profiles of Betts and Neihart]	Do you recognise this classification? This classification is made by Betts and Neihart, two American researchers in 1989. This is the updated version from 2010. I would like to ask you to sort the name cards into the profiles.
	When participant has trouble with sorting: *After sorting:*	Why are you experiencing difficulty with the sorting of the name cards?
	Question 1:	What are the advantages of this kind of classification?
	Question 2:	What are the disadvantages of this kind of classification?
	Question 3:	How do you use these profiles in daily practice?
Conclusion/closing 0.57-1.00	• *Thanking:*	I would like to thank you very much for your time and valuable additions during this interview.
	• *Further contact:*	In case you would like to be kept informed about the rest of my thesis, please let me know.
	• *Information processing:*	After all the interviews have been conducted, the information will be analysed and anonymously reported in my thesis. In case I would need more additional information regarding certain aspects of the interview, I would like to know if I can contact you later .