What Is Needed to Fulfil the Needs and Wishes of Highly Able School Drop-Outs?

The Importance of Autonomy, Relatedness and Competence for the Well-being of

Highly Able Drop-Outs

Bachelor's Thesis

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Abstract

This study investigates the educational needs and wishes of highly able drop-outs regarding autonomy, relatedness and competence. Currently, high numbers of drop-outs are observed in the Netherlands, of which a significant part is highly able. These drop-outs faced numerous problems at school, including the lack of autonomy, competence and relatedness.

By using semi-structured in-depth interviews, conducted with 35 participants in their own environment, this study begins to identify motives for dropping out, positive experiences, and recommendations for schools. The results of this study show that highly able drop-outs have a need for more autonomy, more challenge and being understood and taken seriously.

Keywords: high ability, drop-out, well-being, autonomy, relatedness, competence

The Importance of Autonomy, Relatedness and Competence for the Well-being of

Highly Able Drop-Outs

In the Netherlands, a raise in the number of drop-outs is observed (Ministry of Education, Culture and Science, 2022). In the Dutch coalition agreement, it was stated that the government aims at bringing back the number of drop-outs to zero, and that it aims at providing appropriate education for every child (Dutch Council of Ministers, 2021). A relatively high number of these drop-outs is highly gifted, as identified in practice by the Vereniging Begaafdheidsprofielscholen. These drop-outs make use of an already overloaded mental healthcare system (Fischer et al., 2022). To reduce the number of highly able drop-outs and lower the load on mental healthcare, it is of utmost importance to have knowledge on what is fundamental for the well-being of highly able drop-outs and what can, eventually, support them in returning to school.

The Vereniging Begaafdheidsprofielscholen is concerned about all its students, and would like to do more for them, specifically for the highly able school drop-outs. For these reasons, SLO, the National Expertise Centre for Curriculum Development in the Netherlands decided to study this problem. In consultation with the Dutch Ministry of Education, Culture and Science, a plan was made to research the needs and wishes of the highly able drop-outs and to develop products or interventions in order to mitigate the problem.

Since well-being is essential for learning to occur (Gumora & Arsenio, 2002), improving well-being is more important than returning to school itself. The concept of well-being can be split up into emotional well-being (Bakx et al, 2020; Courtwright et al, 2019; Kleinjan et al, 2021), physical well-being, and social well-being (Keyes 1998, 2002), which are influenced by the individual experience, as can be seen in Figure 1 (Engel, 1977; Gazzaniga et al., 2016; Ryan & Deci, 2000; Steenbergen-Penterman et al., 2022). This

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division helps in making the concept of well-being more concrete and with that, easier to research.

Figure 1: Emotional, physical and social well-being (Steenbergen-Penterman et al., 2022 p. 3, adapted from Engel, 1977)

High ability

The multifactor model of giftedness (Mönks, 1995; Wolska-Długosz, 2015) explains the relationship between family, school, friends and the gifted person. As can be seen in Figure 2, giftedness (also called high ability in this Bachelor Thesis) is defined as having the personal traits of motivation, creativity and exceptional abilities. The environment and these traits need to be in balance in order for high ability to develop.
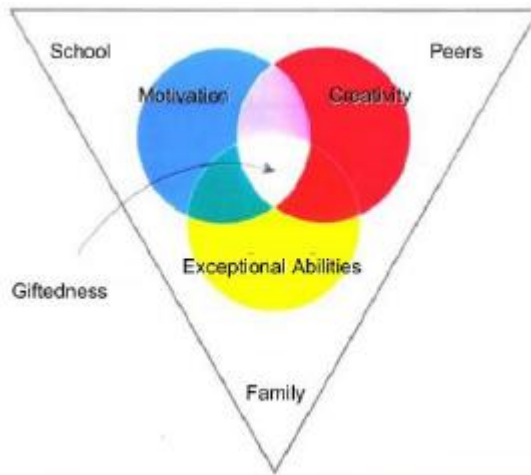
Figure 2: Multifactor model of giftedness (Mönks, 1995; Wolska-Długosz, 2015)

As this model displays, giftedness is present when motivation, creativity and exceptional abilities are all accounted for. For giftedness to come to fruition, however, it is essential that the social environment is not limiting (Mönks & Ypenburg, 1995).

Context and Appropriate Education

The generalizability of this study is, among others, dependent of the educational context. Hence understanding the problem context is essential for the application of this study in other educational systems.

The Dutch Ministry of Education, Culture and Science coordinates education policy together with municipal governments. An important characteristic of the education system in the Netherlands is freedom of education: the freedom to found schools, to organise the teaching in schools, and to determine the principles on which schools are based (religious, ideological or educational beliefs). The statutory equality of public, special (religious) and private schools is another important feature of the education system. The central curriculum policy reflects processes of decentralisation and increased local autonomy (CIDREE, 2010). Although the School Inspectorate monitors the educational results of each school, the

realisation of educational goals is the responsibility of the individual schools. Since 1998, the Inspectorate's reports on individual schools have been public.

Since 1985, kindergarten and elementary school have been integrated into primary education. Education in the Netherlands is compulsory from the ages of five to sixteen. Most children begin in Primary school at the age of four until they are over twelve. Children then start secondary education with the choice of school and type of education depending on their individual results and preferences. The Dutch education system has common standards, referred to as core objectives, which describe in general terms the knowledge and skills that students should achieve at the end of primary and secondary education.

Gifted students are not mentioned explicitly in national legislation, but the definition of children with special educational needs is established in regulations from the Ministry. Since 2001, highly able students have been considered to be a group with special educational needs (Mönks & Pflüger, 2005). The Primary Education Act (Art. 8, sub 4) states that "the undisturbed development of each child has to be guaranteed. The education needs to foster attainment of emotional, intellectual and creative development and has to lead to essential social, cultural and physical knowledge and abilities. Students with special needs have to be offered an individualised education regarding their special need".

In August 2014 a new Inclusive Education Act came into effect. Consequently, schools now have a duty of "care" (zorgplicht): to provide a suitable place of learning for every child. In a factsheet, Bosschers (2012) describes the Dutch government's plans regarding inclusive education: "Mainstream and special needs schools must cooperate in regional alliances to offer children a place of learning at one of the mainstream schools; if needed, with extra support in the classroom or at a school for children with special needs. These alliances will receive their own budgets for educational support, which will make them

responsible for offering and bearing the costs of both minor and more substantial educational support."

Altogether, both primary and secondary schools have a duty of care, meaning that schools and alliances have the obligation to make efforts to find appropriate education for each student, including the highly able.

High Ability in Teacher Training

For both primary school teachers and secondary school teachers, there is no mandatory curriculum about highly able students. Elective courses about high ability are often available, but due to a gap between science and the institutions for primary school teacher education (pabo), the available scientific knowledge on giftedness is barely transferred to the school context (De Heer, 2018). The pabo institutions often see high ability as a niche subject, about which the teachers-to-be will need to learn in the workfield (Mönks & Pflüger, 2005; Houkema, 2018, De Heer, 2018). Programmes for secondary school teachers also do not have the obligation to include high ability in the curriculum.

To work at a special-needs school, it is often required to have attained a diploma of the Master's programme "Special Educational Needs". As Mönks & Pflüger (2005) stated, the Radboud University Nijmegen was the only one to have an obligatory course on high ability in its Special Education programme.

There are specialized educational programmes about high ability available in the Netherlands. Novilo's applied programmes on high ability and the Radboud University Nijmegen's post-master programme "RITHA" are the most popular examples. Both are, amongst others, targeted at teachers.

Altogether, there are programmes available for training teachers about high ability, but no specific training on high ability is needed to teach this specific target group. On the

other hand, for the special needs students that have below-average abilities, there is a required diploma.

What Can Be Learned From Drop-Out Initiatives With Daytime Activities?

When a child becomes a (temporary) drop-out, education is still compulsory for the child. For this (and other) reasons, the drop-outs are often sent to one of many drop-out initiatives in the Netherlands. The initiatives differ in the kind of support and/or activities they offer. Some offer an (almost) fulltime programme. At other initiatives, children come one or two days a week. The type of activities also differs. At a portion of the initiatives, the children do the work they would usually do at school with extra coaching. Other initiatives offer other projects, space for the children to decide themselves or a mix of this.

Often reoccurring concepts in the initiatives aimed at highly able drop-outs are talent development, autonomy and the development of relationships, which are very similar to the psychological basic needs, as defined by Ryan and Deci in their self-determination theory (Ryan & Deci, 2000). By doing challenging projects together with peers on self-chosen topics, the children work on self-acceptance and a positive self-image, they learn to make their own choices and can feel recognized and inspired by others. This is the desired situation, as stated by Houkema (2020). In the case of a drop-out, it can be seen that a mismatch with the educational system is the origin of the problem (Houkema, 2020). Examples of this are a lack of challenge for the students and a lack of understanding of highly able students and knowledge on high ability from the teacher. Additionally, negative influencers of social and emotional well-being (such as stress, perfectionism and suicidal thoughts) can be amplified by this mismatch between the educational context and the student's needs (Bakx et al., 2020). Hence, it is essential to not only focus on treating the

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symptoms of the problem, but also to work on forming a match between the child and the school.

At the same time, it is known that highly able children are at risk for social, emotional and educational problems (Rinn, 2018; Neihard & Yeo, 2018). For example, there is a higher risk for lowered well-being, loneliness, underachievement (Mooij et al., 2007), and, more extremely, depressions and dropping out (Betts & Neihart, 2010; Rimm, 2002; Vialle, Heaven & Ciarrochi, 2007). However, it is known that highly able children have less social and emotional problems (Cornell et al., 1994; Gallucci et al., 1999; Garland & Zigler, 1999) and that they show less unwanted behaviour, for example aggressive behaviour (Eklund et al, 2015).

Existing literature

Research on highly able drop-outs that has been done found, for example, that gifted students in the United States dropped out of school due to e.g. attendance problems, academic problems and discipline problems (Matthews, 2006). Also, it was found that some students drop out to take a job, or to join community college (Matthews, 2006). Renzulli and Park (2000) surveyed 334 gifted drop-outs about their reasons for dropping out of school. Getting a job, not liking school, getting pregnant, not being able to keep up with the schoolwork and failing school were some of the most given responses.

Hansen and Toso (2007) also researched gifted drop-outs, for which they found fourteen participants. With thematic analysis, it was found that for these drop-outs, problems began in elementary school. Their high sensitivity was not acknowledged at school, and they did not receive help in coping with major losses. The lack of community and respect, and the unchallenging curriculum also had a major influence. The absence of an advocate to bring about meaningful change, issues with authority, alcohol and drug use and conflicts with

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parents about school were mentioned too. Nobody in this study felt understood by teachers or students who were in power at school. The findings of this study regarding lack of challenge and a disturbed relation with other students and staff fit with the three psychological basic needs, as defined in the self-determination theory by Ryan and Deci (2000)

For another American study by Camper, Hickman and Jaeckle (2019), 4 gifted participants (37, 43, 44 and 77 years old) that resided in an urban area when they dropped out of high school were interviewed. Zabloski (2010) also interviewed seven rural gifted drop-outs, who all stated problems with relational losses, relational traumas and relationships with teachers as the reasons for dropping out, although Zabloski also addressed other needs of gifted students, such as a challenging curriculum, higher level thinking, social interaction and caring teachers.

Landis and Reschly (2013) studied gifted underachievement and drop-out, for which research on highly able drop-outs and underachievement was analysed within the framework of student engagement. They conclude that the highly able drop-out is easy to overlook, since the signs of problems are often not very obvious. Additionally, Landis and Reschly (2013) mention that autonomy and the relation of the student with the teaching staff are factors in dropping out, which is closely related with the self-determination theory (Ryan & Deci, 2000).

The self-determination theory (Ryan & Deci, 2000) explains the three basic psychological needs of a human being, namely autonomy, competence, and relatedness, which together positively influence motivation and well-being (Ryan, 2009). This theory is applicable to all human beings, and not only specifically for highly gifted children. Nonetheless, this theory describes fundamental needs which need to be fulfilled for a person to feel motivated and happy.

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Nonetheless, the depth of the studies and the differences in educational contexts make that the current research does not sufficiently aid the understanding and mitigation of the problem in the Netherlands. The reasons for why the participants did not like school or had attendance problems, for example, is essential for the understanding and mitigation of the problem faced in the Netherlands. For that reason, this study is aimed at finding in-depth information not only on the reasons for dropping out, but also on what was needed to improve the well-being of the highly able and prevent them from dropping out. Additionally, some of these studies used a very small sample size, or studied adults who had dropped out years ago. Due to the major differences with the Dutch educational context, there is a need for research in the specific problem context to aid the goals of the Dutch government and to help schools and specifically the "Vereniging Begaafdheidsprofielscholen" that asked for help.

Research Question

This study aims at finding the needs and wishes of highly able school drop-outs in the Dutch context. For this, the self-determination theory (Ryan & Deci, 2000) and the before presented theories on well-being are used. These theories were identified as important by numerous experts in the field.

Consecutively, this study tries to answer the following research question:

What is needed in the Dutch primary and secondary education to fulfil the needs and wishes of highly able students regarding fitting education to prevent drop-outs?

To answer this question, the following sub-questions will be addressed:

1. *What are the motives for the dropping out of children with high abilities, according to the drop-outs themselves?*
2. *Are there positive experiences of the highly able drop-outs regarding fitting education? If yes, what are these?*

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3. *What are the needs and wishes of highly able drop-outs regarding autonomy, relatedness and competence?*
4. *What are the needs and wishes of highly able drop-outs regarding social, physical and emotional well-being?*
5. *What is the advice of highly able drop-outs for schools and teachers?*

Method

To answer the research questions, semi-structured in-depth interviews were conducted with 35 participants. This approach was chosen to overcome practical issues. Experts indicated that the highly able drop-outs would most likely not answer the questions in a survey with the same depth as they would with an interview. Additionally, the experts suggested that a young, highly able researcher should conduct the interviews, because they expected that the participants would share more with such a researcher that can be seen as a peer, than with an older researcher.

In the research, the influence of family, peers and school as explained in the multifactor model (Mönks, 1995; Wolska-Długosz, 2015) is taken into account in the interview questions by explicitly asking for experiences in these three environments.

Participants

In total, 35 current and former drop-outs from all over the Netherlands participated in this study. The participants were all identified as highly able, both formally and informally. The participants were selected by three methods. First, the Stichting Begaafdheidsprofielscholen and ECHA network in the Netherlands shared a call for participants under its members, which resulted in eight participants. Second, drop-out initiatives aimed at highly able were contacted, adding 25 participants to the study. Lastly, a post in a Facebook group for parents of drop-outs in the Netherlands was used to find participants was useful for two extra participants. Out of 35 participants, 32 were either current drop-outs, or had experiences as a (part-time) drop-out in the past. Three of the participants only went to a drop-out initiative for a few hours a week or were thinking of dropping out, for which they are not included in the data analysis. The participants and/or their parents handed in a signed written informed consent in advance. The participants agreed verbally to be recorded during the interview. The research was conducted following the

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ethical standards of the University of Twente, which was confirmed by the ethical committee of the Faculty of Behavioural, Management and Social Sciences of the University of Twente. At the moment of the interview, the 32 participants were 9-23 (mean = 16, SD = 3.32). From 3 participants, the age was unknown. Out of the 32 participants, nine were female. Other diagnoses, such as ADHD and ASD, were not taken into account in this study. The age on which the participants dropped out was also not studied specifically. Nonetheless, the drop-out age ranged from 4 years old (after only 6 weeks of school) to 17 years old, covering the whole age range in which education is compulsory in the Netherlands.

Interview Scheme

An interview scheme consisting of 20 questions was created for the drop-outs (see Appendix 1). The interviews focused on four topics, each focussed on one sub research question: 1. Motives for dropping out, 2. Autonomy, relatedness and competence, 3. Social, emotional and physical well-being and 4. Recommendations. From these questions, data about positive experiences also arose to answer the second sub research question. When talking about school, initiatives and other experiences, participants where asked about that certain experience in case they did not tell about it themselves.

Next to the questions about these topics, some opening and closing questions were added to let the participant get used to the researcher and feel more at ease (questions 3, 4 and 20). Additionally, an exploratory question from SLO was added to measure interest into an online platform for highly able drop-outs, just as questions about how the drop-outs see their future and what is important to them. This last question was used not only to find recommendations, but also to study whether the participants had specific plans for the future or not. Lastly, the participant was asked if they had any questions for the interviewer.

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Procedure for Data Collection

For this study, semi-structured in-depth interviews were conducted. If the student wanted, (a) parent(s) or other trusted person could join the interview and add to the answers of the participant. It was expected that this would help the students to open up. The interviews were held in the home environment of the participant or another location where they felt comfortable and safe and took 13 to 85 minutes (mean=38 minutes, SD=0.01), which depended on the answering time of the respondents, the attendance of parents and to what extent and with which level of detail the participant wanted to share their story. An audio recording was made of each interview by means of a phone. Besides the interviewer, there was an additional person present with the primary function to observe and ask follow-up questions where the primary researcher did not. Before the interview, all participants were informed about the goal of the interview, and were asked if they felt comfortable with the second researcher attending the interview. Only four interviews were held with only one researcher, either due to the preference of the participant or due to logistical reasons.

Data Analysis

The interviews were transcribed and subsequently uploaded and coded in the program Atlas.ti (version 22.1.5.0, 2022). The aim of the coding process was to identify common topics in the interviews that help to answer the research question. During the data analysis, the following code groups emerged: development, future, important, motives, positive experiences, recommendations, well-being and other. This latter was used for codes that did not fit into one of the other groups, such as the opinion on an online environment. These code groups were based on the topics of the interview scheme. The topic "other" was split up into three code groups for clarity and the code group "positive experiences" was added. Refer to Appendix 2 for all codes.

In the further coding process, the researcher used an inductive, data-driven approach to look for codings arising from the code groups. For this process, the researcher first scanned all transcripts in order to identify the most common codes for every code group. Secondly, a transcript was read thoroughly and coded by using the previously identified codes. At the same time, additional subcodes were identified where appropriate and coupled to a code group. This process was repeated for every transcript. During the whole process, the codes were compared with each other and revised by merging, renaming or splitting them. Per code, a comment was written about the topic the code reflected. This coding process was decided on in collaboration with C. Grömping MSc., researcher at the University of Münster. This coding method was chosen due to the explorative nature of this study. Additionally, its unique nature made that no existing coding schemes fit the research well.

It is worth noting that some codes could have fitted in multiple code groups. For these, the code group was chosen that fitted best with the context of the code. Resulting from this, some codes that are related to the same concept are categorised differently (e.g. one code in motives, the other in development or positive experiences). Additionally, to show the relevance of the study for both primary and secondary education, the code distribution of the codes over participants in primary, secondary and tertiary education is displayed.

Results

Development

Concerning the development of the drop-outs, 21 codes were identified in the interviews. The codes in this code category taps into the self-determination theory (Ryan & Deci, 2000).

Table 1

Development code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Experienced no autonomy	6	16	1	23
Experienced autonomy	1	2	0	3
Experienced limited autonomy	1	3	1	5
Experience no Competence	8	15	1	24
Experience Competence	0	4	0	4
Experience limited Competence	2	2	0	4
Did not feel understood	8	15	1	24
Does not feel understood by friends and/or family	0	1	1	2
Feels understood by friends, family and/or trainers	3	7	0	10
Feels understood sometimes	0	5	0	5
Challenges themselves with hobby/project	2	8	1	11
Initiative is not fitting	1	5	0	6
Is taken seriously at school	0	3	0	3
Is not challenged	0	1	0	1
Has bad relationship with students	2	10	0	12
Has good relationship with students	3	4	0	7
Has limited relationship to students	3	8	2	13
Bad student teacher relationship	4	8	1	13
Positive student teacher relationship	0	4	0	4
Neutral student-teacher relationship	3	10	1	14
Has social-emotional challenge	2	1	0	3

For autonomy, competence and the relationship with students and teachers, there are

three codes each. This coding arose from the data and enabled to differentiate between

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positive, neutral and negative experiences regarding these categories. As emerges from the data, only three of the drop-outs indicated that they experienced autonomy at school. Most of them did not experience autonomy in their school situation before they dropped out:

School was focussed a lot at "you must do this". You must fit in the system, you must do your tests, you must do this, you must do that. I had no voice in this, even when I told them what I needed, they just said that that was not how school works and that I just needed to do it."

Regarding competence, similar results emerged:

No, not at all. If they offered some differentiation or enrichment, it was just extra work. It was extra work, not even something challenging.

11 of the participants stated that their current source of challenge is their hobby or a self-chosen project. Another participant stated that he has no challenge at the moment.

24 of the drop-outs stated that they did not feel understood by their teachers:

I was in a class with only highly able students, but almost all of them fitted in the normal school system. I did not feel understood, and the teacher only had a very negative effect at my self-confidence, especially regarding maths.

Only five of the participants felt understood sometimes, and as can be seen in Table 7, only three of the participants stated that they felt understood. 10 of them did explicitly state that they felt understood by their family, friends, or at their hobbies (e.g. a trainer).

Six of the participants indicated that the drop-out initiative that they attend is not fitting with their needs and wishes:

"The school alliance insisted that I went to that initiative, but it was not fitting for me at all because I get overstimulated very easily."

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Out of the 32 participants, 12 did not experience good relationships with class mates. Seven drop-outs did have good relationships with their class. The remaining 13 fall in between. For them, there often was no good bond with the class mates, but it was not that bad either:

"At many of my classes, there was not really a relationship. I was there, but at the same time, I wasn't and the students got used to it."

In contradiction to the relationships with fellow students, only four participants experienced a good relationship with their teachers. For 14 of them, the relationship was not great, but also not too bad. 13 of the drop-outs stated that they had a bad relationship with their teachers:

"Teachers were a big problem. I made a plan with a school therapist, but the teacher just did not help. I had a lot of arguments with the teachers. They couldn't handle it when I disagreed with them."

Future

Six codes were identified in the interviews concerning the ideas about the future of the drop-outs.

Table 2

Future code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Future_context	1	0	0	1
Future_diploma	4	16	1	21
Future_job	5	13	2	20
Future_living	4	6	1	11
Future_no ideas	4	8	0	12
Future_well-being	3	3	0	6

Many participants had ideas about their future, such as plans to get a diploma, or ideas about their future jobs. 12 participants did not have concrete plans about their future. Six of the participants mentioned that they want to be happy in the future. One drop-out mentioned the context in which they see themselves living (a lot of robots), and 11 of them mentioned the way they would be living (e.g. the family, house or pets):

"I hope that my secondary school time will be amazing, after which I can follow an educational programme for designer or something related to software, so I can work at a tech company later, preferably in California."

Important

17 codes were identified in the interviews about what the participants think is important in their lives.

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Table 3

Important code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Important activity	0	2	0	2
Important appropriate education	1	3	0	4
Important autonomy	1	4	1	6
Important Back2school/diploma	0	2	0	2
Important calmnes	1	1	0	2
Important change in school system	1	6	0	7
Important clarity/structure	1	0	1	2
Important environment	0	2	0	2
Important Feeling better/well-being	2	5	0	7
Important having a happy/fun life	0	2	0	2
Important initiative	1	0	0	1
Important learning relevant things	1	1	0	2
Important nature and climate change	0	1	0	1
Important not school	1	0	0	1
Important people	5	11	1	17
Important perspective/goal	0	2	1	3
Important pets	0	2	0	2

17 of the participants mentioned that specific people in their lives were important to them, such as their parents or friends:

"People that understand me and that care about me, things and people that make me happy"

"For me, it is important to improve my well-being."

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Motives

For the code group "motives", 16 codes were found. This code group taps into the reasons participants had to drop out of school.

Table 4

Motives code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Mismatch with school system	9	16	1	26
Not taken seriously/not listened to	8	15	1	24
Depression/mental problems/suicidal	1	8	2	11
False promises	3	6	1	10
Teachers miss knowledge about high ability	3	7	0	10
Did not meet expectations	2	6	1	9
Lack of clarity/structure/calm environment	3	4	1	8
Lack of challenge	4	2	1	7
Test problems	0	6	1	7
People/environment/bullying	1	5	0	6
Insecure	0	4	0	4
Stress	0	3	1	4
Feels unfair	2	1	0	3
Exhausting	0	1	0	1
Motive unknown	0	1	0	1

26 of the participants stated that a mismatch with the school system or the lack of appropriate education was a cause for them to drop out of school. Not being listened to and not being taken seriously are also frequent motives, as stated in 24 interviews:

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"My teacher that taught us maths and Dutch treated me childish. The instructions were way too long, and I just did not want to anymore. I did not pay attention anymore, and every time I zoned out, the teacher became mad and treated us like we were toddlers"

Next to that, mental problems such as depressions are also a common motive for dropping out. 11 participants named this as a reason for them to drop out of school:

"I have always struggled with first and second grade. I went quicker through the learning materials than the other children. I have felt unhappy from the fourth grade of primary school, but at secondary school, I really was depressive. My mentor at school did not help me with this. To prevent me from worse, my parents kept me at home."

Other common motives for dropping out are false promises, not meeting expectations and teachers with lack of knowledge on high ability. Often, teachers would promise to do something, which ended in disappointments for 10 of the participants. Nine of the participants stated that their school did not meet their expectations. Nine participants also stated explicitly that they thought that the teacher did not have enough knowledge on high ability:

"I don't trust school anymore. They did not help me well at all, and they did not do anything to learn how to help me. They promised me things, but they did not follow up on these promises at all. I just want to leave everything of this school behind and start with a clean slate. I even don't want to reuse the pencils from that school."

Next to these motives, participants also mentioned that a lack of clarity, structure or a calm environment caused them to drop-out. Additionally, a lack of challenge, problems with tests and the people, environment and bullying were mentioned as motives for not attending school. Lastly, participants felt insecure, stressed, treated unfairly or exhausted due to school.

Positive Experiences

For the code group "positive experiences", 11 codes were identified in the interviews. These codes are used for positive experiences drop-outs have.

Table 5

Positive Experiences code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Feels understood	0	3	0	3
Positive experience_appropriate education	3	5	1	9
Positive experience_autonomy	0	7	0	7
Positive experience_challenge	4	6	0	10
Positive experience_covid	0	1	0	1
Positive experience_initiative	5	7	0	12
Positive experience_mental health and learning	0	1	0	1
Positive experience_peers	1	1	0	2
Positive experience_specialized help	0	1	1	2
Positive experience_taken seriously	0	3	0	3
Positive experience_teachers	0	2	0	2

12 of the participants have positive experiences with the drop-out initiative they attend. These initiatives are mostly specialized in high ability, and often are aimed at getting the child back to a form of education. The participants were especially positive about IEQuest and NCGN:

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"Eventually, we ended up at IEQuest. Finally, we felt understood. It feels like a blessing. She really helps us forward."

"At NCGN, I feel safe. This is a place where I feel understood. I have freedom here, and the coaches here really know what they are doing."

Other positive experiences have to do with being challenged, having autonomy and the presence of peers:

"I prefer working with the older guys at the 3D printer. There is more challenge in there, and they understand these things too. People from my age don't understand these things at all. With the older kids, I can talk about it, and they can even teach me some things."

Positive experiences regarding appropriate education often have to do with the participant being taken seriously by someone. Often, the teacher understands what needs to be done, and by combining part-time school with specialized help, the participants were able to have a form of education again.

Recommendations

21 codes were identified in the interviews about what the participants would recommend to schools.

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Table 6

Recommendations code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Individual education/attention	7	17	2	26
Listen/take seriously	7	15	1	23
More freedom/autonomy	5	15	2	22
More challenge	2	6	1	9
More project work-application	3	5	1	9
Teacher-training	2	7	0	9
No tests/grades/alternatives	0	8	1	9
More peers	3	2	0	5
More calmness in class	2	2	0	4
More focus on well-being than learning	0	3	1	4
More perspective	0	4	0	4
More in-class safety	1	0	2	3
Change in building	2	0	0	2
Changing environment	1	0	1	2
Improve social context	0	2	0	2
No physical contact	2	0	0	2
School pet	1	1	0	2
University/HBO without havo/vwo diploma	0	2	0	2
Less homework	0	1	0	1
More structure	1	0	0	1
No false promises	0	1	0	1

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Out of the 32 participants, 26 said that they would like more individual education, where there is more education with individual attention. 23 participants want to be taken seriously, and 22 would like to experience more autonomy and freedom. Additionally, extra teacher training was mentioned in nine interviews:

"In the ideal situation, I would not need a diploma. It would be accepted to just go to university. I want to do things at my own speed, and I think it is of utmost importance that people at school listen and get more training on high ability. I have seen what teacher learn about high ability at the pabo, and it's like only three sentences."

Additionally, nine participants stated that they would like to be challenged more. Also, nine participants would like to work on projects or more applied work. A change in the system with tests and grades was also mentioned in nine interviews:

"I want to be able to set my own tempo so that I can challenge myself. A changing environment could also help, going outside to learn every once in a while for example. Learning in another way, with more practical things and more project work. That combination works well for me. Tests and grades often feel useless for me. I understand that we use them, but they do not help me."

Well-being

53 codes were identified in the interviews about concepts influencing the well-being of the participants.

Table 7

Well-being code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Has a low confidence level	1	7	1	9
Has a neutral confidence level	3	8	1	12
Has a high confidence level	4	4	0	8
Environment_animals	1	2	0	3
Environment_busy	0	1	0	1
Environment_calm	6	13	1	20
Environment_good-people	4	11	0	15
Environment_home	4	14	1	19
Environment_initiative	2	1	0	3
Environment_known	0	4	0	4
Environment_nature	3	1	0	4
Environment_online	0	0	1	1
Environment_stimulating	1	1	0	2
Friends help them	3	11	2	16
Parents/family help	9	19	1	29
Pet helps	2	2	0	4
Someone at school helps	4	8	1	13
A form of therapy helps	7	19	1	27
Is not happy	2	3	1	6
Is happy	6	8	1	15
Is somewhat happy	1	8	0	9
Hobby_creative	3	13	1	17
Hobby_friends	1	13	1	15
Hobby_gaming/computer	5	12	1	18
Hobby_learning language	0	2	0	2
Hobby_me-time	0	1	0	1

Hobby_museum	1	0	0	1
Hobby_music	3	7	0	10
Hobby_other	5	5	1	11
Hobby_pets/animals	3	1	0	4
Hobby_reading	4	5	1	10
Hobby_scouting	1	2	0	3
Hobby_series-movies-youtube	2	7	1	10
Hobby_sports	7	17	2	26
School attendance officer did not understand/help	1	2	0	3
School attendance officer was helpful	1	5	1	7
Not taken seriously by municipality	0	1	0	1
Has no therapy	2	1	0	3
Relax_calmness	4	1	0	5
Relax_eating	1	0	0	1
Relax_family	0	1	0	1
Relax_friends	1	3	0	4
Relax_fun activity	0	4	0	4
Relax_hobby	7	16	0	23
Relax_me-time/sleeping	5	7	2	14
Relax_not	0	1	0	1
Relax_pets	1	4	0	5
School alliance/school is limiting	0	2	0	2
Has no self-control	1	2	1	4
Has limited self-control	3	6	1	10
Has self-control	2	10	0	12
Wants more friends	0	1	0	1
Well-being_physical	0	7	1	8

Eight of the participants feel self-confident. Another nine do not feel self-confident.

12 of the participants stated that they felt somewhat self-confident, or that their confidence

differed per theme. For example, they would feel self-confident in general, but once you mention school, the self-confidence would drop:

"My self-confidence about everything is fine, but as soon as it is about school, my self-confidence is gone."

The participants mentioned several environments where they feel comfortable. A calm environment, the home environment and an environment with trusted people were mentioned the most. For the home environment, specifically the bedroom of the participant was seen as the preferred environment.

Regarding external help, many of the participants can count on the support of their family (29) and a form of therapy (27), for example, when they dropped out of school. Additionally, they can turn to friends (16), pets (4) and school (13) when they experience problems.

Out of 30 participants that stated something about their happiness, only six felt unhappy. The others felt neutral about their happiness (9) or stated that they felt happy (15) at the time of the interview. Please note that this is their happiness in their current situation, where most have found a way of living that (to some extent) works for them.

The participants reported an extensive list of hobbies they have. Hanging out with friends (15), creative hobbies (17), hobbies involving gaming and computers (18) and sports (26) were mentioned the most often. Especially individual sports were popular (e.g. skating and horseback riding).

Seven of the participants expressed that the school attendance officer was helpful. On the other hand, for three participants the school attendance officer did not understand or help.

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One even stated that they were not taken seriously by the municipality, and for two, the school or school alliance was limiting:

"We tried to arrange home education in the Netherlands, but the School attendance officer would just not allow it. We moved to Belgium to be able to get home education."

23 of the participants used their hobbies as a means for relaxing. For 14 of the participants, sleeping or "me-time" (time for themselves, to just do nothing) were a way to relax. Other ways of relaxing, like a calm environment and a pet were also mentioned.

12 of the participants experience self-control. Four of them state they do not have this self-control. Another 10 participants say they have self-control to a certain extent:

"I do have control over myself, because I think a lot about things, and that gives me control, but if you ask me to stop fidgeting, then I cannot. That just needs to happen."

Eight of the participants expressed physical illnesses, e.g. eating disorders, stomach ache and head ache:

"I always had a lot of headaches and stomach aches, and more. The stress, the depression really expressed itself physically in my case."

Other

11 codes were identified in the interviews that do not fit into the other code groups.

Table 8

Other code frequency

Code	Primary Education (n=9)	Secondary Education (n=21)	Tertiary Education (n=2)	Total (n=32)
Differences Teachers	1	5	1	7
Full-time drop-out	6	17	2	25
Home education	1	1	0	2
No_initiative	1	0	0	1
Negative about online environment	1	3	0	4
Neutral about online environment	1	8	1	10
Positive about online environment	6	10	1	17
Part-time drop-out	3	4	0	7
Negative about real life environment	0	2	0	2
Neutral about real life environment	0	5	1	6
Positive about real life environment	4	4	0	8

7 of the participants reported that they experienced major differences between teachers:

"It differs a lot per teacher if I feel understood. Every year, there is one that just is not right. For some courses for which we have agreements, the teachers do not keep up with the agreements. That is hard, every now and then."

25 of the participants are of have been full-time drop-outs. Seven of the participants are or were part-time drop-outs, meaning that they only went to school for a few hours or a few days a week. Often, there is/was an initiative or form of therapy next to that, which helped the participant enough to get through the rest of the school week. Additionally, two of the participants are home educated after dropping out of school.

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"Due to the initiative, everything went better. I am now going to school for 3 days a week. The other 2 days, I am at the initiative. This makes that I can handle the school days."

When asked what the participants thought about an online environment, 17 expressed themselves positively, and seemed to be interested in such a the platform. 10 participants were neutral (e.g. they thought that it could be valuable for others, but not for them). Four participants thought negatively about the online platform. Eight of the participants stated it would be better to have the platform in a real-life environment, six participants were neutral about that, and two thought negatively about a real-life platform.

Conclusion

This study investigated the needs and wishes of highly able drop-outs in order to provide requirements for a curriculum and instruction plan and to inform educational practice. In order to come to a list of needs and wishes, highly able drop-outs were interviewed about their experiences, needs and wishes. This study is unique in the qualitative nature and educational context. Never before has qualitative research using semi-structured in-depth interview been used to research highly able drop-outs in the Netherlands.

Motives

The first subquestion in this study was: "What are the motives for the dropping out of children with high abilities, according to the drop-outs themselves?"

Based on the research data, the most outstanding motives for dropping out of school are a mismatch with the school system and not being listened to or not being taken seriously. The data suggests that the level of the education and the way the education was offered often did not match with the students, and appropriate alterations were hardly done to come to

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appropriate education. Moreover, the participants felt that the teachers did not listen to them, and when they did, the participants felt that they did not take the student seriously. The mismatch with the school system can be an indicator for a lack of knowledge on high ability amongst teachers. As high ability is not a mandatory subject in teacher degree programmes, this result is not surprising. Nonetheless, this does point out the need for more professional development on high ability.

The mismatch with the school system often includes a lack of challenge, as arises from the data. Not being listened to and not being taken seriously can be linked to autonomy and relatedness (Ryan & Deci, 2000). The lack of challenge, autonomy and relatedness implies a serious issue, since the data suggests that teachers are unable to fulfil the basic psychological needs of the highly able students and offer somewhat fitting education. Moreover, it is remarkable that the participants feel that they are not taken seriously or listened to. Altogether, it can be concluded that not fulfilling the basic psychological needs is often the reason for highly able students to drop out, which might be caused by the lack of knowledge on high ability of teachers.

Positive experiences

The second sub question of this research was: "Are there positive experiences of the highly able drop-outs regarding fitting education? If yes, what are these?"

It stands out that the positive experiences regarding initiatives mentioned by the participants all involve an initiative where the participant had the ability to challenge themselves, to make their own choices and was understood by others. Additionally, it was observed that the most positive responses came from initiatives that worked with a certain goal, instead of only providing daycare activities. The participants are especially positive about the initiatives IEQuest and NCGN. These initiatives have employees specialized in

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high ability, and participants report that they feel that they were listened to and that they were taken seriously, in contrast to their schools.

Other positive experiences have to do with challenge, appropriate education and autonomy. Participants liked getting hard exercises, being able to determine their own working speed, having accommodations in the curriculum to make it more fitting and having the ability to make choices about their learning and education. Often, positive experiences came from schools that showed courage to try unconventional things, such as going to school part-time.

To conclude, data shows that highly able drop-outs like challenge, autonomy and being taken seriously. Additionally, having experts on high ability available and having fitting goals are good practices as well, according to the data. This implies that when schools have the courage to make individual learning plans and offer training on high ability to their staff, the highly able students would be happier.

Autonomy, Relatedness and Competence

The third sub question of this research was: "What are the needs and wishes of highly able drop-outs regarding autonomy, relatedness and competence?"

The data clearly shows that practically all participants experienced a lack of autonomy and challenge. Additionally, the relationships the participants had with the teachers was not great either. The participants regularly did not feel understood, which indicates a lack of knowledge on high ability amongst teachers and displays a suboptimal student teacher relation. Next to the teachers, some participants state not to be understood by the school attendance officer, school alliance or municipality. Together, this shows that there is a lack of professional development regarding high ability. Additionally, the motives for dropping out, the important concepts for the drop-outs and the recommendations the participants made all

make clear that autonomy, relatedness and competence are of utmost importance for the target group.

To conclude, the data implies that autonomy, relatedness and competence are important for the highly able. However, it is still unclear if the current educational system and teacher expertise can fulfil these needs.

Social, Physical and Emotional Well-being

The fourth sub question addressed in this study was: "What are the needs and wishes of highly able drop-outs regarding social, physical and emotional well-being?"

Most of the participants felt happy at the time of the interview. An explanation for this can be that these drop-outs in general already found a fitting alternative for school. Additionally, it can be expected that drop-outs who are not doing well are less willing to partake in an interview, which can have biased the research.

A calm environment with trusted people was preferred by most participants. In cases of a busy classroom and/or suboptimal relations with fellow students, it can be expected that the student will feel unhappier. On the other hand, the data indicates that gaming and computer related hobbies (e.g. programming) are very popular amongst the drop-outs. Hobbies related to arts and crafts and music are also common, just like sporting and exercise.

Data indicates that the majority of the participants has ideas about their future jobs or has plans for getting certain diplomas or degrees.

Since autonomy, relatedness and competence influence well-being (Ryan, 2009), fulfilling these needs is essential for the well-being of the highly able. Since the data and other research suggests that the three needs are not sufficiently fulfilled, the assumption can be made that this lowers the well-being of the highly able students. This would be a serious issue, which needs attention.

Recommendations

The fifth and final sub question in this study was: "What is the advice of highly able drop-outs for schools and teachers?"

The participants recommend schools to offer more education that accommodates to the needs of the individual students. The participants often felt like "one of many" and did not think the education was appropriate for them. This is closely related with being challenged. Secondly, the participants would like the teachers to listen more to the students and take them seriously. Third, the students expressed that a raised level of freedom and autonomy would be helpful for them. These recommendations suggest that the three basic psychological needs are not fulfilled, as confirmed by the data on the motives for dropping out.

Other recommendations include changes to the school building or learning environment, improving the social context, making changes to testing, grading and homework systems and the use of project based work and applied learning. Additionally, the data implies that participants would like there to be more focus on their well-being, instead of solely on learning. The participants expressed that they do not like that it feels like learning is more important than their well-being.

A few of the drop-outs were physically touched by their teachers, mostly in order to restrain them. They indicated that it had a negative influence on their well-being and advised teachers to refrain from using their physical strength in trying to resolve a difficult situation.

Seeing the lack of training on high ability in teacher education, it can be assumed that extra training in offering appropriate education to the highly able will help in meeting the needs of the highly able students. Participants did mention that they would like teachers to have more training on high ability. Additionally, the advice of the participants includes ideas

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that might not fit within the current educational context. Hence, a change in the educational system might be needed to fit with the recommendations of the drop-outs.

Final Conclusion

The main research question of this study was: "What is needed in the Dutch primary and secondary education to fulfil the needs and wishes of highly able students regarding fitting education to prevent drop-outs?" Using the beforementioned conclusions, it can be concluded that the results of this study show that highly able drop-outs have needs regarding autonomy, competence and relatedness. Next to these needs, the data implies that the drop-outs need to feel understood by their teachers more. For these needs to be fulfilled, improved teacher training about high ability is almost inevitable. The need for this is even visible in the data. Additionally, a change in the educational system might not only be required to fulfil the needs, it is also wished by the highly able drop-outs, as comes out of the data.

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Discussion

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The conclusion regarding the first research question is in line with what Houkema (2020) wrote on the mismatch with the school system. Houkema described that a mismatch with the educational system is the cause for dropping out, and the data of this study implies the same.

Hornstra & al. (2020) found that highly able students have a higher need for autonomy, meaning that the teacher needs to offer them more autonomy to fulfil their needs than needed compared to other students. Ushioda (2006) also found that autonomy is important for learning languages. According to Houkema (2018), highly able children can learn two to five times as fast as other students, due to which they need less practice. This makes that the current education often offers too little challenge for the highly able, as the

data found in this study confirms. Together, this shows that the three basic psychological needs are more important for the highly able than for the other students. The data found in this study is in line with Hornstra & a. (2020), Ushioda (2006) and Houkema (2018).

The presence of participants who dropped out in primary school, and all other drop-outs for who the problems started there, confirm with the findings of Hansen and Toso (2007). Their study implies that drop-out problems often begin in elementary school. This study and the study by Hansen and Toso both found data suggesting the lack of understanding by teachers, a lack of challenge and a disturbed relationship with teachers and other students. This is also in line with the study of Landis and Reschly (2013).

Limitations and future studies

In this study, no intercoder was used. All interviews were coded by one researcher only. This limits the reliability of the research.

The generalizability of the results is limited by the sample group. By recruiting participants via drop-out initiatives, schools and ECHA specialists, the sample group may be biased. Furthermore, this study is limited to drop-outs that were willing to participate in this study. It can be possible that there are differences between the participants and the drop-outs not willing to participate, for example due to the current state of their well-being.

Additionally, the presence of parents at some of the interviews might have influenced the results. The parents were allowed to add information to the answers of the participants, which resulted in the collection of more useful data. However, the presence and the answers of the parent can have influenced the answers of the participant.

Since autonomy, competence and relatedness are so clearly reflected in the results, future research into each of these concepts specifically and the needs drop-outs have regarding them.

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Other important future research taps into teacher training. Krijnen et al. (2021) found that teacher professionalization training is considered the most promising activity in their alliance regarding giftedness. With the results of this study in mind, study into the knowledge and (need for) training of teachers regarding high ability seems fruitful for improving educational practice and important for meeting the needs and wishes of the highly able drop-outs.

In the same line, research into if and how the needs of the highly able can be fulfilled is recommended too. For this, good practices could be studied.

Contextual Analysis

In this contextual analysis, it is explored how other academic disciplines or fields feed into or profit from this study. This study finds itself at the crossroads of healthcare, psychology and educational science. Hence, the relation between this study and those fields are discussed. Secondly, the relation of this study with public administration and its societal relevance will be explained.

Educational Science

First of all, this study is relevant for the educational sciences. The findings of this study will be directly applicable in providing appropriate education to highly able students, both to prevent drop-outs and to help drop-outs to a form of education. The findings in this study are of utmost importance for the help of the highly able. At the same time, all other students might also benefit from it in the same way that an elevator is essential for immobile people, but handy for those who are mobile.

The importance of well-being, autonomy, relatedness and competence, as implied by the data, show that this study goes beyond educational sciences, and that psychology and

pedagogy are essential for the field, making this study of a multidisciplinary nature. In practice, there is often a gap between educational practice and psychology. The highly able often have a form of therapy outside school, but collaboration between the school and the therapy is not so common, as noted during the interviews. A collaboration between these two stakeholders would be beneficial for the student.

Healthcare

This study is related to (mental) healthcare, a field that is currently under pressure from increased demand, partly caused due to all students who experience mental problems due to the COVID-19 pandemic (Fischer et al., 2022). This study can play a part in mitigating this problem, since supporting the highly able guided by the results of this study, can prevent students from needing mental healthcare. At the same time, the results can be important for the mental healthcare professionals. The findings on the needs of the drop-outs and the importance of autonomy, relatedness and competence can aid the treatment of current highly able students with mental health needs.

Additionally, there are similarities between research into well-being in healthcare and this study. One of the findings of this study is that the drop-outs would like to have more autonomy and that they want to have an influence in finding solutions to their school problems, instead of the teachers forcing their choices up onto the students. This is closely related to the concept of shared decision making, a known paradigm in healthcare. An example of a model of shared decision making is provided by Elwyn et al. (2012). In this model, three steps are taken to go from the initial preference to an informed preference and, finally, the decision. Although shared decision making can improve patient outcomes, as suggested by literature, it is only being used sparsely (Pollard et al., 2015). The concept of shared decision making has been introduced to the educational sciences about 40 years back

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already (Duke et al., 1980). On a more zoomed out perspective, this study and shared decision making show that it is important that the person that is directly influenced by a decision has a say in the decision making process. In this way, this study and the shared decision making support each other and add to validity.

Psychology

As mentioned before, this study is closely related to psychology. The study is based on the three basic psychological needs, as described in the self-determination theory (Ryan & Deci, 2000), which originates from the field of psychology. At the same time, this study confirms that the self-determination theory is applicable to the highly able drop-outs as well, which helps validating future research regarding the self-determination theory and the highly able.

Public Administration

Educational laws relate this study to the field of public administration. On the one hand, this study is based on e.g. the duty of care. With this, the public administration influences this study and the application of the results. On the other hand, the results of this study might cause a need for new or altered legislations.

Additionally, the highly able students would like to be more involved in the design of their education and have a need for a more individualized educational programme. This does not only require teachers to put in more effort, it would also require them to learn more about high ability. Hence, the field of public administration is related to this study, since changes in regulations regarding teacher training and freedom for individualized education follow logically from the results of this study.

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Social Relevance

This study is of social relevance, because it affects many children. Fitting education is of the utmost importance, not only for the well-being of the individual students but also for society as a whole. These highly able students are often highly intelligent and creative, talents that can benefit society in many ways. By offering fitting education and thus improving the well-being of these students, the workload in mental healthcare will not only be lowered, but the students will also be able to thrive in their learning and perform at their full abilities, which is an investment in society.

Still, the preeminent reason for meeting the needs of the highly able drop-outs is that every individual has the right to have appropriate education. The facts that whole families decide to move to Belgium to be able to offer their children somewhat fitting education, children drop out at age of 4 because teachers mistakenly recognise boredom as unwanted behaviour and the long distances children (and their parents) travel to be able to attend a more fitting form of education or initiative, show how fundamental of a need this is. Some drop-outs have suicidal or depressive thoughts. Our society constantly asks for new engineers, people who are able to think outside the box and people who are able to mitigate the world's big and complex problems. It is exactly the group of highly able that has the potential for working on these challenges that call for creativity and new solutions, which of great relevance for our whole society.

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Appendix 1: interview scheme

Number	Topic	Questions
1	Social, emotional and physical well-being	In what environment do you feel good?
2	Social, emotional and physical well-being	What are things you like doing? What makes you happy?
3		Can you tell me what your typical day looks like?
3		Can you tell me about your friends and family?
5	Social, emotional and physical well-being	Can you tell me something about your hobbies and/or sports?
6	Motives for dropping out	What caused you to drop out?
7	Motives for dropping out	Can you tell me about your school situation?
8	Motives for dropping out	Who, outside of school, have you spoken to about the dropping out?
9	Other	What is important to you?
10	Social, emotional and physical well-being	How happy do you feel this week? Can you explain that?
10,1	Social, emotional and physical well-being	How confident do you feel?
10,2	Social, emotional and physical well-being	Do you feel like you have control over yourself?
11	Social, emotional and physical well-being	Who can you turn to if you have a problem?
12	Autonomy, relatedness and competence	How was your relationship with your teachers and classmates?

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13	Social, emotional and physical well-being	How and when do you relax?
14	Autonomy, relatedness and competence	Were/are you able to make your own choices?
15	Autonomy, relatedness and competence	Did you feel challenged? Where do you find your challenge now?
16	Recommendations	Imagine an ideal situation. What would the perfect education for you look like?
17	Other	How do you see your future?
18	Other	Suppose we were to create an online platform where highly able drop-outs could meet each other. What would you think of this?
19	Recommendations	Do you have any tips for schools?
20		Do you have any questions for me?

Appendix 2: Code Book

Group	Code	Meaning
Development	Experienced no autonomy	The participant stated not to have experienced autonomy, freedom to make choices etc. at school
	Experienced autonomy	The participant stated to have experienced autonomy, freedom to make choices etc. at school
	Experienced limited autonomy	The participant stated to have experienced limited autonomy, freedom ed make choices etc., or changing autonomy at school
	Experience no Competence	The participant did not feel challenged at school
	Experience Competence	The participant did feel challenged at school
	Experience limited Competence	The participant felt a bit challenged at school
	Did not feel understood	The participant did not feel that teachers understood them
	Does not feel understood by friends and/or family	The participant feels that friends and/or family do not understand them
	Feels understood by friends, family and/or trainers	The participant feels understood by friends, family and/or trainers (at their sport)
	Feels understood sometimes	The participant feels that teachers sometimes understood them
	Challenges themselves with hobby/project	The participant challenges themselves with their own projects or hobby
	Initiative is not fitting	The initiative attended by the participant is not fitting their needs

	Is taken seriously at school	The participant feels that they are being taken seriously by the teachers at school
	Is not challenged	The participant does not feel challenged currently
	Has bad relationship with students	The participant has no good connections with their classmates
	Has good relationship with students	The participant has friends in class and/or no bad relationships in their class
	Has limited relationship to students	The participant has no bad connections with other students, but does not feel connected either, or the participant experiences both good and bad relationships with their classmates
	Bad student teacher relationship	The participant experiences problems with teachers and/or does not feel that teachers care about them.
	Positive student teacher relationship	The participant does not have problems with the teachers, and likes the relations they have.
	Neutral student-teacher relationship	The participant does not have problems with the teachers, but feels no connection or relation, or the participant experiences both problems with some teachers and good relations with other teacher.
	Has social-emotional challenge	The participant feels that the main challenge at school come from the social-emotional context and/or their own social and emotional status
Future	Future_context	The participant has ideas about how the context in the future looks like, e.g. the presence of robots.

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	Future_diploma	The participant has ideas about a diploma they would like to get, or what education they want to finish
	Future_job	The participant has ideas about their future jobs
	Future_living	The participant has ideas about their future living situation, e.g. their own house, living with dogs or living in another country
	Future_no ideas	The participant says to have no ideas about their future
	Future_well-being	The participant expresses that they would like to feel happy or happier in the future
Important	Important activity	The participant says that a certain activity is important for them
	Important appropriate education	The participant says that appropriate education is important for them
	Important autonomy	The participant says that autonomy is important for them
	Important Back2school/diploma	The participant says that returning to school and/or receiving a diploma is important for them
	Important calmnes	The participant says that a calm environment is important for them
	Important change in school system	The participant says that a change in the school system is important for them
	Important clarity/structure	The participant says that clarity and structure are important for them
	Important environment	The participant says that being in the right environment is important for them, e.g. a safe or trusted environment

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	Important Feeling better/well-being	The participant says that it is important for them to feel better and/or increase their well-being
	Important having a happy/fun life	The participant says that having a happy and fun life is important for them
	Important initiative	The participant says that the drop-out initiative they attend is important for them
	Important learning relevant things	The participant says that learning relevant things at school is important for them, e.g. learning about taxes instead of theories that they will never use.
	Important nature and climate change	The participant says that treating nature better and minimalising climate change are important to them
	Important not school	The participant says that school is not important to them
	Important people	The participant names specific people that are important to them.
	Important perspective/goal	The participant says that having perspective or a goal in life is important to them
	Important pets	The participant says that their pet is important to them.
Motives	Mismatch with school system	The participant says that a mismatch with the school system was a motive for dropping out
	Not taken seriously/not listened to	The participant says that a motive for dropping out was feeling that they were not taken seriously by the teachers, and/or that the teachers did not listen to them

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Depression/mental problems/suicidal	The participant says that a depression, mental problems or suicidal thoughts were a motive for dropping out
False promises	The participant says that false promises made by the school and/or teachers were a motive for dropping out.
Teachers miss knowledge about high ability	The participant says that a motive for dropping out was that teachers lack knowledge on high ability
Did not meet expectations	The participant says that the school not meeting the expectations was a motive for dropping out
Lack of clarity/structure/calm environment	The participant says that a lack of clarity, structure or a calm environment at school was a motive for dropping out
Lack of challenge	The participant says that a lack of challenge was a motive for dropping out
Test problems	The participant says that problems with tests (and the grades that come with them) are a motive for dropping out.
People/environment/bullying	The participant says that the people at school, the school environment and/or bullying was a motive for dropping out
Insecure	The participant says that feeling insecure was a motive for dropping out. This code was also used for perfectionism
Stress	The participant says that experiencing a lot of stress was a motive for dropping out
Feels unfair	The participant says that a feeling of unfairness was a motive for dropping out. This is related to the high sense of justice that the highly able have.

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	Exhausting	The participant says that a motive for dropping out was that school was exhausting
	Motive unknown	The participant says that they do not know exactly why they dropped out.
Positive Experiences	Feels understood	The participant had a positive experience in which they felt understood
	Positive experience_appropriate education	The participant had a positive experience in which they experienced appropriate education
	Positive experience_autonomy	The participant had a positive experience in which they felt that they had autonomy
	Positive experience_challenge	The participant had a positive experience regarding being challenged
	Positive experience_covid	The participant experienced the COVID-19 period as positive
	Positive experience_initiative	The participant experiences the drop-out initiative they attend as positive
	Positive experience_mental health and learning	The participant had a positive experience in which mental health was more important than learning
	Positive experience_peers	The participant had a positive experience regarding peers
	Positive experience_specialized help	The participant had a positive experience regarding specialized help, e.g. therapy
	Positive experience_taken seriously	The participant had a positive experience in which they felt taken seriously
	Positive experience_teachers	The participant had a positive experience with one or multiple teachers
Recommendations	Individual education/attention	The participant recommends the education to be more individually

	focussed, with more room for personal attention and customization of education.
Listen/take seriously	The participant recommends to listen to the students and take them seriously
More freedom/autonomy	The particpant recommends offering more freedom and autonomy to the students
More challenge	The participant recommends offering a more challenging curriculum
More project work-application	The participant recommends using more project based work and/or more applied/practical work in the curriculum
Teacher-training	The participant recommends that teachers receive better training regarding high ability
No tests/grades/alternatives	The participant recommends not to use testing and/or grading, or another system for testing and grading
More peers	The participant recommends to put more peers together. E.g. put more highly able students together
More calmness in class	The participant recommends to have more calmness in class, or to have smaller classes
More focus on well-being than learning	The participant recommends to focus more on the well-being and mental health of the student, instead of learning that needs to happen regardless of well-being
More perspective	The participant recommends to offer more (short-term) perspective, e.g. in reaching certain diplomas
More in-class safety	The participant recommends to pay more attention to the in-class safety, e.g.

		preventing bullying and work on teambuilding
	Change in building	The participant recommends changes in the school building
	Changing environment	The participant recommends to change the learning environment, e.g. go outside regularly
	Improve social context	The participant recommends to improve the social cohesion in the class, e.g. trying to mix groups
	No physical contact	The participant recommends teachers not to use their physical strength in difficult situations, e.g. not hurt or hold a student
	School pet	The participant recommends the school to take a school pet
	University/HBO without havo/vwo diploma	The participant recommends to make it easier to join an (applied) university without a secondary school diploma
	Less homework	The participant recommends giving less homework
	More structure	The particpant recommends offering more structure at school
	No false promises	The participant recommends not to do promises that the teachers might not be able to keep
Well-being	Has a low confidence level	The participant says they have no or very little self-confidence
	Has a neutral confidence level	The participant says they are not very confident about themselves, but they have a certain level of confidence
	Has a high confidence level	The participant says they have a high level of self-confidence

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Environment_animals	The participant feels good in an environment with animals
Environment_busy	The participant feels good in a busy environment
Environment_calm	The participant feels good in a calm environment
Environment_good-people	The participant feels good in an environment with trusted, good people (e.g. family)
Environment_home	The participant feels good at home
Environment_initiative	The participant feels good at the drop-out initiative they attend
Environment_known	The participant feels good in a known, familiar environment
Environment_nature	The participant feels good in nature
Environment_online	The participant feels good in the online environment
Environment_stimulating	The participant feels good in a stimulating environment
Friends help them	The participant says that friends help them in difficult times
Parents/family help	The participant says that parents/family help in difficult times
Pet helps	The participant says that their pet is helpful in difficult time
Someone at school helps	The participant says that someone at school is helpful in difficult times
A form of therapy helps	The participant says that a form of therapy is helpful, or that they have a form of therapy
Is not happy	The participant says that they are not happy
Is happy	The participant says that they are happy

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Is somewhat happy	The participant says that they are a bit happy
Hobby_creative	The participant has a creative hobby
Hobby_friends	The participant likes hanging out with friends or doing activities with friends
Hobby_gaming/computer	The participant has a hobby related to computers, gaming and/or programming
Hobby_learning language	The participant learns a language as a hobby
Hobby_me-time	The participant likes time for themselves to rest, do nothing, etc.
Hobby_museum	The participant likes going to museums
Hobby_music	The participant listens to music or plays a musical instrument as a hobby
Hobby_other	The participant has a unique other hobby
Hobby_pets/animals	The participant's pet is their hobby
Hobby_reading	The participant likes reading
Hobby_scouting	The participant is a member of a scouts group
Hobby_series-movies-youtube	The participant likes watching series, movies or Youtube videos
Hobby_sports	The participant does sports
School attendance officer did not understand/help	The participant feels that the school attendance officer did not understand their situation well, and that they did not help
School attendance officer was helpful	The participant feels that the school attendance officer helped them in their situation
Not taken seriously by municipality	The participant feels that they are not being taken seriously by the municipality in their problems
Has no therapy	The participant has no form of therapy

	Relax_calmness	The participant relaxes in a calm environment
	Relax_eating	The participant relaxes while eating
	Relax_family	The participant relaxes when surrounded by family
	Relax_friends	The participant relaxes when they are with friends
	Relax_fun activity	The participant relaxes when they do fun activities
	Relax_hobby	The participant relaxes when they are executing their hobby
	Relax_me-time/sleeping	The participant relaxes while sleeping or having me-time/doing nothing
	Relax_not	The participant does not relax
	Relax_pets	The participant relaxes with their pet(s)
	School alliance/school is limiting	The participant feels that the school alliance is limiting them
	Has no self-control	The particpant says that they have no or barely any self-control
	Has limited self-control	The participant says that they have a limited level of self-control, or that the level of self-control differs per situation
	Has self-control	The participant says they have self-control
	Wants more friends	The participant says that they would like to have more friends
	Well-being_physical	The participant has an illness, pain or physical condition, e.g. illness due to stress, or a sport injury
Other	Differences Teachers	The participant notices major differences between teachers, e.g. in relationships, autonomy or challenge

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Full-time drop-out	The participant is or was a full-time drop-out
Home education	The participant is home educated
No_initiative	The participant is not attending a drop-out initiative
Negative about online environment	The participant does not like the idea of an online environment for drop-outs
Neutral about online environment	The participant is not very positive, but also not negative about an online environment for drop-outs, or the participant sees how it could be useful for others, but not for themselves
Positive about online environment	The participant likes the idea of an online environment for highly able drop-outs
Part-time drop-out	The participant is only a part-time drop out, and still goes to school a few days a week
Negative about real life environment	The participant does not like the idea of a real-life environment/activity for highly able drop-outs
Neutral about real life environment	The participant is not very positive, but also not negative about a real life environment for drop-outs, or the participant sees how it could be useful for others, but not for themselves
Positive about real life environment	The participant is positive about a real life environment/activity for highly able drop-outs, and sees benefits over an online environment