

Criteria for a transition year for gifted and accelerated students

MASTER THESIS

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Abstract

The transition between primary and secondary school is a big step for many students as it brings many changes. During this transition, gifted and accelerated students may face additional challenges on a social and academic level. Since a poor transition can be associated with a negative impact on academic achievement and overall well-being, there is a need for interventions that address the transition challenges gifted and accelerated students may face. One way to help gifted and accelerated students with the transition challenges can be to offer a transition year in which these challenges are addressed. The first Dutch schools to implement a transition year with this purpose received positive feedback from teachers, parents and students which resulted in more and more schools considering implementing a transition year. Yet, in order to facilitate an implementation on a wider scale, a research-based curriculum and instructional plan is needed. This study addresses this issue by investigating what a transition year should entail regarding curriculum (content/skills) and instructional methods in order to help students with the challenges during the transition and to promote student ownership. The final aim of this study has been to develop a criteria list for a transition year which schools can use as a framework for the implementation. In this qualitative study, 20 interviews were conducted with teachers and gifted and accelerated students from Dutch primary and secondary schools as well as from Dutch schools which already offer a transition year. Based on the analysis of the interviews, a list of 20 criteria was developed that address experiences of the transition, content/skills, basic conditions, instructional methods and student ownership. Furthermore, critical remarks regarding the concept of a transition year as well as suggestions for possible alternatives that arose during the interviews have been discussed.

Keywords: gifted students, acceleration, school transition, transition year

Criteria for a transition year for gifted and accelerated students

In most Western countries, school classes are formed based on age (De Corte, 2013). In the Netherlands, children enter primary school at the age of four and move on to secondary school at the age of eleven or twelve. This grouping system is based on the belief that people have a similar cognitive, social-emotional and physical development. Yet, there are individual differences which teachers should attend to. Gifted children, for example, have an advanced cognitive level compared to their peers and therefore need other tasks in order to be challenged. When gifted children are not cognitively challenged enough and feel bored in their class over a longer period of time, it can lead to underachievement or school drop-outs (Freeman, 1998). To prevent this, several forms of interventions are developed (De Corte, 2013).

Two of the most practiced interventions for gifted students are early entrance at school and grade skipping, which are forms of acceleration (Freeman, 1998; Westphal, Vock, & Stubbe, 2016). Acceleration is defined as progressing through educational programs either at rates faster than or at ages younger than one's peers (Pressey, 1949). In the Netherlands, academic acceleration mainly takes place in primary school (Hoogeveen, 2015). Parents and teachers decide together whether grade skipping or early entrance is a suitable option for a child. Although teachers and parents often have concerns about acceleration, it has been practiced more frequently in the last few years. Whereas in 2013/2014 merely 1% went through primary school at a faster pace, in 2015/2016 the number of accelerated students increased to 2% (Rijksoverheid, n.d.).

Due to the increasing number of academic accelerations at primary school, there is a growing number of gifted students who enter secondary school at a younger age than their peers (Rijksoverheid, n.d.). For every student, the transition from primary to secondary school is a significant life event which is accompanied by many changes (Sirsch, 2003). A few of those are: going to a bigger school, new classmates, having a different teacher for each subject and being assigned more homework. In research about the transition of gifted as well as non-gifted students, most students were found to be worried about these changes (e.g. Barbier, Donche, & Verschueren, 2019; Bicknell & Riley, 2013; Mackenzie, McMaugh, & O'Sullivan, 2012; Waters, Lester, & Cross, 2014). Although these changes can cause the transition to secondary school to be stressful for every student, gifted and accelerated students may perceive the transition period as even harder due to additional challenges they have to face related to some of their unique characteristics and school experiences during primary school.

First, for gifted students who have accelerated one or more years, the transition can be socially more demanding due to being younger than their classmates. Even though age-differences are already present in earlier school years, they tend to become more visible during the first years of secondary school as that is the time when non-accelerated students reach puberty (Hoogeveen, van Hell, & Verhoeven, 2009). When students reach puberty, dramatic changes in biology and interests

occur (Simmons, Burgeson, Carlton-ford, & Blyth, 1987). For accelerated students, perceiving these physical differences and differences in interest due to age-gaps can lead to negative effects regarding social relationships and well-being. For example, Hoogeveen et al. (2009) found that accelerated students (especially males) show a less positive social self-concept - which concerns social relations and physical appearance - in the first two years of secondary school. In addition, Hoogeveen et al. found that accelerated students had a lower social status than non-accelerants during that period and were considered by their non-accelerated peers to be less cooperative, humorous, helpful, leading, and social. At the end of the first two years of secondary school, however, the social self-concept of accelerated girls was found to have improved. According to Hoogeveen et al., this finding gives an indication for age-differences tending to become more invisible again once the accelerated student also reaches puberty. Hoogeveen et al. supposed to have found this effect earlier in girls because girls reach puberty at a younger age than boys. Although the social self-concept improves after the first years of secondary school, aligning less with classmates on a social level is expected to influence the transition to secondary school in a negative way. Coffey (2013) found that positive social relationships ameliorate many of the challenges presented by the changes due to the transition. The absence of those positive relationships during the transition, in turn, can lead to a more severe perception of other challenges.

Secondly, when entering secondary school, many gifted students lack self-management strategies such as study skills and time management (Siegle & McCoach, 2005). The lack of those skills can be the result of inadequate challenge at primary school. According to Siegle and McCoach, gifted students often can rely on their good memory and fast progressing skills in early school years and therefore, do not need to develop and/or apply study skills such as note taking. When entering a more challenging school environment, a lack of those skills can become a barrier from achieving academic success (Siegle & McCoach, 2005). Further evidence for this is found in a recent qualitative study by Barbier et al. (2019) about (under)achievement of intellectually gifted students in the transition between primary and secondary education in Belgium. However, in that study, respondents -being in the first or second year of secondary school- did not necessarily perceive secondary school as academically more challenging than primary school and did not discern school programs about learning how to learn as helpful (Barbier et al., 2019). An explanation for this can be that at some schools, or rather for some students, the content is regarded as challenging in later years of secondary school and thus, difficulties resulting from a lack of skills do also appear in later years. Dutch (e.g. de Boer, 2012; Koenderink & Van Dijk, 2015) and international research (e.g. Barbier et al., 2019; Siegle & McCoach, 2005) remains consistent in the fact that underachievement in secondary school can be caused by a lack of study skills or other self-management skills which often emerge due to insufficient challenges in the early school years. Although accelerating during primary school could have helped gifted students to be challenged at some point during primary school, it is supposed that gifted students did not develop study skills to the same extent as their peers. Accelerating a year is not

always enough in order to reach the point where students feel challenged on the long-term (Hoogeveen, 2015) and often takes place only after several years of not being challenged.

Thirdly, gifted students who were not challenged in early school years are at risk of developing maladaptive beliefs and coping mechanisms towards challenge which can lead to underachievement in later school years (Snyder & Linnenbrink-Garcia, 2013). According to a theoretical model of gifted underachievement by Snyder and Linnenbrink-Garcia, some gifted students undergo a “Maladaptive Competence Beliefs Pathway”. Those gifted students who do so have strong competence beliefs and a high self-worth in early school years, when they experience high achievement due to an easy curriculum. Furthermore, they are often identified and praised for being gifted. As a result of that, students’ self-worth becomes highly related to academic achievement (Snyder & Linnenbrink-Garcia, 2013). In later years, when suddenly confronted with a more challenging curriculum, those students develop a fear of failure since failure would result in a strong decrease of self-worth. In order to protect their self-worth, students may adapt maladaptive coping strategies such as self-handicapping and withdrawal from academics when confronted with challenging tasks. In a study by Mofield and Parker Peters (2019), this phenomenon was linked to the role of mindset and perfectionism among gifted underachievers. It was found that gifted underachievers had higher fixed mindset beliefs about intelligence which in turn was found to predict an Evaluative Concerns Perfectionism which is referred to when students evaluate themselves against their mistakes. Taken together, those gifted students who developed fixed mindsets and/or a strong contingency between self-worth and academic achievement in early school years are at risk of underachieving when tasks become more challenging following the transition to secondary school.

Even though a large body of Dutch and international research shows that acceleration through grade skipping or early entrance at school has positive effects concerning academic achievement and moreover slightly positive effects on a socio-emotional level in the long-term (e.g. Hoogeveen, van Hell, & Verhoeven, 2012; Steenbergen-Hu & Moon, 2011), difficulties that can arise for gifted and accelerated students during the transition must not be ignored. Research emphasizes the importance of promoting a successful transition since difficulties during this time can have severe consequences for the students. For example, McGee, Ward, Gibbons, and Harlow (2003) found a strong correlation between the extent to which students experience difficulties following the transition and the likelihood of dropping out from education. Other research indicates that poor transitions have negative impacts on students’ wellbeing and on their achievement in the future (West, Sweetingm, & Young, 2008). To prevent gifted and accelerated students from experiencing a poor transition, it is important to help them to manage the transition challenges they can encounter. One intervention that may facilitate the transition for gifted and accelerated students is a transition year.

A transition year

The idea of a transition year is to provide an extra year for gifted and accelerated students between primary and secondary school which takes place at the location of a secondary school. In a transition year, gifted and accelerated students can be offered an extra program which does not overlap with the curriculum of primary and secondary school. The main aim of a transition year is to help students manage the challenges that come along with the transition. As a transition year counts as an extra year, there is no academic pressure of passing or failing during that year. Due to that, students can focus on settling in and can get used to the new environment of the secondary school at their own pace. Furthermore, the first additional challenge that gifted and accelerated students face due to age-differences is addressed in a transition year as the students grow older during that year and are therefore at the same age -or at least not much younger than their peers- when entering the official first year of secondary school. The second and third additional challenge that gifted and accelerated students can face during the transition can be addressed in a transition year by providing a program that fosters the development of self-management skills and the development of functional beliefs regarding mindset and perfectionism.

Beyond helping students to manage the challenges of the transition, a transition year aims to promote student ownership. Dole, Bloom, and Doss (2017) found that promoting student autonomy and ownership had positive effects regarding motivation and student engagement. Further research revealed that autonomy support and involvement by teachers are positively associated with high-quality motivation in gifted students (Hornstra, Bakx, Mathijssen, & Denissen, 2020). This, in turn, is expected to help to prevent underachievement in gifted students. Conley and French (2014) reveal that students who become owner of their learning can be successful in a wide range of learning environments. They state that strong ownership can even compensate for less effective teaching since learning can go beyond following simple teacher instructions when students experience ownership. Due to these positive effects of student ownership regarding motivation, promoting student ownership during a transition year is expected to serve as a buffer to prevent students from underachieving.

In the Netherlands, a transition year has recently been implemented at a couple of schools and seems to be a promising intervention which is well received by students, teachers, and parents. Therefore, more and more schools in the Netherlands consider implementing it. Yet, there is no research-based curriculum or instructional plan for a transition year on which schools can rely to when attempting to introduce a transition year. Designing a carefully thought-out curriculum and instructional plan that meets the needs of the learners is crucial for the success of gifted programs (Tomlinson, 2005; Van Tassel-Baska & Stambaugh, 2008). As no research regarding the curriculum and instructional plan for a transition year has been undertaken yet, this study aims to address the gap in literature in order to enable a successful implementation and introduction of a transition year on a wider scale.

The present study

The purpose of the present study is to arrive at a criteria list for a transition year in order to provide a framework for a curriculum and instructional plan for the intervention. This will be done by examining experiences and suggestions of gifted and accelerated students and their teachers concerning the following research question (RQ):

RQ1. What should the transition year entail regarding curriculum (content/skills) and instructional methods in order to help students with the challenges during the transition and to promote student ownership?

In order to develop a criteria list focusing on this RQ, the following sub-questions must be answered:

RQ 1.1 How do gifted and accelerated students experience the transition from primary to secondary school?

RQ 1.2 What should be included in the curriculum of a transition year regarding content and skills?

RQ 1.3 What should be included in a transition year regarding instructional methods?

RQ 1.4 What should be included in a transition year to promote student ownership?

Methods

Design

For this study, semi-structured interviews were conducted. Students originating from the same school were interviewed in pairs. It was expected that students feel more comfortable during the interview when a second student is present. Teachers were interviewed individually.

Participants

In total, 12 teachers and 16 students of three primary and four secondary schools from all over the Netherlands participated in this study (n=28). The participants were selected by convenience sampling, a non-probability sampling method where participants are chosen who are easily accessible (Sedgwick, 2013). All interviewed teachers and students were working at or attending schools with special programs for gifted students ("begaafdheidsprofiel scholen"). The teachers and parents of the students handed in a signed written informed consent in advance. The participating students agreed

verbally to participate and to be recorded during the interview. The study was approved by the Ethical Commission of the University of Twente. An inclusion criterion for teachers was to be experienced in working with accelerated students. For the students, an inclusion criterion was to have accelerated at least one year in primary school. The sample included four primary school teachers, four secondary school teachers and four transition year teachers. The average age of the teachers (1 male, 11 female) was 43,83 years ($SD=10.34$). Furthermore, the sample included four primary school students that were in grade five or six (groep zeven of acht), four secondary school students that were in grade seven or eight (klas één of twee) and four former transition year students that are in the first year of secondary school and four transition year students that currently are in a transition year. The students (9 boys, 7 girls) had an average age of 11.13 years ($SD=1.09$).

Interview schemes

In total, seven slightly varied interview schemes were created for the different groups of primary, secondary, and transition year teachers (see Table 1) as well as for the different groups of primary, secondary, former transition year, and transition year *students* (see Table 2). The interviews focused on four topics, which each tackled one of the sub-RQ: (1) experiences of gifted and accelerated students during the transition from primary to secondary school, (2) suggestions for the curriculum (content/skills), (3) suggestions for instructional methods and (4) suggestion for promoting ownership during the transition year. The first topic was intended to stimulate the participants to think about the transition and aimed to garner a general impression of what the teachers and students think about the transition of gifted and accelerated students and the challenges the students have to face on an academic and social-emotional level. The second topic tackled the question, “What should be taught?” during the transition year. A distinction has been made between content and skills that should be included in the curriculum to manage the challenges. The third topic about instructional methods tackled the question “How should it be taught?”. The fourth topic concerned the question what the transition year should entail to promote student ownership.

The questionnaires differed mainly in terms of periods of time the respondents were asked for. Primary school teachers and students were asked about their expectation of the transition in the future, secondary school teachers and students as well as former transition year students were asked about their transition experiences in the past, and transition year teachers and students were asked about their experiences of the transition year in the present. Further, the questions of the transition year teachers and students differed in terms of asking for actual experiences versus asking for suggestions/wishes. Transition year teachers and students were asked for actual experiences in their transition year, whereas primary and secondary school teachers and students were asked for suggestions and wishes for a possible transition year and the experiences they had regarding the transition without having this intervention.

Table 1*Sample questions of the interview schemes for teachers*

Topics	Sample questions primary school teachers (out of 10)	Sample questions secondary school teachers (out of 14)	Sample questions transition year teachers (out of 13)
1 General experiences regarding the transition between primary and secondary school	What are your experiences regarding the transition from primary to secondary school from accelerated students? Do you get feedback regarding the well-being of the students?	What are your experiences regarding the transition from primary to secondary school from accelerated students? How would you describe the students in terms of well-being?	What are your experiences concerning the transition from accelerated students to the transition year? How would you describe the students in terms of well-being?
2 Curriculum (Content/skills)	What could the accelerated student encounter in terms of skills in secondary education? Which skills should be taught during the transition year?	Which skills do students need at secondary school? On which skills should be focused during the transition year?	What could the accelerated student encounter in terms of skills in secondary education? What is done about that during the transition year?
3 Instructional methods	What should a transition year entail regarding instructional methods?	What should a transition year entail regarding instructional methods?	What does the transition year program at your school entail regarding instructional methods?
4 Student ownership	What should be focused on during a transition year in order to accompany students in the process of becoming owner of their learning?	What should be focused on during a transition year in order to accompany students in the process of becoming owner of their learning?	What do you focus on in order to accompany students in the process of becoming owner of their learning?

Table 2*Sample questions of the interview schemes for students*

Topics	Sample questions primary school students (out of 7)	Sample questions secondary school students (out of 8)	Sample questions transition year students (out of 14)	Sample questions former transition year students (out of 17)
1 General experiences regarding the transition between primary and secondary school	Did you already think of the transition to secondary school? Are you looking forward to it?	How did you experience the transition to secondary school?	How did you experience the transition to the transition year? Did it go easier than expected?	How did you experience the transition to the transition year? Did it go easier than expected?
2 Curriculum (Content/skills)	Imagine, that there would be a transition year. What would you like to learn about during that year? (in terms of subjects, topics, skills)	Do/did you encounter anything in terms of skills since you are at secondary school that you would have liked to learn earlier? What would you have included during a transition year? (in terms of subjects, focus on personal development, skills)	Are there things you encounter (e.g. planning, note taking, homework) now in the transition year? What subjects do you have? Do you like them? Are the subjects interesting/challenging?	Did you encounter things at primary school or during the transition year? If so, has something changed in this during the transition year? What was new during the transition year? (in terms of subjects, topics) How did you like that?
3 Instructional methods	Imagine that you would go to such a transition year, how would you like to learn, with what methods? (Think of methods such as project work or working with a computer.)	Imagine that you would have had a transition year. Do you have ideas with which methods you would have liked to learn?	What appeals to you most about the way of working within the transition year? What does not?	What appealed to you most about the way of working within the transition year? What did not?
4 Student ownership	n/a	n/a	n/a	n/a

Procedure for data collection

The interviews were held in separate rooms in the schools that the participants worked/attended and took 15 to 53 minutes (mean=32 minutes), which depended on the length of the various respondent group questionnaires and differential answering times of the respondents. An audio recording was made of each interview by means of a phone. Besides the interviewer, an

additional person was present with the primary function to keep track of which student said what. Through this, the answers of two students participating in the same interview could be properly attributed. Before the interview, all participants were introduced to the idea of a transition year and got a brief explanation of the aim of the study.

Data analysis

The interviews were transcribed and subsequently uploaded and coded in the program Atlas.ti. The aim of the coding process was to identify common topics in the interviews that help to answer the research question as well as to create a structured overview of topics that should be considered when developing the criteria list for a transition year. An integral approach was used for coding (Bradley, Curry, & Devers, 2007). The four central topics of the interview schemes which are related to the sub research questions were used as main codes and determined with a deductive approach before starting the coding process. The names of the central topics were shortened as main codes to: *experiences of the transition*, *curriculum (content/skills)*, *instructional methods* and *student ownership*. In the further coding process, the researcher used an inductive, data-driven approach to look for additional central topics as well as for sub topics arising from the central topics. For this process, the researcher followed the five steps of an iterative process. Firstly, the researcher scanned all transcripts in order to check whether the main codes can cover all data. By doing this, the researcher identified two additional central topics which were addressed repeatedly in the interviews. Consequently, the researcher added these two topics as main codes: *basic conditions* and *doubts/alternatives*. Secondly, three transcripts were read thoroughly and coded by using the six main codes. At the same time, initial subcodes were identified for each main code. The researcher did this by looking for varying subtopics in the transcripts that arise from the main topics. Thirdly, after coding three transcripts, the subcodes were compared with each other and revised by merging, renaming or splitting them. Text fragments that have been assigned the same subcodes were compared with each other in order to check whether they reflect the same topic. Fourthly, the process of coding and revising three transcripts was repeated five times, until at least two interviews of the seven different interview schemes were coded. After this process, the final coding scheme was created. Then, two interviews were coded by three researchers and checked for inter-coder agreement. Differences between researchers were discussed until researchers agreed upon the coding process and coding scheme. Lastly, the remaining interviews were coded with the final coding scheme by one researcher. The final coding scheme consists of six main codes with five to thirteen subcodes each which are presented in the tables under the results section.

Results

In total, six main codes were identified: *experiences of the transition, curriculum (content/skills), basic conditions, instructional methods, student ownership* and *doubts/alternatives*. For each main code, several subcodes were identified and described in two parts: First, the subcodes identified in the interviews with teachers were described. Second, the subcodes identified in the interviews with students were described.

1. Experiences of the transition

Teacher perception

Five subcodes were identified in the interviews of teachers concerning the general experiences of the transition from primary to secondary school (see Table 3).

Table 3

Subcodes teacher perception about 'Experiences of the transition'

Subcodes	Number of teacher responses			
	Transition year teachers (n=4)	Primary school teachers (n=4)	Secondary school teachers (n=4)	Total (n=12)
1 (Positive) effects of the transition year	4	0	0	4
2 Difficulties of accelerated students during usual transition	4	3	3	10
3 Negative student experiences at primary school	4	0	0	4
4 The transition from a transition year to the first year of secondary school	4	2	0	6
5 Students' misconception of secondary school	0	4	0	4

The experiences of *transition year teachers* were **positive** regarding the **effects of the transition year (1)** on well-being and personal development of the children. According to the transition year teachers, the students showed growth during the transition year and became better prepared for the first grade of secondary school:

My experiences are very positive. What I really like is that now, there is a possibility for these children to accelerate and not to go to the first class of secondary school at a very young age. [...] When you see the children at the beginning of the school year and at the end. And then, in the first and second grade of secondary school. Then I am just very proud. Those children have grown and are really ready for the first year of secondary school.

(Transition year teacher 1)

One transition year teacher described different effects of the transition year program during the course of the year. First, s/he mentioned that most students feel tense but after a few weeks they become relaxed, make friends and feel acknowledged. The teacher described that thereafter a turbulent phase follows since the students are challenged in order to learn certain skills, to learn to make mistakes, and to deal with disappointments. Since most accelerated students experienced primary school as being easy, being challenged is a new and difficult experience for them. The teacher observed that towards the end of the year this turbulent phase concludes and perceived that students are prepared for the first class of secondary school.

With regard to the experiences of the transition period for accelerated students, teachers mentioned some **difficulties of accelerated students during the usual transition (2)**. *A transition year teacher* mentioned that s/he perceives some accelerated students as dreamier than others and as a result of that, s/he notices that they miss some important information. *Secondary school teachers* mentioned that some accelerated students are much younger than their classmates. Due to this, they behave more childish and have different interests than their older classmates. Some other teachers mentioned that the transition is difficult for some accelerated students because of a lack of study skills and/or executive functions and that students fear to make mistakes when entering secondary school.

The transition year teachers noticed that some of the accelerated students that opted for a transition year were not having as good of a time at primary school because they had to work a lot individually outside the classroom and did not feel seen (**Negative student experiences at primary school, 3**). For those students, the transition year revitalized their enjoyment of learning and going to school. With regard to skills such as executive functions, *a secondary school teacher* described that some primary schools supported the development of these skills, whereas others did not facilitate their development.

All of the interviewed primary school teachers stated that many children do not have a realistic image of secondary schools (**students' misconception of secondary school, 5**). As students cannot grasp what they have to expect in secondary school, the teachers describe the transition as being a big, tense step for most students. A suggestion of *primary school teachers* was to provide more opportunities for students to develop a realistic view of secondary school. *One primary school*

teacher suggested collaborating on projects with primary and secondary school students at the location of the secondary school.

A *transition year teacher* described that, even after the transition year, starting at a secondary school remains a big step for students (**the transition from the transition year to the first year of secondary school, 6**). However, the teacher indicated that the children are well accompanied during that transition:

We try to do everything we can, for example through providing a fixed room in the building and more mentors. But it is still a matter of acclimatization, it is still a big step. A step where students receive more support compared to regular students that go to the first grade of secondary school. The transition year students have more mentors and a smaller group.

(Transition year teacher 2)

The transition to the first year of secondary school is described by *transition year teachers* as smooth for students that choose to stay at the same school. In that case, the students already know the school and rules and routines at that school, and they also know most of their teachers and some of their classmates. When students make the choice to go to another school, teachers are not sure about their experiences. They try to make sure that the transition goes well by providing the new school with information about the student by using a personal dossier which includes data from the student tracking system. *Primary school teachers* mentioned that they think that the transition to the first year of secondary school could be difficult for transition year students because of the changes they will experience when they leave the transition year, which is well designed for accelerated students, and go to a normal class at secondary school.

Student perception

Five codes were identified concerning the experiences of the transition from primary to secondary school in the interviews with accelerated students (see Table 4).

Table 4*Subcodes student perception about 'Experiences of the transition'*

	Subcodes	Number of student responses			Total (N=16)
		Transition year students (N=8)	Primary school students (N=4)	Secondary school students (N=4)	
1	Positive experiences of the transition year	8	0	0	8
2	Worries about the transition	2	3	0	5
3	Changes due to the transition	8	0	4	12
4	Wishes for the transition period	0	4	1	5
5	Motivations for doing a transition year	8	0	0	8

The transition year students characterized the transition year as a great experience (**Positive experiences of the transition year, 1**). They liked the new subjects, particularly the high number of creative subjects, they learned useful things, were more challenged than during primary school and found it nice not to be the youngest student of the class. Most *transition year students* were tense before the transition year. However, students experienced the transition as going smoother than expected. The introduction activities were perceived as very helpful for getting to know the class and making friends, which was considered as very important. Most of the students indicated feeling comfortable in the transition year group, one of the reasons being among peers of the same age.

Some *transition year students* expressed **worries about the transition (2)**. One worry concerned missing their friends from primary school or struggles in making new friends. However, this turned out not to be an issue as they had plenty of opportunities to visit their old primary school. Even though most *primary school students* stated that they were looking forward to going to a new school, most students expressed some worries about the transition. Most of the primary school students expressed some worries about orienting themselves in a much bigger building, where they also need to change the rooms between subjects. One primary school student expected the transition to be hard because s/he expected to miss his/her friends from primary school.

Three (former) transition year students indicated that the biggest **change due to the transition (3)** was to use public transport due to a larger distance to secondary school. Besides, some students were overwhelmed by the bigger size of the building of the secondary school. One *transition year student* remarked upon having to organize themselves to bring the right schoolbooks. At primary school they were allowed to leave books in the classroom. Apart from these changes that were perceived as challenges, *the transition year students* only experienced positive changes, for example

in communication with the school and in being more challenged. They also expressed that there were less changes than for other students because they still have a fixed classroom. *The secondary school students* indicated that they did not experience the transition different from non-accelerated students. However, they experienced some changes due to the transition. The new building, the new subjects and the bigger amount of homework were new for them. In addition, a student mentioned the change of being one of the oldest students at primary school to being the youngest at secondary school. Another difference they described is that they needed to study for exams at secondary school. As this was new to them, some students indicated getting lower grades than at primary school, especially when they entered secondary school and still needed to get used to studying for an exam.

For the transition to secondary school, *primary school students* mentioned some **wishes for the transition period (4)**. A concrete wish was to get to know the class and the school before the start of the school year, for instance through an introduction week. General wishes for secondary school were having a nice class, nice teachers, a nice ambience at school and finding friends. Additionally, a student wished to have choices for subjects. Another student wished to have homework hours and extracurricular activities where students can work on what interests them. *A secondary school student* would have liked to be mentally prepared for getting lower grades and that the focus would have been more social skills.

The transition year students named three different **motivations for doing a transition year (5)**. Most students felt too young for secondary school but were bored at primary school. Some students did not feel comfortable anymore in their primary school class. Others indicated to just have followed the advice of their parents and teachers.

2. Curriculum (content/skills)

Teacher perception

In total, six subcodes were identified with regards to the curriculum (content/ skills) that teachers perceive as important to focus on during a transition year (see Table 5).

Table 5*Subcodes teacher perception 'Curriculum (Content/skills)'*

Subcodes	Number of teacher responses			
	Transition year teachers (N=4)	Primary school teachers (N=4)	Secondary school teachers (N=4)	Total (N=12)
1 Study skills/ Executive functions	4	3	3	10
2 Social skills	4	2	2	8
3 Making mistakes	4	1	2	7
4 Personal development of the gifted	3	2	1	6
5 Teaching about giftedness	1	0	1	2
6 Brushing up primary school content/ skills	1	0	0	1

First, all *transition year teachers* stated an importance to teaching **study skills and/or executive functions (1)** such as automatizing, organizing, planning, note taking and time management during the transition year. According to the transition year teachers, it is important to teach those skills since the students need them at secondary school. They stated that accelerated students in particular often lack some study skills/executive functions when they enter secondary school since accelerated students did not need to develop those skills in order to be successful in primary school.

A thing that accelerated students have not learned in primary school is automatization. Some children are so fast that they calculate sums on the spot instead of memorizing the multiplication tables. But when they have to learn a language such as French, they have to memorize vocabulary and some children do not know how to approach that. This is something we practice in the transition year.

(Transition year teacher 2)

One school that already implemented a transition year has chosen the executive functions as the basis for their program. This is because they consider the acquisition of these skills as the fundamental learning goal of the transition year. There is attention for one or more executive functions in every subject. Most of the *primary and secondary school teachers* named one or more study skills/executive functions as being important during a transition year. In particular, the following skills were mentioned: learning how to learn, automatizing, making summaries, reading comprehension,

planning, organizing, time management, structuring tasks, emotion regulation, reaction inhibition, sustained attention and working with computers. In line with the experiences of transition year teachers, primary and secondary school teachers mentioned that most accelerated students have more difficulties with those skills in the beginning of secondary school than other students, even though every student still needs to develop those skills during secondary school.

Secondly, eight teachers suggested to pay attention to teaching **social skills (2)** during a transition year. *Most transition year teachers* stated that some transition year students have difficulties with working in groups. A transition year teacher stated that sometimes, the transition year students find it difficult to wait until their turn and to be friendly to their classmates. Besides, a transition year teacher described that some accelerated students do not feel understood by other children that are not at the same cognitive level. In the curriculum of one of the transition years, two hours a day of art or physical education are included since those subjects are perceived as providing a good opportunity to focus on social and emotional development. In another school with a transition year, children can choose to participate in a resilience training called “rots en water training”, where the focus lies on social and emotional development:

With the “rots en water training” we teach them how to react to each other, how to give and to take. Some children find it difficult to connect with other children because their jokes were not understood. Some are quick to become frustrated or angry, while others withdraw.

(Transition year teacher 2)

Two primary and two secondary school teachers also mentioned that it is important for accelerated students to learn how to collaborate since some have difficulties in dealing with others and understanding their perspective.

Thirdly, six teachers stated that attention should be paid to learn to **make mistakes (3)** during a transition year. *All transition year teachers* stated that most transition year students struggle a lot with making mistakes and find it difficult to ask for help when they get stuck with a task. One transition year teacher mentioned that most accelerated students have a fixed mindset and experience fear of failure. The transition year teachers indicated that a transition year, where students are not graded, is a good moment for accelerated students to learn how to deal with disappointments and with making mistakes.

[...] They have to know that it is okay to make mistakes and that it helps them to go on and that sometimes, they *need* help. In particular for accelerated children it is an eye opener when they realize that it is okay to fail.

(Transition year teacher 3)

A *primary school teacher* also indicated that accelerated students experience fear of failure and a *secondary school teacher* stated that accelerated students need to learn how to deal with disappointments.

Fourthly, teachers suggested to pay attention to the **personal development of the gifted (4)**. Three *transition year teachers* observe personal growth during the year: students gain self-confidence and feel that there is room for them. One transition year teacher argued that after the first transition year, s/he noticed more need to focus on personal development than on focusing on executive functions or study skills. Two *primary school teachers* and one *secondary school teacher* also argued that the transition year should focus on personal development. In particular, it was mentioned that students can explore their strengths, talents and weaknesses in a transition year and could learn how to use their strengths and deal with their weaknesses.

With regards to content, **teaching about giftedness (5)** is named by a *transition year teacher* and a *secondary school teacher* that stressed the importance of psychoeducation about fear of failure and perfectionism for gifted students. One *transition year teacher* named **brushing up primary school content (6)** to help students with shortcomings that arose due to grade skipping. *Primary and secondary school teachers* named examples for subjects but did not perceive it as important what subjects are chosen. Rather, they argued for the importance of providing subjects with opportunities for skill development, and that the curriculum meets some conditions, listed in '4. Basic conditions'.

Student perception

Six subcodes were identified in student interviews about the curriculum (content/skills) (see Table 6).

Table 6

Subcodes student perception about 'Curriculum (content/skills)'

	Subcodes	Number of student responses			
		Transition year students (N=8)	Primary school students (N=4)	Secondary school students (N=4)	Total (N=16)
1	Study skills/ executive functions	5	0	2	7
2	Social skills	2	1	0	3
3	Make mistakes	2	1	0	3
4	Personal development of the gifted	2	0	0	2
5	Ideas for new subjects	8	4	4	16
6	Ideas for new topics	0	2	0	2

In general, with regard to skills, students mentioned less skill deficits than their teachers. *Transition year students* mentioned having difficulties with planning in the beginning, which is a **study skill/executive function (1)**. However, one transition year student described that a lot of attention is paid to work on that skill in the transition year.

With planning, it does not always work out well, so I still have to practice that a bit. At primary school, I did not need to plan anything. So this is new. But it is starting to work out more and more. I practice a lot and it goes easier from time to time. [...] I forget less often to write things down in my agenda. (*Transition year student 1*)

The accelerated *secondary school students* mentioned either having experienced no skill deficits during the transition or having had difficulties with planning or emotion regulation, which belong to study skills/executive functions. A recommendation made by a student for a possible transition year is to support students in their emotion regulation, since s/he stated having had problems with becoming angry quite fast in the past. An alternative program for gifted students helped in becoming calmer.

Two transition year students indicated that there was a lot of attention for **social skills (2)**, in particular regarding bullying. A *primary school student* would wish to learn more about how to deal with others in a transition year.

Two transition year students mentioned that it was difficult for them to **make mistakes (3)**. Making mistakes was new for them but they did expect secondary school to be more difficult than primary school. A *primary school student* thinks that s/he would need to learn to refrain from judging themselves when making a mistake.

Regarding **personal development (4)**, a student stated being less shy now compared to the beginning of the transition year. According to the student, this is caused by a good classroom atmosphere and the attention that is paid to personal development by the teachers.

The transition year students were enthusiastic about the **new subjects (5)**. Students liked the challenging nature of the subjects and found the subjects interesting in general. Some of the subjects were completely new for the students, such as the language “Esperanto”, others were related to primary or secondary school subjects, such as “Visual arts” (beeldende vorming) and “People and society” (mens en maatschappij). In particular, creative subjects such as arts and theatre were mentioned by some students of the transition year as being great. As an example, the students enjoyed writing their own theatre script and showing the play at the end of the year. One transition year program includes time for working on topics that students did not learn about at primary school due to grade skipping. Regarding content, *primary and secondary school students* gave diverse suggestions for a transition year and included suggestions for new subjects that the students perceived as either interesting (e.g. physics), useful for the future (e.g. informatics), difficult (e.g. geography) or relaxing (e.g. art).

I think that you should provide the subject informatics. Since at secondary school, you use it a lot and later on in your live probably as well. In the future, a lot of things will happen digitally, so, I would offer informatic lessons.

(Primary school student 1)

Two primary school students shared their **ideas for new topics (6)** that they would like to spend time on during a transition year. One student would like to have climate lessons where students learn more about climate related topics such as waste separation. Another student would like to spend time with stories that have a morality. Both students also indicated that they would like to have some outdoor activities.

3. Basic conditions

Thirteen subcodes are identified as basic conditions for a transition year for accelerated students (see Table 7).

Table 7

Subcodes teacher perception 'Basic conditions'

	Subcodes	Number of teacher responses			Total (n= 12)
		Transition year teachers (n=4)	Primary school teachers (n=4)	Secondary school teachers (n=4)	
1	Challenging content	1	1	0	2
2	Flexibility of the program	3	0	0	3
3	Teacher involvement	3	1	0	4
4	Student involvement	2	0	1	3
5	Parent involvement	1	0	1	2
6	Variation in program	2	3	1	6
7	Distinct curriculum	3	1	0	4
8	Well-defined target group	2	2	0	4
9	Provide homework	0	1	0	1
10	Provide options for deepening	0	1	0	1

Table 7 (continued)*Subcodes teacher perception 'Basic conditions'*

	Subcodes	Number of teacher responses			
		Transition year teachers (n=4)	Primary school teachers (n=4)	Secondary school teachers (n=4)	Total (n= 12)
11	Teachers that are educated about giftedness	0	1	0	1
12	Teachers as coaches	0	1	0	1
13	Exchange of information between schools	3	3	0	6

Teacher perception

Providing **challenging content (1)** is named as a basic condition for the program by one *transition year teacher and a primary school teacher*. Three *transition year teachers* indicated that the transition year program is flexible since there are no final standards for the transition year that they set up (**flexibility of the program 2**). According to those teachers, the content of the program can be adjusted at every point in time, e.g. due to results of program evaluations or changes of teachers. Besides, a *transition year teacher* mentioned that teachers can decide based upon the interests or needs of the students, to deepen or shorten topics in the class. "When you notice that a topic is very vivid in the group, you can pay attention to that." (*Transition year teacher 1*). As a result of the flexibility of the program, *transition year teachers* indicated that it is possible to involve teachers, parents and students in the planning of the program. Three *transition year teachers* mentioned the **involvement of teachers (3)** as being valuable since the teachers have the opportunity to teach topics they like, are motivated to teach and are experts in. Two *transition year teachers* mentioned the **involvement of students (4)** with the planning of the program. S/he stated to ask students in the beginning what they would like to do and then, tries to do that during the transition year. One *transition year teacher* indicated the **involvement of parents (5)** to be very valuable. Sometimes parents come up with good ideas for the program or offer opportunities for an excursion or module related to their jobs at an interesting company.

Two *transition year teachers* mentioned that providing enough **variation in program (6)** was important when setting up the program of their transition years. Even though the program is flexible, teachers have paid attention to cover all subject areas of secondary school, such as science, languages and sports. On top of that, one transition year offers elective courses, which also contributes to variation in the program. With these elective courses, children can choose a course (together with a mentor) that fits best to their personal learning goals regarding skill development or personal

development. According to a *primary school teacher*, variation in program should also include offering different types of tasks, like creative, practical, analytical and ethical tasks.

Providing a **distinct curriculum (7)** with no overlap regarding the content of the secondary school curriculum is mentioned by *three transition year teachers* as one of the basic conditions. This prevents students from becoming bored in the first year of secondary school. Nevertheless, a *transition year teacher* stated that the subjects should still prepare the students for secondary school.

According to *two transition year teachers*, having a **well-defined target group (8)** for the admission is an important basic condition for a transition year. During the first year of the new program, teachers noticed that some students that had been admitted had not mastered the primary school content sufficiently and that there were twice exceptional students. Since their transition year was only meant for students that master the primary school content sufficiently and there were no qualified teachers in special education, the transition year *teachers* decided to be more critical during the admission and to ask for more information about the students. This way, the transition year *teachers* wanted to make sure that only the students that meet the criteria of the target group are permitted to do the transition year. Apart from the flexibility of the program, all of those conditions (1-8) are also mentioned by at least *one primary or secondary school teacher*.

There are five conditions (9-13) that were named only *by one primary school teacher*. According to a *primary school teacher*, students should get **homework (9)** in a transition year. An additional condition named by a *primary school teacher*, is to **provide options for deepening (10)** during a transition year for students who are not challenged enough by the regular transition year curriculum. *Another primary school teacher* indicated that it is important to have **teachers that are educated in giftedness (11)**. S/he stated that teachers should have the ECHA diploma or a similar gifted education diploma to be able to provide good education for the gifted students in a transition year. Another requirement that is mentioned by a *primary school teacher* is that the transition year teachers should take the **role of a coach (12)** that accompanies the learning process and does not give solutions when students struggle.

A good coach is someone that observes well and does not immediately help. Someone that takes time so that the students can struggle. Someone that knows how to ask questions so that students think on their own about what they can do to solve the problem.

(Primary school teacher 1)

The **exchange of information (13)** between primary school teachers, parents, children, and transition year teachers was mentioned as being important for most *transition year teachers* in order to find out whether the transition year is the best option for the child. *Three primary school teachers* stated that for a smoother transition in general, a good exchange of information between the mentioned parties is important. The *primary school teachers* revealed that the contact between

primary and secondary school is important for creating a more continuous line between primary and secondary school. Furthermore, they stated that students should be well-informed about secondary schools before the transition in order to have a realistic image of what to expect.

Student perception

Seven subcodes were identified regarding basic conditions of a transition year (see Table 8).

Table 8

Subcodes student perception about 'Basic conditions'

Subcodes	Number of student responses			Total (N=16)
	Transition year students (N=8)	Primary school students (N=4)	Secondary school students (N=4)	
1 Challenging tasks	8	1	0	9
2 Flexibility of the program	2	1	0	3
3 Variation in program	1	0	0	1
4 Preparation for secondary school	0	0	2	2
5 Provide homework	5	0	0	5
6 Subjects to unwind	0	1	2	3
7 Subject teachers	0	1	0	1

Most transition year students indicated that they had more **challenging tasks (1)** than at primary school and that they enjoyed that. They also indicated that they had to do some repetitive tasks that challenged them less. One student mentioned that for him/her, the second half of the transition year became boring but that this was compensated by an enrichment project that was offered to him/her. *A primary school student* wished to have challenging tasks in a transition year that build up in difficulty.

Two transition year students liked the **flexibility of the program (2)**. They indicated that they are part of a group of former transition year students that help with the evaluation of the program. They argue for cooperation between schools for improving the program. *A primary school student* thought that it would be nice to have more choices in order to study things of your own interest.

A transition year student mentioned that the transition year was great because there was a lot of **variation in the program (3)**. *Two secondary school students* stated that they would have liked to be better prepared for the subjects at secondary school in general and suggested to focus in a transition year on the **preparation for secondary school (4)**.

Former transition year students mentioned that they would have preferred more **homework (5)** during the transition year to be better prepared for the high amount of homework at secondary school. Moreover, one student mentioned that s/he prefers to study at home more and another indicates that more homework would also help to learn time management and planning. *Other transition year students* stated that it took time to get used to the increased amount of homework compared to primary school and that they expect it to increase even more after the transition year.

One primary and two secondary school students would like to have a **subject to unwind (6)** in between other, more challenging subjects. They would like to have a creative subject like music or a subject where they can read books, or someone tells stories.

4. Instructional methods

Teacher perception

Six subcodes were identified with regard to instructional methods (see Table 9).

Table 9

Subcodes teacher perception 'Instructional methods'

	Subcodes	Number of teacher responses			Total (N=12)
		Transition year teachers (N=4)	Primary school teachers (N=4)	Secondary school teachers (N=4)	
1	Project-based learning	3	2	3	8
2	Learning outside the classroom	1	0	1	2
3	Peer review/ Feedback	2	0	0	2
4	Inquiry learning	0	1	2	3
5	Reflecting	0	1	0	1
6	Debating	0	2	0	2

Most of the teachers of the transition years stated to offer **project-based learning (1)**. According to *the transition year teachers*, projects are valuable because students learn to work together. One transition year teacher stated that some projects are provided as additional enrichment for some students. Another transition year teacher explained that through some projects, subjects are connected with each other:

We sometimes work cross-disciplinary as for example when making dolls for a visual art project. They will consecutively use the dolls for the subject Drama in a short play, a puppet theatre. And in the subject Music, they compose music that fits to the play. And one group composes the music for the play of another group. Thus, two or three create a play for the puppet theatre and the others make music. So, they also work together.

(Transition year teacher 4)

One transition year teacher described a **learning outside the classroom (2)** activity, where the class went on an excursion to a laboratory. *A secondary school teacher* suggested making several excursions with the students because s/he thinks that the transition year provides room for learning outside the classroom since there is less time pressure.

According to *two transition year teachers*, by applying **peer review and feedback (3)**, transition year students can learn to give and receive feedback and to make mistakes. Before handing in a product, transition year teachers ask the students to ask a peer for feedback.

[...] the students always get the chance to improve their work. This way they experience 'hey it is okay to make mistakes' and then they get feedback from their classmates or from their teacher. Because they get feedback and also give feedback, they look at their work critically. And you notice that they are very proud of what they hand in.

(Transition year teacher 4)

One primary school teacher and two secondary school teachers suggested to use **inquiry-based learning (4)** during the transition year. One teacher argued that inquiry-based learning allows for the development of many skills. The other two teachers indicated that inquiry learning fits well to the target group and can evoke their curiosity.

A primary school teacher suggested to **reflect (5)** with students on their learning process. The teacher believed it beneficial to reflect with students on for example the process of planning. The teacher can help students with keeping things that go well and changing things that do not go well.

Two primary school teachers suggested that **debating (6)** should be part of the transition year. According to those teachers, through debating, students learn to think critically, to listen to others and to wait for their turn.

Student perception

Five subcodes were identified in student interviews regarding instructional methods (see Table 10).

Table 10

Subcodes student perception about 'Instructional methods'

	Subcodes	Number of student responses			Total (N=16)
		Transition year students (N=8)	Primary school students (N=4)	Secondary school students (N=4)	
1	Project-based learning	3	1	1	5
2	Learning outside the classroom	2	0	0	2
3	Inquiry learning	1	0	0	1
4	Debating	1	1	0	2
5	Work with laptops/tablets	7	2	0	9

Project-based learning (1) was perceived as a popular method by *three transition year students* and *one primary and secondary school student*. Other ways of learning that *transition year students* named were: **learning outside the classroom (2)**, **inquiry learning (3)**, **debating (4)**, and **work with laptops/tablets (5)**. All of those methods were well received by the students. Working with laptops/tablets was perceived as very convenient by *transition year students* because they did no longer have to bring heavy books to school. *Two primary school students* also indicated that it would be convenient to work with laptops/tablets. *A primary school student* liked debating a lot, even though s/he could not explain what exactly it was s/he liked about it.

5. Student ownership

Teacher perception

In total, six subcodes were identified in teachers' answers to the question how to encourage students in taking ownership of their learning during a transition year (see Table 11).

Table 11*Subcodes teacher perception 'Student ownership'*

	Subcodes	Number of teacher responses			
		Transition year teachers (N=4)	Primary school teachers (N=4)	Secondary school teachers (N=4)	Total (N=12)
1	Working goal-oriented	2	0	0	2
2	Give students responsibilities	3	3	2	5
3	Encourage to apply feedback	1	1	2	4
4	Set high expectations	0	2	0	2
5	Provide top-down learning	0	1	0	1
6	Psychoeducation	0	1	0	1

Two transition year teachers indicated to **work goal-oriented (1)** with their students in order to enhance students' ownership. They stated to work with spreadsheets where students can see their learning goals and their progress towards these goals. A learning goal could for example be to work on one of the executive functions. It is up to students what and when to work on the learning goals and how they show that they have made progress.

Three primary and two secondary school teachers argued for the importance of **giving students responsibilities (2)** in order to enhance their ownership of the learning process. *One secondary school teacher* stated to give students the opportunity to leave the classroom and work on an online forum when they believe to already have mastered the content of the given class. Those students were thus given the responsibility to make their own choice on when to work in the forum and when it is better to stay in the classroom. *Two transition year teachers* also advised giving students the opportunity to take responsibility in deciding what to learn. One transition year teacher argued that it is the task of the teacher to facilitate the student in making choices by having conversations with them.

Several teachers suggested to **apply feedback (3)** to encourage ownership. A *transition year teacher* explained that it is important to give feedback and reflect with the student on their learning process. A *primary school teacher* stated that giving feedback to others can also help students with looking more critical at their own learning process.

One primary school teacher indicated that for accelerated students, it is important to **set high expectations (4)** in order to enhance ownership. *Another primary school teacher* named **top-down**

learning (5) as a method to enhance ownership. *Another primary school teacher* stated that **psycho-education (6)** can help. S/he stated that it is good for the students to know how the brain works. In particular, s/he referred to explaining how the short-term and long-term memory works.

6. Doubts/ alternatives of the transition year

Teacher perception

Nine subcodes were identified regarding doubts/alternatives of the transition year that were expressed by primary and secondary school teachers (see Table 12).

Table 12

Subcodes teacher perception 'Doubts/alternatives'

	Subcodes	Number of teacher response			Total n= 12
		Transition year teachers n=4	Primary school teachers n=4	Secondary school teachers n=4	
1	Preparation for secondary school is beneficial for every student	0	2	3	5
2	Broader target group	0	1	0	1
3	Accelerated students set in a bubble	0	2	1	3
4	Embed transition year in system	0	1	0	1
5	Doubts about effectiveness of a transition year	0	1	0	1
6	Offering a transition year at primary school	0	1	0	1
7	Changing the educational system	0	2	0	2
8	More flexible classes	0	1	0	1
9	Alternative pull-out programs	0	0	2	2

Three secondary and two primary school teachers mentioned that a **preparation for secondary school is beneficial for every student (1)** and not only for accelerated students. The teachers indicated for example that many students of the first year of secondary school still have to

learn study skills and executive functions and perceive the transition from primary to secondary school as a big step. Regarding the perception of the transition and the development of skills, some teachers indicated that they did not perceive big differences between the experiences of accelerated and non-accelerated students. *One primary school teacher* mentioned that at their primary school, the transition year is not only aimed at accelerated children but is accessible for a **broader target group (2)** such as for children with difficulties on a social-emotional level. According to that teacher, it should be re-considered whether a transition year should be exclusively offered to accelerated children since s/he thinks that other students could also benefit from a transition year.

Two primary school teachers and *one secondary school teacher* indicated that **accelerated students are set in a bubble (3)** in a transition year. Even though grouping them can provide them with a positive and safe environment, students will miss out on learning in heterogeneous groups during that year. One suggestion *by a primary school teacher* was to **embed the transition year in the system (4)**. According to that teacher, it is important that transition year students also have contact with other, non-accelerated students at secondary school. When accelerated students would work on projects with other students from the school, they would have the experience to work in heterogeneous groups and would be involved more with the new secondary school in general.

One secondary school teacher indicated that offering a transition year at the secondary school should be reconsidered. According to that teacher, **offering a transition year at primary school (5)** would give students time to explore which secondary school will fit him/her best. *One primary school teacher* has **doubts about the effectiveness (6)** of a transition year since s/he experienced that students who participated in a transition year did not perform better in the first year of secondary school than other accelerated students.

Two primary school teachers indicated that the long-term solution is to **change the educational system (7)** in a way that there are no separate schools and no age-based groups but level-based groups. According to those teachers, a transition year would become redundant when students could stay at the same school from the age of 4 until the age of 18. Additionally, they believe that at such a school, it would be possible to provide personalized education, where every student can work in a learning area on a level that fits him/her:

Then the student would be able to do an exam at any given moment. When s/he knows a subject on vwo level [university preparatory education level], then s/he could do an exam on that level but when s/he knows mathematics on havo level [senior general secondary education level], then s/he can do an exam on havo level and s/he could be done with English after five years, when s/he already takes the English exam then.

(*Primary school teacher 2*)

One primary school teacher mentioned that having **more flexible classes (8)** is a good alternative when changing the educational system is not possible. S/he stated that it would be better to group students based on their academic level for certain subjects instead of on their age.

Another alternative to the transition year would be to implement an **alternative pull-out program (9)** for accelerated students. *Two secondary school teachers* indicated that at their school, the possibility exists for accelerated children in the last year of primary school and in the first year of secondary school to participate one morning a week in a pull-out program. In that program, students in the last year of primary school get to know a secondary school. Furthermore, they work on projects where they have to collaborate and can work on personal goals.

Student perception

Four subcodes were identified in the student interviews belonging to the main code doubts/alternatives (see Table 13).

Table 13

Subcodes student perception about 'Doubts/alternatives'

Subcodes	Number of student responses			
	Transition year students (N=8)	Primary school students (N=4)	Secondary school students (N=4)	Total (N=16)
1 One-year duration of Transition year	0	1	2	3
2 Alternative pull-out programs	0	0	4	4
3 Transition year would be an option for the student	-	1	1	2
4 Transition year would not be an option for the student	-	3	3	6

According to a *primary school student* and *two secondary school students*, the **one-year duration of a transition year (1)** is too long. *Two of the secondary school students* stated that a shorter program, for example of a month, would have been sufficient to prepare students for the transition. *The primary school student* argued that the fact that participating in a transition year means going to school a year longer, may prevent primary school students from applying.

All of the secondary school students indicated having participated in one of two **alternative pull-out programs (2)**. Both programs took place for a couple of hours on one morning in the week for several weeks. Students in both programs also indicated that they worked on projects where they

had to work in teams. A student of one of the programs indicated that through the pull-out program, s/he could get to know the secondary school in advance. Due to that, the transition was less challenging for him/her. Additionally, a student mentioned having learned to regulate his emotions during the pull-out program. The students that participated in the other pull-out program also indicated that they felt better prepared for secondary school because of that program. They already learned some of the executive functions such as planning, organizing, and note taking and already got homework assigned.

*For one primary and one secondary school student, the transition year **would be/ would have been an option (3)**. For the rest of the interviewed *primary and secondary school students, the transition year would not be/ would not have been an option (4)*. They did not think that a transition year would be necessary for them since they would either get used to new things quickly or could participate in other challenging programs or just felt that the transition was not a problematic event for them.*

Discussion

This study aimed at finding criteria for a transition year for gifted and accelerated students in order to provide a framework for a curriculum and instructional plan for a transition year. In order to come to a criteria list, primary, secondary, and transition year teachers and students were examined about their experiences concerning the transition and suggestions for a transition year. The criteria list focuses on what the transition year should entail regarding curriculum (content/skills) and instructional methods in order to help students to manage the challenges during the transition and to promote student ownership. In this section, teacher and student responses have been integrated and compared to literature. Based on the resulting insights, the criteria list for a transition year has been created.

Experiences of the transition

In line with previous literature findings (e.g. Hooegeveen, van Hell, & Verhoeven, 2009, Siegle & McCoach, 2005, Snyder & Linnenbrink-Garcia, 2013), teachers mentioned that accelerated students face challenges during the transition on a social level regarding the students younger age as well as on an academic level due to missing study skills and the fear of making mistakes. Similar to Siegle and McCoach (2005), teachers mentioned that some gifted and accelerated students have not been challenged enough at primary school. Furthermore, teachers in this study mentioned negative student experiences of gifted and accelerated students at primary school such as working alone outside the classroom.

In accordance with Waters, Lester, and Cross (2014), in this study, teachers described that students have misconceptions about secondary school. In order to better prepare students for the transition, teachers suggested helping students to create a realistic view of secondary school, for example by means of a collaboration project with the involvement of both primary and secondary school. Furthermore, teachers pointed out that students should be well-informed about secondary school and get the chance of visiting the school before the transition. These suggestions are in line with research by Evangelou et al., (2008), who found that visits to schools by prospective teachers, children and their parents, taster days and other joint social events between schools helped to support students with the transition. Accordingly, it is recommended to offer students opportunities to get to know the secondary school (where the transition year takes place) in advance (**Criteria 1**).

For students, social concerns like making friends played the most important role during the transition. Primary school students were worried about missing friends and wished to have a nice class and nice teachers at secondary school. Likewise, Chedzoy and Burden (2005) as well as Howard and Johnson (2005) found that students attach great importance to making new friends during the transition. Transition year students experienced the transition period as less difficult than expected due to being able to find friends quickly. They were able to do so thanks to an introduction week at the beginning of the transition year, where they went on an excursion and participated in activities where they got to know each other better. According to these findings, introduction activities help students to make friends in a new group which is important to them for settling in. Therefore, it is recommended to offer introduction activities in a transition year (**Criteria 2**).

Secondary school students stated to experience a decrease in academic achievement. This is in line with literature where it is spoken of an 'academic dip' after the transition (McGee et al., 2003). Remarkable, however, was that accelerated students attributed the decrease in academic achievement to forgetting to study for an exam while in McGee et al. this dip was attributed mainly to students' decreased interest in academic activities and an increase in non-academic activities in the middle years. To help accelerated students with preventing a decrease in academic achievement, focusing on the development of study skills in a transition year might help. However, further research is needed to investigate the relation between study skills and a decrease in academic achievement.

Both teachers and students of the transition year experienced that the transition year contributed to a smooth transition and prepared the students for the first year of secondary school. According to student and teacher responses, it helped that students already knew the teachers, the school and some classmates when they entered the first year of secondary school. Furthermore, transition year teachers perceived an enhancement in student well-being and personal growth during the transition year. Future research can help quantify these observations. Moreover, this research only included students who stayed at the same school after the transition year. How well students settled in when they chose to change schools after the transition year remains unclear. However, the transition year teachers indicated school changes after the transition year to be very rare.

Curriculum (content/ skills)

In line with literature findings, teachers in this study experienced that gifted and accelerated students are lacking some study skills/executive functions when they enter secondary school (Siegle & McCoach, 2005; de Boer, 2012; Koenderink & Van Dijk, 2015). A possible explanation for the lack of these skills is that they are not called upon when carrying out easy tasks. According to Siegle and McCoach (2015), gifted students can rely on their fast progressing skills until tasks become more challenging and it remains inevitable to use study skills to solve them. When students did not develop those skills during earlier school years, they are at risk of underachieving in their later career (Barbier et al., 2019; Siegle & McCoach, 2015). To prevent this, it is recommended that a transition year fosters the development of study skills/executive functions (**Criteria 3**).

Remarkable, however, is that student responses contrast somewhat to teachers' perceptions in the matter of skill development. Secondary school students mentioned either having no deficit or only having one concrete skill where they wanted to improve in, such as planning or emotion regulation. A possible explanation for the contrasting perception is that some primary school teachers already fostered the development of study skill/executive functions during primary school. Furthermore, secondary school students that participated in pull-out programs at primary school mentioned to already have been provided with challenging tasks requiring study skills/executive functions, which probably has fostered the development of those skills prior to or in the beginning of secondary school. Another explanation would be that students are not aware of different study skills/executive functions which they still need to develop.

Suggestions from some teachers further included teaching social skills, since they perceived some students to have difficulties with that. Likewise, a primary school student wished to learn more about how to deal with others. These responses are in contrast to most prior literature findings, which show no differences regarding social competence nor social relationships between gifted and non-gifted students (Košir, Horvat, Aram, & Jurinec, 2016). However, difficulties can arise due to a change from working in an academically heterogeneous classroom to a selective high-ability or gifted program. This change, which can be described as a Big-Fish-Little-Pond effect and often leads to a decreased self-concept (Patrick, Gentry, Moss, & McIntosh, 2015), could also play a role in social interactions during teamwork. A transition year teacher described, for example, that students had to get used to wait until their turn with saying something because they were not used to that. Due to this, it is recommended to provide opportunities for collaboration and support students with working in same-ability groups (**Criteria 4**).

In line with literature findings (Mofield, 2010; Snyder & Linnenbrink-Garcia, 2013) and student responses, teachers noted that some gifted students find it difficult to make mistakes. According to Mofield and Parker Peters (2019), concerns about making mistakes arise from a

maladaptive perfectionism defined as Evaluative Concern Perfectionism. Mofield and Parker Peters found that fixed mindset beliefs are predictive of this type of perfectionism. The concern with making mistakes incorporates negative reactions to mistakes, the interpretation of mistakes as failure and the belief to lose the respect of others following failure (Frost, Marten, Lahart, & Rosenblate, 1990). Interventions should focus on helping students to view mistakes no longer as a threat but as cues to adjust strategies in the attainment of a goal (Mofield & Parker Peters, 2019). Therefore, it is suggested to encourage students to make mistakes by setting high expectations and providing challenging tasks (**Criteria 5**) and at the same time, to help students to view making mistakes no longer as a threat for example by teaching about growth mindset and giving psychoeducation in individual and group conversations (**Criteria 6**).

Regarding the content of a transition year, teachers suggested to provide psychoeducation and to teach students about giftedness. This is supported by a review of Papadopoulos (2020) which suggests for gifted education practitioners to administer psychoeducational interventions in order to teach gifted students about their advanced development. In addition, Papadopoulos argues to create room for gifted students to share their unique concerns and needs with other gifted students. This emphasizes the importance of individual and group conversations during a transition year and adds the insight that teachers should not only pay attention to the individual needs but also inform students about what it means to be gifted (**Criteria 7**).

A high diversity of student wishes about content and topics show the diversity of passions and talents gifted students have. In order to provide students with the opportunities to develop themselves in their different areas of interest, differentiation in content is required (**Criteria 8**), which is pointed out in a growing body of research (e.g. Tomlinson, 2014).

Basic conditions

Teachers and students in the present study named several basic conditions for a transition year. Both teachers and students stated that tasks should be challenging for the students which is in line with literature about gifted programs (e.g. Rogers, 2007). A longer absence of challenge is correlated to negative effects such as boredom, underachievement or even school dropouts (Freeman, 1998). Providing students with challenging tasks, however, is correlated with positive motivational effects since challenge serves as an important ingredient for experiencing flow (Nakamura & Csikszentmihalyi, 2009). When students are in a state of flow, learning can be intrinsically motivating. In addition, flow-experiences are associated with a positive effect on performance (Tse, Nakamura, & Csikszentmihalyi, 2020). Due to the positive effects of providing challenges, the importance of this is stressed by many educators. Rogers (2007), for example, reveals that educators of gifted students should provide gifted students with daily challenging learning opportunities and

environments in their specific areas of talent. Therefore, it is recommended to provide challenging tasks during the transition year (**Criteria 9**).

One teacher added the suggestion to provide options for deepening in specific topics (**Criteria 10**), which is supported by Rinn and Bishop (2015), who found that deep immersion in a domain of talent during school years is a predictive factor of adult accomplishment and eminence.

Several teachers stressed to involve teachers, students and parents in the development of the program (**Criteria 11**). As gifted students are a varied group (Colangelo & Wood, 2015), it can indeed be useful to include parents and the students themselves in the planning to provide a program that is based on the interests and unique needs of students. In a current transition year, former transition year students were asked to help evaluate the program. Likewise, Reis and Renzulli (1984) state that the evaluation of a program while involving the target group is crucial for its success. Transition year teachers valued the teaching about topics where they are passionate about, which turned out to be perceived as motivating by students and is also found to be a criterion of quality teaching for gifted students in VanTassel-Baska (2010).

When involving students, parents, and teachers in the program, a certain flexibility of the program is required which is also named as a basic condition in several interviews. In accordance with this, Reis and Renzulli (1984) identified flexibility as a key feature of programs for gifted students since every school should be able to modify the program to their unique school and students. Therefore, it is suggested to allow for flexibility in the program (**Criteria 12**).

Teachers also suggested to provide room for student choices in a transition year. According to Phillips and Lindsay (2006), doing so can enhance gifted students' motivation. Therefore, providing students with choices is advised for a transition year (**Criteria 13**).

The recommendation of a teacher to educate teachers about giftedness is supported by Dutch (De Boer, 2012) and international research (Papadopoulos, 2020). According to those literature findings, teachers with knowledge about giftedness can better understand and acknowledge problems of gifted students and know how to foster the students' creativity and thinking skills. Due to these findings, having transition year teachers that are educated in teaching the gifted is suggested (**Criteria 14**).

Teachers noted room for improvement when it comes to cooperation between schools and the exchange of information. Teachers suggested more cooperation between schools and a better exchange of information regarding the student and his/her learning progress. A conversation between primary and secondary teachers prior to school transition was recommended. This is supported by Evangelou et al., (2008), who pointed out that sharing information about each child is seen as essential for the secondary school to facilitate that the child settles in without difficulties and is therefore recommended (**Criteria 15**).

Getting more homework assigned at secondary school was one of the major changes that was noticed by students. Due to that, students wished to be prepared for that. Students' suggestion for the transition year was therefore to provide a gradual increase in the amount of homework (**Criteria 16**).

Instructional methods

The teachers suggested a variety of instructional methods for a transition year. The instructional methods aim to facilitate skill development and enhance student ownership. For example, implementing inquiry-based learning entails teamwork, student responsibility and the development of metacognitive skills (Chichekian & Shore, 2014). In addition, when students engage in inquiry-based learning projects, teachers have the chance to observe students' unique combinations of strengths and weaknesses in learning (Lo et al., 2019). Similar to inquiry-based learning, project-based learning can facilitate the development of complex skills such as research skills, problem solving and higher order thinking and enhances student responsibility (Vidergor & Krupnik-Gottlieb, 2015).

In general, teachers suggested to include instructional methods that included collaboration, since working with same-ability peers might be a new, and valuable experience for gifted students which is supported by literature (e.g. Rogers, 2007). Involving different instructional methods such as those named by teachers, seems to be valuable for skill development. Students suggested similar instructional methods as their teachers and emphasized practical advantages of working with computers/tablets. Moreover, students liked project-work outside the classroom. Based on the teacher and student responses, it is suggested to include a variety of instructional methods that foster the development of social skills, study skills/ executive functions and reflecting (**Criteria 17**).

Student ownership

To enhance student ownership, it was recommended to work goal-oriented, give students responsibilities, to encourage the application of feedback and to set high expectations (**Criteria 18-20**). Several given examples of how teachers try to enhance student ownership such as mastery tracking of executive functions in a spreadsheet, are based on evidence-based practices that are summarized in Chan, Graham-Day, Ressa, Peters, and Konrad (2014). Future studies can investigate whether enhancing gifted students' ownership during a transition year has long lasting effects by helping them to take an active role in their own learning.

Doubts/ alternatives

Even though transition year teachers and students were very positive about the transition year, primary and secondary school teachers and students expressed some doubts about it. Some teachers

found it hard to distinguish between the needs of accelerated students and other students concerning the transition from primary to secondary school and therefore questioned the target group to be accelerated students. One explanation for teachers seeing no differences between accelerated and non-accelerated students is that only schools with special programs for gifted students ('begaafdheidsprofiel scholen') were included in this study. Therefore, the schools are likely to be visited by a high number of gifted students that face similar difficulties as accelerated students. However, the question remains which group of students might profit most of a transition year and whether the target group should be reconsidered. In this matter, future research is needed.

Some teachers revealed that a transition year would not be necessary when the educational system changes. Individual education could be better realized in a system with level-based groups instead of age-based groups. Likewise, Mooij (1995) argues that a learning centered system with 'leerstoflijnen', where students can learn according to their learning attributes benefits student development, especially for the gifted. A transition year should therefore be considered as an intervention for gifted students matching the current school system and not as a provision for the longer-term. For the longer-term, an educational system is desired where a transition year is not required.

Another concern about offering a transition year is that it creates a social bubble for accelerated students. Whereas homogeneous grouping has several advantages for the students, literature findings reveal that it is also important to give students the opportunity to interact with non-gifted peers (Adams-Byers, Whitsell, & Moon, 2004). Transition year teachers suggested to embed the transition year more in the system by looking for points of contact with other classes/students of the secondary school in order to overcome that students experience to be a 'special group'. Yet, it still needs to be investigated how this could be put into practice.

Criteria for a transition year

Experiences of the transition

1. Foster realistic expectations of secondary schools by providing opportunities for students to visit the school before entrance (e.g. through taster days, introducing a project with primary schools).
2. Encourage social relations by offering introduction activities in the first week(s) (e.g. through making an excursion to an amusement park/ zoo, through doing outdoor team activities).

Curriculum (content/ skills)

3. Provide students with opportunities to develop study skills/executive functions.
4. Provide opportunities for collaboration and support students in working with same-ability peers.
5. Encourage students to make mistakes by setting high expectations and providing challenging tasks.
6. Provide a safe environment for making mistakes (e.g. by addressing the topic in individual and group conversations).
7. Give psychoeducation about 'being gifted'.
8. Give students the opportunity to work in their areas of passion and talents by differentiating the content.

Basic conditions

9. Provide challenging tasks.
10. Provide options for deepening.
11. Involve teachers, students and parents in the development of the program.
12. Allow for flexibility in the program.
13. Make room for student choices.
14. Educate teachers about giftedness.

15. Exchange information between primary and secondary schools, parents and students before school entrance (e.g. by making an appointment with primary and secondary school teachers).
16. Provide a gradual increase in homework.

Instructional methods

17. Use different instructional methods that foster the development of social skills, study skills/ executive functions and reflecting (e.g. project work, inquiry-based learning, debating, peer reviews).

Student ownership

18. Give students responsibilities.
19. Set high expectations.
20. Encourage the application of feedback.

In this research, a list of criteria for a transition year could be distilled based on teacher and student responses. However, no conclusions can be made about the feasibility of these criteria. It still needs to be investigated whether the availability budget and staff for such a program allows for the realization of all criteria, such as the criteria to involve only teachers that are educated in teaching the gifted. Furthermore, based on this study, no generalizations can be made according to the effectiveness of a transition year, which is recommended for future research. Moreover, it is suggested to investigate whether early participation in pull-out programs such as those named by participants in this study, have similar effects as the participation in a transition year.

Conclusion

The results of this study confirm that gifted and accelerated students can face additional challenges during the transition from primary to secondary school with regard to age-differences, skill development, and making mistakes. A transition year with the aim to facilitate the transition between primary and secondary school for accelerated students seems to be a well-received intervention by current transition year students and teachers that were participating in this study.

The current study led to 20 criteria for a transition year which were categorized into five groups: experiences of the transition, curriculum (content/skills), basic conditions, instructional methods and student ownership. By taking these criteria into account, educational practitioners can develop a thought-out curriculum and instructional plan for a transition year.

However, this research also gives insight into some doubts of teachers and students regarding a transition year and discusses alternative ways to facilitate the transition from primary to secondary school for accelerated students. We recommend schools to take these doubts and alternatives into account when they consider offering a transition year. Furthermore, we would like to re-emphasize that gifted and accelerated students are a diverse group and therefore, recommend teachers, parents and students to ponder whether a transition year is the best option for the individual child.

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