

Anna Gronostaj | Elise Werner | Eric Bochow | Miriam Vock

How to Learn Things at School You Don't Already Know

Experiences of Gifted Grade-Skippers in Germany

Suggested citation referring to the original publication: Gifted Child Quarterly 60 (2016) 1, pp. 31–46 DOI http://dx.doi.org/10.1177/0016986215609999 ISSN (print) 0016-9862 ISSN (online) 1934-9041

Postprint archived at the Institutional Repository of the Potsdam University in: Postprints der Universität Potsdam Humanwissenschaftliche Reihe ; 415 ISSN 1866-8364 http://nbn-resolving.de/urn:nbn:de:kobv:517-opus4-405211

How to Learn Things at School You Don't Already Know: Experiences of Gifted Grade-Skippers in Germany

Gifted Child Quarterly 2016, Vol. 60(1) 31–46 © 2015 National Association for Gifted Children Reprints and permissions: sagepub.com/journalsPermissions.nav DOI: 10.1177/0016986215609999 gcq.sagepub.com



Anna Gronostaj¹, Elise Werner¹, Eric Bochow¹, and Miriam Vock¹

Abstract

Skipping a grade, one specific form of acceleration, is an intervention used for gifted students. Quantitative research has shown acceleration to be a highly successful intervention regarding academic achievement, but less is known about the social—emotional outcomes of grade-skipping. In the present study, the authors used the grounded theory approach to examine the experiences of seven gifted students aged 8 to 16 years who skipped a grade. The interviewees perceived their "feeling of being in the wrong place" before the grade-skipping as strongly influenced by their teachers, who generally did not respond adequately to their needs. We observed a close interrelationship between the gifted students' intellectual fit and their social situation in class. Findings showed that the grade-skipping in most of the cases bettered the situation in school intellectually as well as socially, but soon further interventions, for instance, a specialized and demanding class- or subject-specific acceleration were added to provide sufficiently challenging learning opportunities.

Keywords

qualitative methodologies, social and/or emotional development and adjustment, acceleration, grade-skipping

Acceleration is an educational practice to promote gifted students. It is defined as proceeding "through an educational program at rates faster, or at younger ages, than typical" (Colangelo, Assouline, & Gross, 2004, p. xi). However, rather than being aimed at speeding up or saving time, accelerative procedures are designed to "align . . . learning opportunities with salient aspects of each student's individuality" (Lubinski & Benbow, 2000, p. 137). Hence, grade-skipping is a measure to achieve an appropriate placement that complies with the students' particular state of development irrespective of their age (see also Brody & Benbow, 2004). Being gifted in an age-based heterogeneous school setting bears the risk of a mismatch between the person and the environment (Brandtstädter, 2007; Eccles et al., 1993). Teaching designed to address academic needs of average-ability students might not provide sufficient intellectual challenge or appropriate pace of instruction, and perhaps does not satisfy the need for deep-level learning of gifted students.

Particularly in their first few years at school, gifted students who are academically far ahead of their classmates do not receive instruction in the zone of their proximal development (Vygotsky, 1978) but are forced to work on things they already know (Stanley, 2000). Much of the knowledge that is new for them at school is acquired quickly, and they are able to understand many things at once. This situation can contribute to several problems, from simple boredom to underachievement, school dropout, and behavioral problems (Gross, 2006; Kanevsky & Keighley, 2003; Matthews, 2009;

Matthews & McBee, 2007; Rubenstein, Siegle, Reis, McCoach, & Burton, 2012). Beyond the issues of intellectual mismatch, the discrepancy in interests and ability levels can lead to difficulties in the relationships between gifted students and their classmates (Wieczerkowski & Prado, 1993). In this context, acceleration can be seen as aiming for a better fit between the intellectual and social needs of a gifted student and the opportunities and challenges provided by the school environment (Lubinski & Benbow, 2000).

One specific form of acceleration is skipping an entire grade, which is particularly challenging for students, because they have to catch up with a whole year's curriculum on their own as well as having to integrate into a new social group. Consequently, grade-skipping is rare: In Germany, approximately 0.05% of all students skipped a grade in the 2006-2007 school year (Penk, 2008). Even among highly gifted students, skipping a grade is rare, as can be seen, for example, in the Study of Mathematically Precocious Youth sample (top 1% in SAT; Park, Lubinski, & Benbow, 2013), which showed only 8% had skipped a grade during high school.

Teachers' beliefs about acceleration and grade-skipping are crucial, as it is mostly teachers who inform—or do not

¹University of Potsdam, Potsdam, Germany

Corresponding Author:

Anna Gronostaj, Empirische Unterrichts-und Interventionsforschung, Karl-Liebknecht-Str. 24-25, 14476 Potsdam, Germany. Email: anna.gronostaj@uni-potsdam.de

inform—parents and students about the option of the intervention (Southern & Jones, 2004). U.S. research found that teachers particularly feared negative social and emotional consequences of acceleration, although there were also concerns about academic development (Rambo & McCoach, 2012). Moreover, the attitudes teachers displayed toward acceleration affected the success of the intervention (Benbow, 1998; Davis & Rimm, 2004; Gross et al., 2004; Vock, Preckel, & Holling, 2007). These attitudes were in turn affected by experiences the teachers formerly had had with grade-skippers and by knowledge about the intervention itself (Hoogeveen, van Hell, & Verhoeven, 2005; Westphal, Vock, & Stubbe, 2015).

In contradiction to the guarded opinions expressed by educators toward acceleration, empirical evidence is supportive of acceleration with regard to the educational outcomes (Colangelo, Assouline, & Marron, 2013; Hattie, 2009; Kulik, 2004; Rogers, 2010). A recent meta-analysis of different forms of acceleration showed it to be beneficial to the academic development and "at the very least . . . not [to be] harmful to social-emotional development" (Steenbergen-Hu & Moon, 2011, p. 47). However, it must be pointed out that the findings on social-emotional effects of acceleration varied, possibly because there are fewer studies analyzing these issues (Neihart, 2007) and due to a wide variety of constructs used as dependent variables (Colangelo et al., 2013; Hoogeveen, van Hell, & Verhoeven, 2012). Sometimes, even studies on similar constructs reveal contradictory findings: A study on Dutch students showed that grade-accelerated students had a lower social status than their (nongifted) classmates, who considered them to be less social, cooperative, or helpful and more conceited (Hoogeveen, van Hell, & Verhoeven, 2009). However, in a later study, the same authors found only a few differences in the social adjustment between accelerated and nonaccelerated gifted students, and these differences favored the accelerated students (Hoogeveen et al., 2012). Lee, Olszewski-Kubilius, and Thomson (2012) found that grade-accelerated students perceived their interpersonal ability higher than their gifted counterparts who were not accelerated. As this was a cross-sectional study, it was "not clear whether having better interpersonal skills contributed to a student being a good candidate for subject acceleration by school officials or whether this was an effect of the acceleration" (Lee et al., 2012, p. 100). Opposed to this, a German study in which propensity score matching was applied to obtain an appropriate control group showed that students who skipped a grade during elementary school judged their peer relations more negative than the control group (Kretschmann, Vock, Lüdtke, & Gronostaj, 2015).

Studies focused on the academic development of gifted grade-skippers found clearly positive effects with samples from the United States (e.g., Park et al., 2013; Wells, Lohman, & Marron, 2009) as well as from Germany (e.g., Gronostaj, Vock, & Pant, 2015; Kretschmann, Vock, & Lüdtke, 2014). In her best-evidence synthesis on various

accelerative interventions, Rogers (2010) found the "most consistently positive effects across academic, psychological, and social outcomes . . . for grade skipping" (p. 2). Overall, quantitative research has shown that acceleration per se and grade-skipping in particular can be considered powerful and successful to foster the academic development of gifted students; yet less is known about the effects of grade-skipping on the social–emotional development.

Using a large-scale quantitative approach, it is, however, impossible to depict the complexity of the whole process of skipping a grade (e.g., the decision making, social and academic adaptation after grade-skipping, conditions which help grade-skippers master the challenge). The qualitative approach of the present study aims to address these questions. We examined a small sample of students "quasimicroscopically" (Frommer & Rennie, 2006) and allowed them to explain their own view of their experiences in the German school system.

The German School System

The German school system separates students according to their level of performance after primary school within a tracking system. German students regularly start primary school at the age of 6 years. Some primary schools offer mixed-age classrooms to better serve the differing ability levels (the first 2 years of school can be stretched to 3 years or shortened to 1, according to individual students' needs and potential). Students change to a secondary school after the fourth or sixth grade, depending on the federal state and type of school. In Berlin and the federal state of Brandenburg, where our interviewees lived, some secondary schools start in the fifth and others in the seventh grade, with the secondary schools starting from the fifth grade generally more challenging. Among various types of secondary schools, the academic-track schools (Gymnasium) are the most challenging and prepare students for university. Obtaining the advanced school-completion certificate (German Abitur) that serves as an entrance requirement for university takes a total of 12 or 13 years of school, again depending on the federal state.

Approximately a third of all German students in secondary school attend academic-track schools (Baumann, Schneider, Vollmar, & Wolters, 2012). In many regions, there are academic-track schools that offer specialized classes for gifted students with a special curriculum, resulting in enriched and/or accelerated learning. However, as the availability of these classes is rather poor in some German regions, it is not always possible for students to attend them. In Germany, private schools are attended by only approximately 8% of all students (Baumann et al., 2012). Due to a law stipulating compulsory school attendance, homeschooling is generally prohibited in Germany until the end of secondary school. Permission is granted in rare cases only, for example, if it is considered to be the only option for schooling due to sickness or disability.

Table 1. Description of Sample.

Name ^a	Age (years)	Grade	Type of school	Skipped grade(s)
Chris	16	10	None (homeschooling)	3 to 4
Lina	10	5	Public Gymnasium	2 (1 to 3)
Felix	16	П	Private Gymnasium	l to 2
Norbert	12	8	Public Gymnasium	2 to 3
Alma	8	4	Primary school	2 (1 to 3)
Sophie	16	13	Public Gymnasium	3 and 8
Julia	14	9	Public Gymnasium	3 to 4

Note. Age, grade, and type of school all describe the subject at the time of the interview. ^aAll names are pseudonyms.

Although grade-skipping is permitted in all federal states of Germany, there is no established routine, and testing for preconditions is not mandatory. In most federal states, parents ask the school for permission for their child to skip a grade. There are no standardized German instruments to help with the decision if a student is ready to skip a grade (as opposed to the United States, e.g., the Iowa Acceleration Scale; Assouline, Colangelo, Lupkowski-Shoplik, Lipscomb, & Forstadt, 2009). Therefore, in Germany, permission to skip a grade depends on the knowledge and attitudes of the teachers involved.

Research Questions

As pointed out, the positive educational outcomes of gradeskipping have been shown in the United States as well as in Germany by quantitative research. However, skipping a grade is a highly individual process, and each grade-skipper may face unique obstacles on his or her way through the German school system. Hence, we wanted to know more about the perceptions of the grade-skippers themselves. We aimed to reconstruct the gifted students' individual stories using research methods based on grounded theory, including a circular process of narrative interviewing and data analysis. According to basic principles of grounded theory, the research interest of this study was initially formulated quite openly: We focused on obtaining knowledge and detailed individual stories about the school experience of gifted students in Germany who had skipped a grade. Gradually, a more specific focus developed: How did our interviewees experience school before grade-skipping? How did they adapt (socially and academically) after grade-skipping? Did they encounter difficulties and if they did, what difficulties did they encounter? What attempts were made to solve these problems? Can we identify structures which can explain the presence or absence of particular problems in their school experience?

Method

Participants

The sample (see Table 1) consisted of seven students (four girls, three boys), aged 8 to 16 years (M = 13.14, SD = 3.24)

who were in Grades 4 to 13 at the time of the interviews. All of them had skipped one grade during primary school; one participant had also skipped another grade in secondary school. No proof of their giftedness was requested, but all the interviewees identified themselves as "gifted." Six of the seven interviewees mentioned that their intelligence had been tested.

Data Collection and Data Analysis

We conducted narrative interviews with seven gifted students who had skipped a grade. Initial contacts with the students were developed through an advertisement in the German journal *Labyrinth*, a publication for members of the German Society for the Gifted Child (Deutsche Gesellschaft für das hochbegabte Kind). The journal addresses issues of giftedness and is widely read by parents of gifted children. Our advertisement was also distributed by e-mail to the members of this society and posted on notice boards in schools in the federal states of Berlin and Brandenburg. Gifted students or their parents contacted us by e-mail or telephone. A total of 30 students volunteered for an interview. Following the idea of theoretical sampling (Corbin & Strauss, 1990), we began the sampling by searching for students who had skipped a grade and differed as much as possible according to criteria anticipated beforehand: for example, differing school careers and experiences, age, gender, number of grades skipped, age at the time of grade-skipping, and location (Berlin as a capital city and Brandenburg as a rural area).

The interviews were conducted between February and May 2012 by two interviewers (second and third authors of the present article) working together. We met five of the students at their homes with one or both of their parents present, but not in the same room during the interviews. In these cases, we talked to a parent once the interview was finished to verify the timelines given by the interviewees (e.g., age at school entrance, time of grade-skipping). We met Sophie and Julia alone in cafés and did not talk to their parents. The interviews focused on enabling the interviewees to give a free and open account of their experiences and to speak about

topics most relevant for themselves. Each interview began with introducing ourselves, explaining the procedure (confidentiality, recording of the interview, etc.), and telling about the aim of the study ("We want to know how gifted children/teenagers experience school and grade-skipping"). We then invited all students to speak about their school career so far by saying:

We already know that you attend the x. grade of . . . [name of school]. We would like you to tell us about your school career. You can start with your first memories up until today, but you don't have to follow a proper order. You can tell everything that comes to your mind.

We focused on asking questions referring to situations and topics previously mentioned, for example: "You indicated that. . . . Can you tell us more about it?" "You told us that. . . . How did you handle that?" "You said that. . . . How did your teacher react?" Questions that introduced new subjects were asked only if topics considered important for the study process had not been addressed by the interviewees, for example: "Why did you skip a grade?" "Which experiences did you gather with your classmates?" "What did you do during breaks?" "How did you experience the lessons?" "Can you remember how it felt when you first came into the new class?" "How did you get along with your teachers?" The average duration of the interviews was about 1 hour. All interviews were recorded digitally and transcribed verbatim. All quotations from the interviews have been translated from German to English by the authors.

The data were analyzed following principles of grounded theory (Glaser & Strauss, 1999). Grounded theory aims to construct a theory by specifying the conditions which give rise to certain phenomena and clarifying how these phenomena are expressed through action and interaction, as well as variations of these phenomena and their consequences (Corbin & Strauss, 1990). Since the analysis begins with the first interview in an iterative process between data collection and interpretation and theoretical sampling, the exact number of cases should not be determined beforehand but depends on how many cases are necessary to achieve a sufficiently saturated model. Explanations and results pertaining to the empirical data are obtained through theoretical coding and the theoretical integration of concepts and categories. Furthermore, in the data material, we explicitly searched for data with apparent contradictions to concepts already found in order to develop new variants of an observed phenomenon (principle of ex negativo; Przyborski & Wohlrab-Sahr, 2010). For example, in this study, the first two interviewees reported a very problematic school career. To enrich the conceptual model, at this point of the analysis, we looked for a gifted student who had skipped a grade and described his or her school career as rather unproblematic. We then attempted to identify certain conditions which might have caused problems in the school experiences of the first

two interviewees but were not part of the third interviewee's experience.

The coding took place on three levels (Corbin & Strauss, 1990). In the process of open coding, concepts are built through constant comparison of the data material for similarities and differences. These concepts lay the foundations for subconcepts. The data material or a specific concept is made accessible by asking generative questions (who did or said what, where, how, and when). The aim of this procedure is to identify as much meaning and as many dimensions as possible. In the next step, axial coding, concepts, and subconcepts are condensed by relating them to each other, testing their connections and conditions, and testing them against further data. The third step, selective coding, attempts to determine a core category by abstracting from the material and the insights obtained so far. This category encompasses all other categories and is developed from these. These levels of coding are marked by higher degrees of abstraction.

Findings

In the data, four main concepts emerged: Feeling of being in the wrong place before skipping a grade; Teacher responses to students' desire for intellectual demands, with students describing their frequent frustration in class before (and in some cases after) skipping a grade; Teachers' impact on the social situation of the student before and after skipping a grade; Trying to make school fit, that is, attempts to improve the situation by teachers and students after skipping a grade (see Table 2). These broader concepts are structured in various subconcepts and will be illustrated by quotations from the interviews we felt were representative of the experiences the students spoke about. Quotations from students which were included in a subconcept but do not appear in the text can be found in Table 2. We finally developed a core category based on the concepts identified so far: intellectual fit affects social affiliation of gifted students in class. These themes cannot be completely separated and do not constitute a complete description of the school experiences of gifted students who skipped a grade. They focus on certain topics and structural problems which became central during the analysis.

Feeling of Being in the Wrong Place

Regarding the time before the grade-skipping took place, our interviewees spoke about feeling as though they were in the wrong place in school, both intellectually and socially. This was true for all our interviewees besides Julia, who did not mention feeling in the wrong place intellectually and socially before grade-skipping, and for Alma, who did not report feeling in the wrong place socially.

Thirst for Knowledge and Boring Classes. The start of primary school was a disappointment for nearly all gifted students in

Table 2. Concepts and Subconcepts in the Data Before and After Grade-Skipping.

Concepts Subconcepts Time Students included: Exemplary quotation

Before grade-skipping^a

Feeling of being in the wrong place

Thirst for knowledge and boring classes

*Chris: "It [school before grade-skipping] was like . . . well, everybody else was sitting there, working happily in their workbooks . . . I remember it vaguely; you had to . . . trace the contours of letters and numbers. They all did this for ages, happily. They did it 20 times, 40 times. After 10 times, it was boring for me."

Lina: "It [school before grade-skipping] was always totally boring."

Alma: "It [school before grade-skipping] was just too simple for me."

Felix, *Norbert, Sophie: see Findings section

Having different interests than classmates

*Chris: "I was definitely an outsider \dots It's not that I don't like being with other people, but not if I have to play-act for it. I want people to like me as I am."

Lina, Felix, *Norbert, Sophie: see Findings section

Before grade-skipping^a

Teacher responses to students' desire for intellectual demands

Teachers disapprove of special treatment of gifted students

Chris: "We [our family] knew a doctor who worked in the field [of giftedness] and she gave me extra tasks to challenge me intellectually . . . [When my teacher learned that] she nearly toppled over backwards and put a stop to it. Even though it would have been no additional work for her, she said no, [I was not allowed to do these extra tasks]."

Lina: "In first grade in maths, we simply all . . . got the same worksheets. We all had to do them, over and over again."

Felix: "I had good grades [in primary school], but still, the principal [of the primary school] did not want to . . . let me go to gymnasium. My parents fought quite a while with him over that."

Norbert: "The teachers just said something like: 'There are 27 pupils in this class and 26 of them haven't understood it yet, you just have to put up with it, tough luck for you."

Alma: "I just did the boring work, what else [could I have done]? There was . . . nothing extra for the smart pupils or something like that."

Showing too much knowledge is not welcomed.

Norbert: "The teacher was irritated when I asked for more tasks, and then again more tasks . . . I think he thought 'Why can't I have a class without such a child?""

Sophie: "In first grade, when we got our reports, me and another girl, Lara . . . were the best students in the class. The teacher said Lara was to be praised for it, because she had to do an effort, but Sophie [was not to be praised for it because] she can do it all anyway."

Lina, *Chris: see Findings section

Teachers do not know how to provide interventions.

Chris: "At this primary school they say they make this balancing act between the dyslexic and the gifted . .. obviously, that can't work, not without special funding. ... After all, it's just a regular public school."

*Norbert: see Findings section.

Before and after gradeskipping

Teachers' impact on the social situation of the student

Lina: "Mr. P. found that I talked too much. . . . So he put me next to a place in front of his desk." Felix: "I always got along well with my teachers."

Norbert: "[When I first came into the new class after grade-skipping] it wasn't so great. . . . Nobody listened to the teacher anymore, they all just stood around me and asked me questions. They did not really understand what had actually happened. . . . I was totally overwhelmed . . . I was only 7, 8 years old. . . . I asked the teacher: 'Please, can you send them away? It's too much for me.' She said: 'Alright.' But nothing really changed."

Sophie: "I sat right next to a girl [after grade-skipping], she became my best friend later, we like each other from the start and the teachers helped a lot, so that I did not feel strange, they involved me from the start. And that was quite nice, because then [the students in class] were not unwelcoming to me, either.'

Chris: see Findings section.

(continued)

Table 2. (continued)

	Concepts				
	Subconcepts Students included: Exemplary quotation				
Time					
After grade-skipping	Trying to make school fit School makes sense: Academic issues after grade-skipping and additional interventions Lina: "It was a lot better then [in school after grade-skipping], not as frightfully boring as before." Felix: "For me, it [the grade-skipping] was really good, it was super, actually. The best solution." Alma: "It [the lessons] became more difficult [after grade-skipping] That was alright. And now, there is 'addition.' If you have done the normal work, you may do addition, you don't have to, but you may." Norbert, Sophie: see Findings section. Social issues after grade-skipping Chris: "I don't remember how it started I guess you could call it a vicious circle I experienced it like this anyway. Once you get defensive because you are used to assaults you react differently to things maybe really only meant as a joke. And they recognize 'Oh, he is easy to provoke,' and that makes it all the worse. It was the same in the next school." Lina: "I didn't have a lot of contact with the others [before grade-skipping] I made some friends then [in the new class after grade-skipping]." Norbert: "I have some really good friends in class, I wouldn't leave there, also because the teachers, they are nice, actually, they just don't know a lot about the content." Alma: "Our teachers, they always notice when somebody has finished [the work], and then we are allowed to help the others I always help the others They like it." Julia: "Well, everybody has problems, and I don't get along with people people at my age, that is."				

aln some cases, the subconcepts applied to the student's situation after grade-skipping as well as before. These cases are indicated with an asterisk.

this study. Norbert, who could read and write fluently when he started first grade, was surprised that the other students in his class did not know how to read or write yet:

I was a bit bewildered at first . . . and it was boring . . . for me. We had an exercise book and were asked to write 20 words that started with a "g." This was just to learn how to write the letter "g." After a while, I said to the teacher, "Listen, that's too boring for me. I know how to do it now." It felt like occupational therapy to me. (Norbert, interview, March 8, 2012)

Sophie explained why, before grade-skipping, she did not want to attend school anymore: "Because I didn't feel like it. I thought it was stupid sitting there for 4 hours when I learned nothing new anyway" (Sophie, interview, May 24, 2012). Felix expressed similar feelings of pointlessness and boredom, especially in German and mathematics lessons: "I just . . . quickly finished everything because I just . . . perceived it as boring" (Felix, interview, March 6, 2012).

During the time before skipping a grade, six of the seven students felt forced to stagnate. From the outset, they desired more demanding tasks and lessons and became more and more frustrated with school. They felt that their desire for high intellectual demands and their thirst for knowledge were not satisfied. They also described their lessons as rather rigid and complained that various creative approaches by students were not valued. They soon felt different from the others as they observed that their classmates seemed to

struggle with some of the tasks and appeared to be generally content with the demands of the classes. These experiences and frustrations led to an increasing alienation from the school as an institution. Only for Julia was the situation before grade-skipping different: In her school, before grade-skipping, differentiated instruction was offered. Her accounts about times when she was bored refer to occasions where the whole class worked together through an exercise, moderated by the teacher. However, there were also periods where she could work on her own and choose which exercises she wanted to attempt. Julia found this challenging enough, because there were also exercises from higher grade levels. Additionally, being bored was not always perceived as negative; it also showed her that she was an excellent student. Julia also did not have to struggle to be permitted to skip a grade, but was offered this option repeatedly. Individually tailored instruction was offered as her giftedness was recognized and accepted, so she did not feel as though she was in the wrong place.

Having Different Interests From Classmates. Apart from feeling in the wrong place intellectually, most of the interviewees said they had different interests from their classmates in their original, age-based classes before grade-skipping. Felix explained that he did not have close friends in kindergarten or first grade because he "was just a bit more curious than the others" (Felix, interview, March 6, 2012). Lina described

herself as something of a loner at primary school by giving the following account about her classmates:

Mostly [they had] different interests than me. . . . The boys always played soccer during breaks, and the girls . . . princess or something similar. I actually explored the schoolyard, climbed the trees there . . . crawled through the pipelines around there, the monkey bars. (Lina, interview, February 14, 2012)

Here, the perceived interest difference was not clearly associated with intellectual capacities, but it is probable that the differing activities during breaks were partly due to intellectual differences, too: Lina mentioned these differences as an explanation for the fact that during extracurricular courses for gifted students, she always found friends, while in her school before grade-skipping, this was generally not the case. Sophie already experienced this kind of mismatch of interests during preschool:

I did not really play with the others. I always considered the games they played to be somewhat stupid, like playing with cars or mother and child or things like that. It was not exciting for me . . . so I always read books. . . . I always sat down in a corner to read. (Sophie, interview, May 24, 2012)

For these three interviewees, the social situation improved after grade-skipping, and they found close friends with similar interests in their new classes. For Norbert and Chris, the feeling of being different from everybody else in class persisted to a certain degree. Norbert explicitly stated that meeting friends was not something he used to be interested in before grade-skipping: "I met friends from time to time, but not every day. It wasn't really my thing, I didn't necessarily want [to do] this" (Norbert, interview, March 8, 2012). He found a few close friends after grade-skipping, but still he considered activities he can engage in with friends a waste of time sometimes:

I am not . . . the kind of person, who says, like, well, I meet someone and then we play games for 3 hours. This is not something I do at all. Instead, I tell myself, well, I can also invest the time . . . in having a look on the Internet about physics or something. . . . So I reason, what could I actually do with the time, which I somehow invest in doing whatever with my friends. (Norbert, interview, March 8, 2012)

The quotation shows that Norbert could not share the kinds of activities in which he was really interested and considered to be useful with his friends. Before and after grade-skipping, Chris had problems with his classmates in every school he attended. He therefore tended to find friends with shared leisure-time interests outside of school.

Teacher Responses to Students' Desire for Intellectual Demands

Besides Julia, for all the students we interviewed, their teachers' reactions to their desire for higher intellectual demands

in the classes before—and in the cases of Chris and Norbert also after—they skipped a grade were a big issue. Most students described their teachers as not wanting to give them any special treatment. Some claimed that the teachers did not welcome the display of knowledge that was too advanced in class. Two students believed that some of their teachers simply did not know how to provide adequate stimulation for them or did not have the resources to do so.

Teachers Disapprove of Special Treatment of Gifted Students. Students reported that, typically, teachers did not give them any special treatment either inside or outside the classroom, for instance, by providing special study materials, assigning them more difficult tasks, or allowing them to participate in an enrichment program or skip a grade, even when the student asked for this. Furthermore, we found examples of explicit hindering of students who tried to do advanced exercises on their own. Ironically, these teacher reactions with the aim of not treating the gifted student differently and avoiding putting the student into a special position, seem to have had the opposite effect: Students felt pushed into a special position, or at least these teacher attitudes seem to have added to the process already taking place among the students. An exception to this was again Julia, who received individually tailored instruction in her primary school before grade-skipping.

Showing Too Much Knowledge is Not Welcomed. Chris reported that before he skipped a grade, when his second grade mathematics teacher asked for the result of one minus two, apparently meant as a joke, he answered "minus one." On this, the teacher told him that "this does not belong here" (Chris, interview, February 2, 2012), and this was one of the experiences that made Chris feel that he did not belong there, or was not welcome as he was: "From this point on, it was just clear . . . to me that something else would be nice" (Chris, interview, February 2, 2012). Students reported situations in which they felt reprimanded for expressing their own knowledge that was too far ahead of the expected level, or if it contradicted the knowledge or opinion of a teacher. Lina recounted what happened when she once corrected her teacher in the biology class before grade-skipping: "She became a bit angry, so I did not do it again" (Lina, interview, February 14, 2012). Lina decided to keep her opinion and knowledge to herself if it contradicted the teacher, so as to avoid conflicts. Sophie similarly experienced rejection by her class teacher before grade-skipping in primary school when she voiced knowledge contradictory to his teaching. She reported that "the teacher . . . did not intervene" in the context that she was not challenged enough and that instead he "only ever complained when I corrected [him] or anything" (Sophie, interview, May 24, 2012). In all cases, these experiences added to the gifted students' feeling of being in the wrong place and to their decision to leave. The interviewees perceived this kind of treatment as being directly related to their giftedness.

Teachers Do Not Know How to Provide Interventions. Two of the interviewees provided possible explanations of why their teachers did not support them better and did not give them more demanding tasks. For instance, Norbert thought that his teachers, before and after grade-skipping, lacked experience with gifted students and simply did not have sufficient knowledge about giftedness. He also considered a lack of capacity for appropriate individually tailored instruction to be another reason:

In mathematics, we have a teacher who is actually quite good, he does [sometimes give me more difficult tasks] . . . but at some point he is at a loss. . . . He has a lot of classes to teach, he can't prepare all kinds of things [for me]. (Norbert, interview, March 8, 2012)

In these cases, students did not feel that teachers rejected their needs in class, but rather that the teachers were just unable to support them. Therefore, the impact on the other students' behavior in class here is different because the teacher did not incite and approve of rejection of the student. The two alternatives of lacking knowledge or capacity and of direct rejection could not always be clearly distinguished, and mixtures of both were evident. Each could also affect the other.

Teachers' Impact on the Social Situation of the Student

A further topic which emerged in the analysis was the gifted students' relationships with their classmates and how these relationships were affected by their teachers' behavior and attitudes. The students besides Julia, Alma, and Felix described situations in which teachers embarrassed them in front of the class, ridiculed them, or did not protect them from attacks from their classmates. The interviewees felt that, in doing so, teachers supported their position of social exclusion. These kinds of situations occurred before the grade-skipping and sometimes also afterward. In the case of Chris, this experience was so prominent in his accounts that it can be considered to be characteristic of the entire time Chris spent in the regular school system. He summarized the connection he perceived between his teachers' attitudes toward him and his social situation in class as follows: "If teachers approve of me, then it is essentially okay with the other students, too" (Chris, interview, February 2, 2012).

In his first few days after grade-skipping, Norbert suffered from the importunity of classmates who asked him questions, because they did not know why he was now in their class: "They did not really understand what had actually happened" (Norbert, interview, March 8, 2012). The teacher had obviously not properly explained to the students why he had skipped a grade and did not intervene effectively even when Norbert asked her to. For a few days, Norbert experienced this situation as quite stressful.

As these examples show, in various ways, teachers encouraged students to view another student rather negatively. If teachers acted disrespectfully toward the interviewees with regard to their achievements in class and demonstrated their disrespect through certain comments, this commenting may have encouraged their classmates to make similar remarks. "And this in class is not very nice," Sophie recounted,

as it gives . . . the others reason to . . . further it, to bully, too. Well, there was one who also always shouted a bit in the background, right, saying, you'll get best marks anyway again, you know that all already. (Sophie, interview, May 24, 2012)

To those commenting on the fact that Sophie had already mastered the subject matter, the teacher in her class before grade-skipping added that she was not to be complimented for it, because she had not had to make an effort. While rapid understanding and high achievements are normally rewarded, Sophie received no credit for her achievements. The teacher put Sophie into a difficult position through his treatment of her, particularly since he did not react to students who repeated variations of his comments. By positioning her as a "know-it-all," he depicted her as not belonging to the class. Sophie said that after grade-skipping her new teachers involved her from the start and by that made her feel welcome.

Chris cited an example in which the teacher put him into a special position within the group beginning with his first appearance in her class. He attended the mathematics class of a higher grade in primary school, and in his first regular lesson, a question was asked in front of the whole class about a new mathematical topic which had also not been taught yet in the third grade. Introducing him with "Chris, who knows everything so well . . . will now recite the 12 times table for us" (Chris, interview, February 2, 2012), she put him into an awkward position, and whether he answered the question correctly or not, he would not win the favor of either the teacher or his classmates. By answering correctly (as he in fact did), he proved himself to be what she thought he was, a know-it-all. If, instead, he had failed to answer, he would have shown that he was not ready for her classes yet, and the other students in the class would probably have laughed at this failure. Chris mentioned this example to generally characterize his relationship with this teacher, who often commented in class on his intelligence in an ironic way.

If, on the contrary, teachers showed respect, acceptance, and a readiness to provide and support interventions and individually tailored instruction, as was the case with Julia, before and after grade-skipping, and with Felix and Sophie after grade-skipping, the situation with other students was also described as agreeable by the interviewees. These kinds of teacher behavior seemed to be closely linked to the social situation of the students in the class, that is, the level of acceptance by the classmates.

Trying to Make School Fit

The interviews revealed several problems from which the gifted students suffered in school. These were intellectual problems (they were bored and frustrated with the intellectual level in class) and sometimes social difficulties (they were interested in different activities than their peers and they felt different from and not accepted by classmates). In the school careers of our interviewees, some attempts to improve the situation were made; one of these attempts was skipping a grade. In six of the seven cases, further interventions were applied after grade-skipping: Students moved to a different (sometimes specialized) school, participated in certain subjects in classes of a higher grade, or even, as in the case of Chris, left the regular school system altogether in favor of homeschooling. These interventions were initiated by the students themselves, their parents, or their teachers.

School Makes Sense: Academic Issues After Grade-Skipping and Additional Interventions. After skipping a grade, these students were not academically distressed, and their grades and achievements were typically still superior to those of their classmates. Only Felix's grades deteriorated slightly after grade-skipping. Further interventions followed; some students found some kind of compensation for their ongoing frustration in classes by attending extracurricular special courses or attending lessons in higher grades. Chris reported that, for some time, he attended an intensive physics course of a much higher grade, where he succeeded in making logical derivations none of the older students were capable of making—despite their superior knowledge of the subject matter.

Lina followed her interests in biology in many extracurricular courses outside of school. However, she did not like the subject in school until she changed to her current school that was specialized in natural sciences and offered additional classes, sometimes in collaboration with the museum of natural history or the zoological garden, as classes at her old schools did not suit her interests.

Felix had always dealt with mathematical problems outside of school, starting preschool, with calculating and writing being favorite leisure activities. Even after grade-skipping, he remained interested in mathematics outside of school, particularly since his knowledge was still several years in advance of that of his classmates. Norbert reported being constantly underchallenged, even in subjects he did not like. He sought intellectual challenge mainly outside of school, for example, by participating in extracurricular enrichment courses for gifted students.

We found that an academically satisfying situation for these students could be accomplished by combinations of interventions and individually tailored instruction. Skipping a grade was the first step toward reducing or erasing the feeling that going to school was of no personal use and therefore experienced as a requirement which did not make sense. This became clear with Sophie's account of the time before she had skipped a grade: "I always begged my mother, 'I want to stay at home. Please, here [at home] I can really do much more, can learn much more" (Sophie, interview, May 24, 2012). After the grade-skipping, this feeling of senselessness regarding school disappeared: "For me, it was basically liberating that I did not just have to sit around, listen to things I already knew, but that I could attend the fourth grade then" (Sophie, interview, May 24, 2012).

Norbert's is the only case where the grade-skipping was the sole intervention, and he is also the only one who in his current school situation constantly lacked satisfying intellectual stimulus. Asked if there are lessons he likes, he said:

Let me think if there is something. No. Mostly, it just feels like a waste of time. . . . [There are lessons where] we are occupied with the same thing for about 30 minutes [snoring sounds]. Then I want to choke the guy who created the curriculum. (Norbert, interview, March 8, 2012).

However, as he was happy with his classmates and teachers, he did not want to move to another new class, and instead compensated the lack of challenge in school with activities outside of school.

Lina combined grade-skipping, two school changes, and the repetition of a class (in order to gain access to a special science program at a specialized school) to find a situation she considered intellectually appropriate and socially agreeable. Further enrichment activities outside of school such as special courses for gifted students also played an important role.

Attending schools with specific intellectually demanding profiles proved to be a satisfying solution, as was the case with Alma, Lina, Felix, and Sophie. In these schools, their giftedness did not attract much attention as many students there were gifted. Chris, however, found a way to cope with the necessity of regular schooling by being allowed to learn on his own through homeschooling. After he had changed schools several times, skipped a grade, and attended classes in higher grades, Chris decided to leave the school system completely when he was in ninth grade. He made this decision despite the fact that he had received valuable support by individual teachers. In spite of the law of compulsory school attendance, he was allowed to be homeschooled due to his severe social problems with teachers and students at school. While he needed the opportunity to break out of what he called a vicious circle of recurrent problems in various school contexts and to have time to deal with his experiences and find positive social situations outside of school, he also saw many advantages in learning according to his own system, at his own pace, and being able to choose the time of the day that best suited him for learning.

Julia's situation differed from the others', both before and after she skipped a grade: She did not feel as though she was in the wrong place in her former class because her giftedness

and her achievements had been accepted and valued by her teachers. She decided to skip a grade after she had been constantly encouraged to do so by her teachers, but she did not feel that it was really necessary. Julia's school seemed to be generally prepared for the intervention, as two more students in Julia's class also skipped a grade. In retrospect, she evaluated her own grade-skipping as negative. She reported that she regretted not having time for her personal and academic development.

Social Issues After Grade-Skipping. After the skipping of a grade, difficulties with social relationships with peers sometimes persisted. Julia reported generally having problems socially relating with others or integrating into a group. These kinds of difficulties played a role before and after the grade-skipping, as well as in her secondary school. Christalked about a vicious circle, referring to the fact that the same social pattern recurred at various schools, perhaps because he expected or feared it, and students soon recognized that he was easy to provoke.

Others integrated well into their new class. For example, Felix did not report any major conflicts, particularly in connection with his giftedness, at any school he attended. Despite some comments by fellow students that Sophie was able to ignore and although her classmates before grade-skipping were not suitable playmates, Sophie did not report any heavy social conflicts at any of her schools, either. In both cases, there were also no serious conflicts with teachers, with the exception of Sophie's class teacher in primary school before grade-skipping, mentioned above. Sophie clearly pointed out that teachers helped her integrate into her new class after she skipped a grade and to feel welcome there. They also supported her and were prepared for gifted students. In our sample, if social problems were not an issue before grade-skipping or before other programs involving a change of social group, they did not really become relevant after the intervention.

Students also developed strategies for integrating themselves into the new class. Norbert, who decided, after skipping a grade once, to stay in the same class and school despite being constantly underchallenged, reported that, for example, he calculated probabilities to keep himself entertained in boring classes, and he also helped his fellow students in class. Meanwhile, he found intellectual challenges outside of school and used his abilities to improve his social affiliations. This strategy seemed to be particularly successful if teachers supported or initiated it, or if it was part of the schools' institutional regulations, as was the case with Alma. At her school, it was common practice for students to help each other, and she did so regularly. According to Alma's account, her helping led to acceptance of differences in intellectual capacities among the students. Another strategy was to use their knowledge to help other students in certain conflict situations at school. For example, Norbert reported informing teachers about property laws when they wanted to confiscate objects from fellow students:

I then say, no, following paragraph blah, blah, blah of property law . . . personal objects of value, uhm, of children are to be retained only until the end of the day. . . . I actually said this quite often and it really works, and then, they are grateful to me. (Norbert, interview, March 8, 2012)

Julia also reported that, before grade-skipping, students were rather pleased that she could help them, despite some jealousy about her giftedness (something also reported by other interviewees).

An Emerging Pattern: Intellectual Fit Affects Social Affiliation of Gifted Students in Class

So far in our analysis, teachers' responses to the different learning needs of the gifted students interviewed have been discussed separately from issues of the gifted students' social affiliation in class. We observed, however, that these aspects of the students' experiences were typically closely connected and therefore this interconnection forms the core category of our study.

The teachers' reactions to the students' needs emerged as an overarching theme in the narrations of our participants. The social integration of a gifted student who had skipped a grade was strongly dependent on the way the teachers in the receiving class coped with the situation, socially as well as intellectually (see Table 2). First, teachers influenced the social affiliation of the gifted student in their class directly by either establishing a respectful relationship with the student or treating him or her as a little know-it-all, thereby setting an example for respectful or disrespectful behavior for the other students in class. Thus, teachers influenced the behavior of their students in the class toward and in interaction with the interviewee. Second, the teachers directly influenced the intellectual fit of the gifted student in their class: In cases in which teachers approved of special interventions, were ready to assign individually appropriate tasks in their class to the gifted student and were generally understanding of the particular student's specific situation and intellectual demands, the gifted student perceived that the intervention offered was more successful. The teachers' behavior in these cases contributed to a relatively satisfying fit between the opportunity to learn at the school, on the one hand, and the students' learning needs and learning abilities, on the other hand.

More surprisingly, however, a teacher's reaction to the intellectual needs of a gifted student also seemed to influence the student's social affiliation in the class. The teacher's willingness to serve the *intellectual* needs of the gifted student seemed to communicate a general acceptance of the student by the teacher and therefore made it easier for the students in the class to interact with peers comfortably. This category represents a pattern which emerged from the analysis of the narrations of the participants and the categories derived from them. Overall, we found that the intellectual fit of the gifted student in class was heavily influenced by the teachers who

were or were not prepared to serve the learning needs of this student. This intellectual fit in turn was connected to the social affiliation of the gifted student in class.

Discussion, Implications, and Limitations

This study has not been continued to the point of theoretical saturation of the relevant structures found. In grounded theory, the "representativeness of concepts, not of persons" is aimed for by theoretical sampling (Corbin & Strauss, 1990, p. 9). It would have been necessary to interview more students according to the *ex negativo* principle to collect more variations of concepts and subconcepts, and to clarify conditions which gave rise to certain phenomena described in the subconcepts. However, the findings allow a deep insight into the direct experiences of gifted students in German schools. Within our cases, structurally recurring phenomena were evident, which could form the research basis for further studies.

In line with quantitative, large-scale studies, the microscopic view gained in this study revealed grade-skipping as perceived by the grade-skippers as mainly positive. We focused on the view of gifted students. The grade-skippers reported many things their teachers had said and done, and they speculated about possible reasons for their teachers' behavior. It is important, however, to bear in mind that the teachers' points of view are missing in this analysis. However, how our interviewees described their situation in class before the grade-skipping was rather disquieting: In their point of view, their teachers in their original, age-based classrooms were mostly not able to respond to their needs in a constructive way. It became clear that the grade-skippers already felt that they were in the wrong place at a very early stage of their school careers. The first few weeks in first grade were severely disappointing to them, because they were not offered any new knowledge in class. Their motivation dropped, and a feeling of pointlessness developed. This drop in motivation can be explained by a frustration of fundamental needs as described in self-determination theory by Deci and Ryan (2000): The gifted students were unable to experience competence in class, because they were not academically challenged, and their abilities were not appreciated. They did not feel part of the class and so lacked social relatedness. Furthermore, some reported that the lessons in primary school followed rigid patterns, and that autonomous learning was not supported. Overall, these factors are known to impair motivation.

We found, however, one exception to this pattern with Julia: Her school was apparently well prepared to support gifted students so that she did not feel as though she was in the wrong place and did not feel that skipping a grade would be necessary. However, Julia was persuaded to skip a grade anyway and, reflecting about it later, regretted this decision. Paradoxically, precisely this school where gifted students were accepted, supported, and intellectually challenged, and

teachers were motivated to encourage and support students to skip a grade seemed to be a place where grade-skipping was not necessary.

Generally, the students reported that their teachers at primary school before skipping did not respond to their learning needs and did not support them adequately to help them feel part of the class. Grade-skipping appeared to be a last resort. The case of Julia, who attended a school where teachers were generally prepared to cope with gifted students, shows that there might have been ways of creating a learning environment in the regular class in which they would have been able to learn and feel as though they were in the right place. Nonetheless, in retrospect, apart from Julia, the gifted students interviewed were all happy with their decision to skip a grade.

Findings related to social–emotional effects of grade-skipping have been quite divergent to date (Hoogeveen et al., 2009, 2012; Kent, 1992; Kretschmann et al., 2015; Lee et al., 2012; Robinson & Janos, 1986; Sayler & Brookshire, 1993; Steenbergen-Hu & Moon, 2011). Key factors in positive social-emotional development after grade-skipping seem to be the attitudes and behavior of the teachers involved (Culross, Jolly, & Winkler, 2013). In the cases analyzed, we found instances in which the teachers did not approve of grade-skipping or other interventions for gifted students. Several studies have revealed that teachers tend to be skeptical about gradeskipping and fear negative social—emotional consequences in particular (Heinbokel, 2009; Rambo & McCoach, 2012; Siegle, Wilson, & Little, 2013), but some recent studies also show that teachers now seem to have more knowledge about and more experience with grade-skipping and exhibit more positive attitudes toward it (Gallagher, Smith, & Merrotsy, 2011; Hoogeveen et al., 2005; Westphal et al., 2015).

The experience of the students interviewed was that their teachers strongly influenced students' behavior toward each other; for instance, they reported that teachers tolerated, furthered, or to some extent triggered the social exclusion of the gifted student in class. Another somewhat surprising pattern emerged from the cases analyzed: Teachers not only affected the social integration or exclusion of the gifted student through their verbal behavior in class (e.g., recognizing outstanding or unusual achievements, ridiculing students, treating gifted students as know-it-alls) but they also created a social climate of exclusion of a gifted student by ignoring his or her learning needs and learning potential. Within the scope of our study, reasons for this can only be speculated on, as teachers' reasons and perspectives were not the focus. In some cases, perhaps teachers did not understand the particular needs of gifted students or for some reason did not want to satisfy them. To varying degrees, gifted students failed to fulfill the role typical of students, and teachers might have been frustrated when recognizing their own inability to teach these students something which is both challenging for them and typically considered appropriate for their age group. In our study, when teachers were able to create a better match between the intellectual needs and abilities of the student and the intellectual demands in school, students not only felt that spending time at school was meaningful but they also had better relationships with their classmates. To further explore this perceived link, future studies should aim at assessing the intellectual and social fit of gifted students simultaneously.

As our study emphasized the importance of the teacher's attitude for the social integration of the gifted student in class, and the attitude of teachers was perceived as rather hostile by some of our interviewees, reasons for this reluctant attitude should be explored. Although there is a vast amount of research on teachers' attitudes toward acceleration, gifted education, and gifted students in general, recent studies in particular are mostly quantitative (e.g., Baudson & Preckel, 2013; Bégin & Gagné, 1995; Geake & Gross, 2008; Lassig, 2009; McCoach & Siegle, 2007, Rambo & McCoach, 2012; Siegle et al., 2013; Wardman, 2009; but see Carman, 2011; Gallagher, 2007; Gallagher et al., 2011). A qualitative approach could be especially helpful when exploring reasons for the reluctance of some teachers to address the needs of the gifted student, as studies that "offer . . . pre-determined responses or closed-content questions . . . can limit understanding . . . [and] provid[e] . . . pre-selected ways of thinking about teaching" (Marcos & Tillema, 2006, p. 125). The present study emphasizes the necessity of cultivating a climate in our schools that enables teachers to recognize and serve the widely varying needs of students. McCoach and Siegle (2007) showed that teachers who have been trained in gifted education did not have more positive attitudes toward the gifted than untrained ones. Therefore, they pointed out, it might not be enough to simply provide *more* training in gifted education, but to rethink the training itself.

Grade-skipping and—in most cases—further interventions, too, led to a feeling that school makes sense again. Skipping was an initial step in a series of helpful interventions to improve the academic as well as the social-emotional situation of the gifted students. Achievements of the grade-skippers were generally still superior to other students in the class after skipping. However, sometimes school grades deteriorated slightly after skipping a grade. For example, Felix's school grades dropped in the years after grade-skipping. Similar findings on lower grades after grade-skipping were reported by Prado and Schiebel (1996) and are usually interpreted as a potential disadvantage of grade-skipping. Still, Felix evaluated the intervention as positive in retrospect and considered it to be a necessary step. Previously, he could not see any sense in attending school, because he already knew everything that was taught there. We also found examples where school careers slowed down after grade-skipping either as a result of a student voluntarily repeating a grade to gain access to a school offering a special program (Lina) or of stretching the work on the curriculum intended for 1 year to 2 years in homeschooling in order to have more time to study the topics thoroughly (Chris). Although these cases would be counted as retentions in a quantitative study, they do

not indicate that the acceleration failed or that students were overwhelmed with the intellectual demands or workload. In fact, these kinds of deceleration functioned de facto as further interventions to increase the intellectual demand or to enable the gifted student to learn in a more appropriate context. These findings show that typical reasons for a later repetition of a class have not been sufficiently analyzed to date, and repetition cannot generally be attributed to intellectually excessive demands. Consequently, an evaluation of the success of grade-skipping might be incomplete and sometimes misleading if school achievements and an ongoing accelerated school career are used as the sole indicators, which is typically the case in large-scale quantitative studies (Gronostaj et al., 2015; Kretschmann et al., 2014; Vock, Penk, & Köller, 2014). Students in this study perceived grade-skipping as necessary and/or tremendously helpful, irrespective of their grades afterward. During free narration, the students accentuated the positive overall effect of the skipping rather than the development of their grades. This positive effect might be an increased sense of well-being in school and/or an increased intellectual fit, albeit only for a limited period of time. For future research, these findings imply that it would be useful to include more diverse indicators of the success of grade-skipping if possible.

All of our interviewees skipped one grade in elementary school, and only Sophie skipped another grade in secondary school. This is in line with quantitative research from Germany that showed that grade-skipping is more frequent during elementary than during secondary school (Gronostaj et al., 2015; Vock et al., 2014). Moreover, research from the United States based on the National Education Longitudinal Study indicated that students who were grade-accelerated early (e.g., during kindergarten or early in elementary school) benefitted more with regard to their academic achievement at the 12th-grade level than those who accelerated later in their school career. The authors offer as a possible explanation that the early accelerants had more years of more challenging instruction at school (Kuo & Lohman, 2011). Similar results indicating benefits of early acceleration compared with later acceleration regarding social-emotional adjustment are reported by Hoogeveen et al. (2012). In our data, we did not find any systematic relationships between how old our interviewees were when they skipped a grade and how they evaluated the intervention in retrospect.

Our interviewees differed in their ages when interviewed, which raises the following issues: First, there are certain challenges entailed when interviewing young children (see for an overview, e.g., Heinzel, 2012; Irwin & Johnson, 2005; Krüger, 2006). We experienced a challenging interview in particular with Alma (8), the youngest of our interviewees, who, for example, gave brief answers to open-ended questions and seemed to "run out of patience" with our questions toward the end of the interview. We nevertheless feel that this interview added valuable insights in the views and experiences of younger grade-skippers. Second, as all our interviewees

skipped a grade during elementary school but differed in their ages when interviewed, the recency of the grade-skipping itself varied between 1 year (Alma) and 8 years (Chris). Hoogeveen et al. (2012) found only few significant correlations of the time expired since acceleration with self-concept, behavioral characteristics, and social contacts of accelerated students. The recency of the event probably affected how precisely the interviewees remembered things they told us. Moreover, the time passed since the grade-skipping might have influenced how the interviewees evaluated the intervention in retrospect, as the older they were, the more time they had to adapt and the more able they were to judge the gradeskipping within the whole of their school careers. In most of the school careers analyzed in this study, grade-skipping was a necessary but insufficient step taken to reach a more or less satisfactory school situation. Typically, further interventions were added, because after a short period of adaptation, problems such as being underchallenged reappeared among the interviewees, which was not the case (yet) with Alma, who we interviewed 1 year after she had skipped a grade. Most still perceived a difference in ability compared with their classmates. An increased feeling of affiliation through similarity could be observed with interviewees who attended a school with a particularly challenging profile. Our analysis of narrative data showed that similarity and common interests increased the chances of a mutual understanding. Especially with Sophie and Felix, it became apparent that at the specialized school, they were better integrated socially. Both reported that being gifted no longer played an important role for them anymore at their current schools, probably because all their classmates were exceptionally intelligent, too. Generally, schooling situations which were challenging and allowed for autonomous studying at an individual pace have been mentioned as positive examples. These findings are mainly in line with previous research on experiences of gifted students in specialized schools (e.g., Moon, Swift, & Shallenberger, 2002; Sayler & Brookshire, 1993; Vogl & Preckel, 2014; but see also Adams-Byers, Whitsell, & Moon, 2004).

These highly individual pathways through the German school system, however, have been the result of a constant struggle by gifted students to improve their own situation, rather than institutionally designated options. Only in the cases of Felix and Sophie, who both attended specialized schools for gifted students from the fifth grade on, was the schooling planned on an institutional level to fit the demands of gifted students, and both students reported being satisfied.

In the other cases, the current situation was either not really satisfying, or a kind of compromise, and/or the result of an individual struggle for solutions, during which the students experienced many difficult years of school. Chris and Norbert evaluated their current situation as better than before, but in both cases, the fit in one area had been compromised for the sake of a positive fit in another area. While Chris completely quitted learning in a class context, mainly to avoid social conflicts, Norbert tolerated the negative intellectual fit for the

sake of positive social affiliation. Lina and Alma, too, depicted the current situation as being better than before, and intended to stay in their current class and school context until their final exams, but they also were the youngest students we interviewed and therefore might assess their situation differently later on.

Although grade-skipping can be a helpful and even necessary step, in none of our cases was it sufficient over time as the sole form of intervention. Moreover, it has been shown that a combination of grade acceleration and other challenging academic programs leads to even more pronounced academic achievements of gifted learners (McClarty, 2015). In this context, formative evaluations and individual counseling about various interventions and individually tailored instruction, and, importantly, advice about potentially helpful combinations of these became particularly necessary within the German school system.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- Adams-Byers, J., Whitsell, S. S., & Moon, S. M. (2004). Gifted students' perceptions of the academic and social/emotional effects of homogeneous and heterogeneous grouping. *Gifted Child Quarterly*, 48, 7-20. doi:10.1177/001698620404800102
- Assouline, S. G., Colangelo, N., Lupkowski-Shoplik, A., Lipscomb, J., & Forstadt, L. (2009). *Iowa Acceleration Scale manual: A guide for whole-grade acceleration K-8* (3rd ed.). Scottsdale, AZ: Great Potential Press.
- Baudson, T. G., & Preckel, F. (2013). Teachers' implicit personality theories about the gifted: An experimental approach. *School Psychology Quarterly*, 28, 37-46. doi:10.1037/spq0000011
- Baumann, T., Schneider, C., Vollmar, M., & Wolters, M. (2012). Schulen auf einen Blick [Schools at a glance]. Wiesbaden, Germany: Statistisches Bundesamt.
- Bégin, J., & Gagné, F. (1995). Predictors of a general attitude toward gifted education. *Journal for the Education of the Gifted*, 18, 74-86. doi:10.1177/016235329401800106
- Benbow, C. P. (1998). Grouping intellectually advanced students for instruction. In J. VanTassel-Baska (Ed.), Excellence in educating gifted and talented learners (3rd ed., pp. 261-278). Denver, CO: Love.
- Brandtstädter, J. (2007). Konzepte positiver Entwicklung [Concepts of a positive development]. In J. Brandtstädter & U. Lindenberger (Eds.), *Entwicklungspsychologie der Lebensspanne. Ein Lehrbuch* (pp. 681-723). Stuttgart, Germany: Kohlhammer.
- Brody, L. E., & Benbow, C. P. (2004). Accelerative strategies: How effective are they for the gifted? In L. E. Brody (Ed.), Grouping and acceleration practices in gifted education (pp. 57-67). Thousand Oaks, CA: Corwin Press.

- Carman, C. A. (2011). Stereotypes of giftedness in current and future educators. *Journal for the Education of the Gifted*, 34, 790-812. doi:10.1177/0162353211417340
- Colangelo, N., Assouline, S. G., & Gross, M. U. M. (2004). A nation deceived: How schools hold back America's brightest students. Iowa City: University of Iowa. Retrieved from http://www.accelerationinstitute.org/Nation Deceived/Get Report.aspx
- Colangelo, N., Assouline, S. G., & Marron, M. A. (2013). Evidence trumps beliefs: Academic acceleration is an effective intervention for high-ability students. In C. M. Callahan & H. L. Hertberg-Davis (Eds.), *Fundamentals of gifted education* (pp. 164-175). New York, NY: Routledge.
- Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13, 3-21. doi:10.1007/BF00988593
- Culross, R. R., Jolly, J. L., & Winkler, D. (2013). Facilitating grade acceleration: Revisiting the wisdom of John Feldhusen. *Roeper Review*, 35, 36-46. doi:10.1080/02783193.2013.740601
- Davis, G. A., & Rimm, S. B. (2004). *Education of the gifted and talented* (5th ed.). Needham Heights, MA: Allyn & Bacon.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268. doi:10.1207/ S15327965PLI1104_01
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48, 90-101. doi:10.1037/0003-066X.48.2.90
- Frommer, J., & Rennie, D. (2006). Methodologie, Methodik und Qualität qualitativer Forschung [Methodology, method and quality in qualitative research]. Psychotherapie, Psychosomatik, Medizinische Psychologie, 56, 210-217. doi:10.1055/s-2006-932608
- Gallagher, S. (2007). Exploring preservice teachers' attitudes towards gifted education. *TalentEd*, 25(1), 11-18.
- Gallagher, S., Smith, S. R., & Merrotsy, P. (2011). Teachers' perceptions of the socioemotional development of intellectually gifted primary aged students and their attitudes towards ability grouping and acceleration. *Gifted and Talented International*, 26(1,2), 11-24. Retrieved from http://thinkingahead.com.au/wordpress/wp-content/uploads/2013/03/GTI-2612-2011-inc-tattitudes.pdf#page=12
- Geake, J. G., & Gross, M. U. M. (2008). Teachers' negative affect toward academically gifted students: An evolutionary psychological study. *Gifted Child Quarterly*, 52, 217-231. doi:10.1177/0016986208319704
- Glaser, B. G., & Strauss, A. L. (1999). The discovery of grounded theory: Strategies for qualitative research. Chicago, IL: Aldine Transaction.
- Gronostaj, A., Vock, M., & Pant, H. A. (2015). Skip a grade, learn more? Estimating effects of grade skipping on gifted students' language skills using propensity score matching. Manuscript submitted for publication.
- Gross, M. U. M. (2006). Exceptionally gifted children: Long-term outcomes of academic acceleration and nonacceleration. *Journal for the Education of the Gifted*, 29, 404-429. doi:10.4219/jeg-2006-247
- Gross, M. U. M., MacLeod, B., Bailey, S., Chaffey, G., Merrick, C., & Targett, R. (2004). *Gifted and talented education:*

- Professional development package for teachers. Sydney, New South Wales, Australia: University of New South Wales. Retrieved from https://education.arts.unsw.edu.au/media/ EDUCFile/INTRODUCTION.pdf
- Hattie, J. (2009). Visible learning. A synthesis of over 800 metaanalyses relating to achievement. London, England: Routledge.
- Heinbokel, A. (2009). *Handbuch Akzeleration* [Manual of acceleration]. Münster, Germany: LIT Verlag.
- Heinzel, F. (Ed.). (2012). Methoden der Kindheitsforschung. Ein Überblick über Forschungszugänge zur kindlichen Perspektive [Methods of children and childhood studies: An overview of research approaches to children's perspective]. Weinheim, Germany: Juventa.
- Hoogeveen, L., van Hell, J. G., & Verhoeven, L. (2005). Teacher attitudes toward academic acceleration and accelerated students in the Netherlands. *Journal for the Education of the Gifted*, 29, 30-59.
- Hoogeveen, L., van Hell, J. G., & Verhoeven, L. (2009). Self-concept and social status of accelerated and nonaccelerated students in the first 2 years of secondary school in the Netherlands. *Gifted Child Quarterly*, 53, 50-67. doi:10.1177/0016986208326556
- Hoogeveen, L., van Hell, J. G., & Verhoeven, L. (2012). Socialemotional characteristics of gifted accelerated and nonaccelerated students in the Netherlands. *British Journal of Educational Psychology*, 82, 585-605. doi:10.1111/j.2044-8279.2011.02047.x
- Irwin, L. G., & Johnson, J. (2005). Interviewing young children: Explicating our practices and dilemmas. *Qualitative Health Research*, *15*, 821-831. doi:10.1177/1049732304273862
- Kanevsky, L., & Keighley, T. (2003). To produce or not to produce? Understanding boredom and the honor in underachievement. *Roeper Review*, 26, 20-28. doi:10.1080/02783190309554235
- Kent, S. D. (1992). The effects of acceleration on the social and emotional development of gifted elementary students: A metaanalysis. *Dissertation Abstracts International*, 54, 419-A.
- Kretschmann, J., Vock, M., & Lüdtke, O. (2014). Acceleration in elementary school: Using propensity score matching to estimate the effects on academic achievement. *Journal of Educational Psychology*, 106, 1080-1095. doi:10.1037/a0036631
- Kretschmann, J., Vock, M., Lüdtke, O., & Gronostaj, A. (2015). Skipping to the bigger pond: Examining gender differences in students' psychosocial development after early acceleration. Manuscript submitted for publication.
- Krüger, H.-H. (2006). Forschungsmethoden in der Kindheitsforschung [Research methods in children and childhood studies]. *Diskurs Kindheits- und Jugendforschung*, 1(1), 91-115.
- Kulik, J. A. (2004). Meta-analytic studies of acceleration. In N. Colangelo, S. G. Assouline, & M. U. M. Gross (Eds.), A nation deceived: How schools hold back America's brightest students (Vol. 2, pp. 13-22). Iowa City: University of Iowa.
- Kuo, Y., & Lohman, D. F. (2011). The timing of grade skipping. *Journal for the Education of the Gifted*, 34, 731-741. doi:10.1177/0162353211417219
- Lassig, C. (2009). Teachers' attitudes towards the gifted: The importance of professional development and school culture. *Australasian Journal of Gifted Education*, 18(2), 32-42.
- Lee, S., Olszewski-Kubilius, P., & Thomson, D. T. (2012). Academically gifted students' perceived interpersonal competence and peer relationships. *Gifted Child Quarterly*, 56, 90-104. doi:10.1177/0016986212442568

Lubinski, D., & Benbow, C. P. (2000). States of excellence. American Psychologist, 55, 137-150. doi:10.1037/0003-066X.55.1.137

- Marcos, J. J. M., & Tillema, H. (2006). Studying studies on teacher reflection and action: An appraisal of research contributions. *Educational Research Review*, 1, 112-132. doi:10.1016/j. edurev.2006.08.003
- Matthews, M. S. (2009). Gifted learners who drop out: Prevalence and prevention. In L. V. Shavinina (Ed.), *International hand-book on giftedness* (pp. 527-536). Berlin, Germany: Springer-Verlag. doi:10.1007/978-1-4020-6162-2
- Matthews, M. S., & McBee, M. T. (2007). School factors and the underachievement of gifted students in a talent search summer program. *Gifted Child Quarterly*, *51*, 167-181. doi:10.1177/0016986207299473
- McClarty, K. L. (2015). Life in the fast lane: Effects of early grade acceleration on high school and college outcomes. *Gifted Child Quarterly*, *59*, 3-13. doi:10.1177/0016986214559595
- McCoach, D. B., & Siegle, D. (2007). What predicts teachers' attitudes toward the gifted? *Gifted Child Quarterly*, *51*, 246-254. doi:10.1177/0016986207302719
- Moon, S. M., Swift, M., & Shallenberger, A. (2002). Perceptions of a self-contained class for fourth- and fifth-grade students with high to extreme levels of intellectual giftedness. *Gifted Child Quarterly*, 46, 64-79. doi:10.1177/001698620204600106
- Neihart, M. (2007). The socioaffective impact of acceleration and ability grouping: Recommendations for best practice. *Gifted Child Quarterly*, 51, 330-341. doi:10.1177/0016986207306319
- Park, G., Lubinski, D., & Benbow, C. P. (2013). When less is more: Effects of grade skipping on adult STEM productivity among mathematically precocious adolescents. *Journal of Educational Psychology*, 105, 176-198. doi:10.1037/a0029481
- Penk, C. (2008). Überspringen von Klassen: Eine Analyse anhand einer repräsentativen Untersuchung [Grade skipping: Analysis of a representative sample]. Unpublished manuscript, Humboldt Universität, Berlin, Germany.
- Prado, T. M., & Schiebel, W. (1996). Entwicklung und Erprobung eines Modells zur Förderung besonders begabter Schülerinnen und Schüler durch Fördermaßnahmen zur Verkürzung der individuellen Schulzeit. Schlußbericht [Development and testing of a model to foster gifted students by acceleration: Final report]. Hamburg, Germany: Behörde für Schule, Jugend, Berufsbildung, Amt für Schule.
- Przyborski, A., & Wohlrab-Sahr, M. (2010). *Qualitative Sozialforschung: Ein Arbeitsbuch* [Qualitative research: A workbook]. München, Germany: Oldenbourg Wissenschaftsverlag.
- Rambo, K. E., & McCoach, D. B. (2012). Teacher attitudes toward subject-specific acceleration: Instrument development and validation. *Journal for the Education of the Gifted*, 35, 129-152. doi:10.1177/0162353212440591
- Robinson, N. M., & Janos, P. M. (1986). Psychological adjustment in a college-level program of marked academic acceleration. *Journal of Youth and Adolescence*, 15, 51-60. doi:10.1007/ BF02140783
- Rogers, K. B. (2010). Academic acceleration and giftedness: The research from 1990 to 2008. A best-evidence synthesis. In N. Colangelo, S. Assouline, D. Lohmann, & M. A. Marron (Eds.), In *Proceedings of the 2008 Wallace Symposium poster session on academic acceleration* (pp. 1-6). Iowa City: University of Iowa.

Rubenstein, L. D., Siegle, D., Reis, S. M., McCoach, D. B., & Burton, M. G. (2012). A complex quest: The development and research of underachievement interventions for gifted students. *Psychology in the Schools*, 49, 678-694. doi:10.1002/pits.21620

- Sayler, M. F., & Brookshire, W. K. (1993). Social, emotional, and behavioral adjustment of accelerated students, students in gifted classes, and regular students in eighth grade. *Gifted Child Ouarterly*, 37, 150-154. doi:10.1177/001698629303700403
- Siegle, D., Wilson, H. E., & Little, C. A. (2013). A sample of gifted and talented educators' attitudes about academic acceleration. *Journal of Advanced Academics*, 24, 27-51. doi:10.1177/1932 202X12472491
- Southern, W. T., & Jones, E. D. (2004). Types of acceleration: Dimensions and issues. In N. Colangelo, S. G. Assouline, & M. U. M. Gross (Eds.), A nation deceived: How schools hold back America's brightest students (Vol. 2, pp. 5-12). Iowa City: University of Iowa.
- Stanley, J. C. (2000). Helping students learn only what they don't already know. *Psychology, Public Policy, and Law*, 6, 216-222. doi:10.1037/1076-8971.6.1.216
- Steenbergen-Hu, S., & Moon, S. M. (2011). The effects of acceleration on high-ability learners: A meta-analysis. *Gifted Child Quarterly*, 55, 39-53. doi:10.1177/0016986210383155
- Vock, M., Penk, C., & Köller, O. (2014). Wer überspringt eine Schulklasse? Befunde zum Klassenüberspringen in Deutschland [Who skips a grade? Findings on grade skipping in Germany]. Psychologie in Erziehung und Unterricht, 61, 153-164. doi:10.2378/peu2013.art22d
- Vock, M., Preckel, F., & Holling, H. (2007). Förderung Hochbegabter in der Schule—Evaluationsbefunde und Wirksamkeit von Maβnahmen [Supporting gifted students at school—Research findings and effects of interventions]. Göttingen, Germany: Hogrefe.
- Vogl, K., & Preckel, F. (2014). Full-time ability grouping of gifted students: Impacts on social self-concept and school-related attitudes. *Gifted Child Quarterly*, 58, 51-68. doi:10.1177/0016986213513795
- Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.
- Wardman, J. (2009). Secondary teachers', student teachers' and education students' attitudes to full-year acceleration for gifted students. Australasian Journal of Gifted Education, 18(1), 25-36.
- Wells, R., Lohman, D., & Marron, M. (2009). What factors are associated with grade acceleration? An analysis and comparison of two U.S. databases. *Journal of Advanced Academics*, 20, 248-273. doi:10.1177/1932202X0902000203
- Westphal, A., Vock, M., & Stubbe, T. C. (2015). Gifted students from the perspective of teachers: Knowledge, experience, and attitudes towards skipping a grade. Manuscript submitted for publication.
- Wieczerkowski, W., & Prado, T. M. (1993). Spiral of disappointment: Decline in achievement among gifted adolescents. European Journal of High Ability, 4, 126-141. doi:10.1080/0937445930040202

Author Biographies

Anna Gronostaj is a research lecturer and teacher educator at the Department of Education at Potsdam University, Germany. She studied psychology at the Freie University of Berlin, Germany, and

received her PhD at the University of Kassel, Germany. Her research interests include self-regulated learning, differentiated instruction, gifted education, and teacher professional development.

Elise Werner majored in English and educational science at Potsdam University, Germany. Her research interests include qualitative research methods, diversity, gender issues, and the impact of normative and restrictive socialization and schooling. She is now working with children with special needs.

Eric Bochow majored in educational science at Potsdam University, Germany. His research interests include measurement

and evaluation, the triangulation of qualitative and quantitative methods, and social and emotional development of students. He is now working with youth at risk.

Miriam Vock is a professor of research on teaching and interventions at the Department of Education at Potsdam University, Germany. Her research focuses on teaching gifted and talented students. She studied psychology at the University of Münster, Germany, where she also received her PhD. Until 2011, she was a researcher at the Institute of Educational Progress at Humboldt University of Berlin, where she and her colleagues developed nationwide, standards-based assessments for schools.