

Ervaringen van Hoogbegaafde Volwassenen die weer Toetreden tot het Onderwijs:
een Kwalitatieve Verkenning

Experiences of Gifted Adults Reentering the Educational System: a Qualitative Exploration

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Samenvatting (Dutch)

Achtergrond

Hoogbegaafde leerlingen beschikken, volgens onderzoek bij kinderen, jongeren en jongvolwassenen, over bepaalde specifieke leerkenmerken. Deze kenmerken leiden tot positieve of negatieve leerervaringen, afhankelijk van diverse factoren. De focus van onderwijsonderzoek bij hoogbegaafden richt zich gewoonlijk niet op volwassenen.

Doel

Het doel van dit onderzoek is het begrijpen van de leerervaringen van hoogbegaafde volwassenen die weer of alsnog zijn gaan studeren. De hoofdvraag van dit onderzoek is als volgt geformuleerd: Welke positieve en/of negatieve ervaringen met volwasseneneducatie rapporteren hoogbegaafde volwassenen na opnieuw of alsnog te gaan studeren, hoe interpreteren zij deze ervaringen, en welke oplossingen dragen zij aan voor mogelijke problemen?

Deelnemers, procedure, onderzoeksontwerp

De steekproef bestond uit 10 hoogbegaafde mannen en 12 hoogbegaafde vrouwen in de leeftijd van 29 tot 61 jaar. De deelnemers werden benaderd via oproepen in de digitale nieuwsbrief van Mensa en plaatselijke elektronische mailinglijsten van Mensa. Er werd een cross-sectionele kwalitatieve survey gedaan, bestaande uit diepte-interviews met behulp van de online video software Skype.

Meetinstrumenten

Voor de interviews werd een beknopte topiclijst opgesteld om een open interview te faciliteren over positieve en negatieve ervaringen in het onderwijs. Dit bood deelnemers de gelegenheid om thema's aan te dragen die voor hen relevant waren, in plaats van bevraagd te worden op de thema's die vooraf uit de literatuur over hoogbegaafde kinderen, adolescenten en jongvolwassenen naar voren waren gekomen.

Resultaten

Deelnemers gaven aan dat ze graag nieuwe kennis opdeden en ondergedompeld werden in een heel nieuw denkkader. Ze rapporteerden negatieve ervaringen wanneer de content werd gepresenteerd op een manier die niet overeen kwam met hun leerstijl. De oplossingen die zij aandroegen richtten zich op het bewust maken van docenten en studenten van verschillende leerstijlen en hoe daarmee om te gaan.

Vanwege hun hoge interne kwaliteitsstandaard waren de deelnemers positief over docenten die de stof in een groter geheel wisten te plaatsen en die open stonden voor discussie. Negatieve ervaringen werden gerapporteerd wanneer docenten deze eigenschappen niet hadden. Wanneer naar oplossingen werd gevraagd, gaven de meeste deelnemers aan zich te conformeren aan de docent.

De deelnemers hadden een voorkeur voor assessment procedures die diepe verwerking testten. Negatieve ervaringen werden voornamelijk gerapporteerd waar assessment bestond uit meerkeuzevragen. De deelnemers gaven aan dat meerkeuzevragen in toetsing niet de standaard zouden moeten zijn.

De deelnemers rapporteerden positieve ervaringen met klasgenoten die relevante werkervaring hadden. Ze rapporteerden negatieve ervaringen waar klasgenoten bij samenwerkend leren minder gemotiveerd waren dan zijzelf om een goed resultaat te behalen. Oplossingen omvatten: het conformeren aan de standaard van klasgenoten en het bewust selecteren van klasgenoten om mee samen te werken.

Conclusie

De ervaringen van hoogbegaafde volwassen lerenden zouden begrepen kunnen worden door naar de volgende vier externe aspecten van leren te kijken: content, docenten, assessment procedures en klasgenoten, in combinatie met de volgende drie interne aspecten van leren: zelfgerapporteerde voorkeursleerstijl, zelfbepaling en interne kwaliteitsstandaard. Het wordt aanbevolen om individuele verschillen in acht te nemen bij het ontwerpen van instructie. Summatieve assessment zou gericht moeten zijn op diepe verwerking, en de werkervaringen van volwassen studenten zouden in het onderwijs benut moeten worden. Tenslotte wordt aangeraden om flexibel om te gaan met samenwerkend leren.

Zoektermen: gifted, learning experiences, adult learning

Susanne Oosterveen

Summary

Background

Gifted learners, as researched in childhood, adolescence, or young adulthood, have several distinct learner characteristics. These characteristics lead to positive or negative experiences in school, depending on several internal and external factors. Educational research on gifted learning usually does not focus on adults.

Aim

The goal of this research is to understand the learning experiences of gifted adults reentering the educational system. The main question of this research is formulated as follows: What positive and/or negative experiences with adult education do gifted adults report after reentering the educational system, how do they interpret these experiences, and what solutions do they propose for possible problems?

Participants, procedure, design

The sample consisted of 10 gifted men and 12 gifted women aging from 29 to 61. They were contacted through calls for participation placed in the digital newsletter of Mensa and local electronic Mensa-mailing lists. A cross-sectional qualitative survey was conducted by interviewing the participants in-depth with the use of the online video call software Skype.

Measures

For the interviews, a brief topic list was constructed to facilitate an open interview on positive and negative experiences in education. This allowed for the participants to talk about the themes that were relevant to them, as opposed to themes found in the literature on gifted learning beforehand, leaving room for new insights.

Results

Participants liked gaining new knowledge and being immersed in new conceptual frameworks. Participants reported negative experiences where subject matter was not presented in a way that

matched the participant's learning style. Self-reported solutions to this mismatch focused on making teachers and students aware of different learning styles and how to deal with them.

Because of their high internal quality standard, the participants were very appreciative of teachers who placed the subject matter in a wider perspective and who had an open mind for discussion. Negative experiences were reported when teachers did not possess these characteristics. When talking about solutions, participants mainly reported conforming to the teacher.

Participants preferred assessment procedures that test deep learning, due to their high quality standard. Negative experiences were mostly reported where assessment consisted of multiple-choice exams. Participants suggest that multiple-choice exams should not be the standard.

Participants reported positive experiences with classmates who possessed relevant work experience. They reported negative experiences where classmates were not as motivated as them to obtain a good result in cooperative learning. Solutions included: conforming oneself to the standards of classmates and purposely selecting group members to work with on projects.

Conclusion

The experiences of gifted adult learners may be understood by looking at these four external aspects of learning: subject matter, teachers, assessment procedures, and classmates, in combination with these three internal aspects of learning: self-reported preferred learning style, self-determination, and internal quality standard. It is recommended to consider individual differences when designing instruction. Summative assessment should focus on deep learning, and the work experience of adult students should be utilized. Flexibility is recommended when cooperative learning is concerned.

Keywords: gifted, learning experiences, adult learning

Introduction

Much research has been done on giftedness and learning in children. With the growing acceptance that gifted children differ significantly in several ways from their non-gifted peers and that they need special attention in the educational system, attention is gradually directed towards gifted adults as well. However, no research seems to have been done on the current learning experiences of gifted adults who reentered the educational system. How are gifted adults managing in the educational system? With both lifelong learning (Jones, 2005) as well as talent development (Ministerie van Onderwijs, Cultuur en Wetenschap [MINOCW], 2011a; MINOCW, 2011b) being important issues in Dutch policy, this should be a pressing question to policy makers.

Giftedness is not easily defined. In research, several models to specify or define giftedness are currently used (Dai, Swanson, & Cheng, 2011; Hoogeveen, Van Hell, Mooij, & Verhoeven, 2004). Traditionally, giftedness is defined as high intellectual ability as measured by an IQ test, where an individual is considered gifted at an IQ score of 130 or more (Hoogeveen et al., 2004; Mönks, 1992). Today, most models stress the importance of the multidimensional nature of giftedness and the role of the environment in the expression of giftedness into high achievement. Several characteristics associated with giftedness in children can be defined (Dai et al., 2011; Hoogeveen et al., 2004; Mönks, 1992; Reis & Renzulli, 2010). In the context of this research, especially the learner characteristics of the gifted are of interest. In order to find these, a literature review was conducted. In table 1, six recurrent learner characteristics associated with gifted children, adolescents and young adults emerging from this literature review are summarized. No research was found on older, adult, learners. In the next section, these six learner characteristics will be further explored to present an overview of gifted learning, including the positive and negative experiences the gifted learner may encounter at different stages of his educational career. Whether gifted learner characteristics lead to positive or negative lived experiences in school is dependent of several factors, including intrapersonal factors and factors in the school environment (Hoogeveen et al., 2004; Persson, 2010). Risk and resilience differ individually: The home and school environment, and individual differences in personality, play a major role in the lived experiences of gifted learners (Gardynik & McDonald, 2005). Also, gender may play an indirect role in the positive or negative lived experiences of gifted learners (Reis & Hébert, 2008; Villatte, Hugon, & Léonardis, 2011).

Table 1

Learner Characteristics of Gifted Children, Adolescents and Young Adults as Found in Literature

Taking in new information fast, natural drive to learn

Combining information creatively

Goal-oriented, with strong self-regulation skills

Multipotentiality

Perfectionism

Sensitivity to the expectations of others

A first characteristic of gifted learners is that they generally take in new information faster than their non-gifted peers, and have a natural drive to learn. Young children who have developed their gifted potential into gifted behavior and achievement, will be highly motivated to learn in a formal setting, as is the case in first grade and up. However, when the school does not allow children to enter first grade when they are ready they are at risk for demotivation and frustration. This applies to the early transition to high school and university as well. When gifted learners are offered a curriculum where information is presented in a high tempo, their experiences on this aspect will be more positive than in the case of enforced underachievement, where they are required to follow the pace of their age peers. In general it is clear that these learners need a more challenging curriculum than average to match their abilities (Doolaard & Oudbier, 2010; Hoogeveen et al., 2004; Mooij, 1991). In the Netherlands, when children enter high school in early adolescence, the degree of difficulty is automatically raised because of the differentiation in educational level. This may lead to positive learning experiences in a sense that the adolescent is challenged more. In adolescence, gifted individuals may also have more possibilities to take more classes than is compulsory, to satisfy their learning drive. In this respect the unique possibilities online learning has to offer holds great potential for this age group and up (Thomson, 2010) and maybe even for younger children (Wallace, 2009). Moving on to higher education, some young adults may again need a curriculum that is more challenging than generally offered at universities or in higher vocational education. They still lack a certain intellectual challenge in the regular curriculum. In the Dutch educational system, it is usually possible to pursue more than one academic degree at the same time, but some flexibility on the part of the educational institute and of the students themselves is needed to enable this. Some Dutch universities offer honors programs for high achievers, offering more challenging assignments than in the regular curriculum (Mooij & Fettelaar, 2010). Partaking in a well-designed honors program gives

students a sense of community as well as the intellectual challenge they need (Hébert & McBee, 2007).

A second characteristic associated with gifted learning is the ability to combine information more creatively (Gardynik & McDonald, 2005). This characteristic leads to positive learning experiences when the school environment allows and challenges gifted learners to use this quality. For example, when preparing an individual presentation or writing assignment, allowing these learners to choose a subject of their own interest and allowing them to consult other resources than the ones prescribed by the teacher is a powerful way of encouraging creative thinking (National Research Center on the Gifted and Talented [NRC G/T] at the University of Connecticut, 1995; Robinson, 1991). A related issue is the way individuals are placed in small groups to work together on a project. This can have an important impact on the lived educational experiences of gifted learners. Placing them in intellectually heterogeneous groups teaches them how to work together productively, but only if this learning process is guided purposively by the teacher to reach these goals (Cohen, 1994; Huss, 2006). Gifted learners often experience negative effects of ill-considered cooperative learning arrangements, like boredom and frustration because they are held back by the other students in their natural way of learning (Huss, 2006; Matthews, 1992; Preckel, Götz, & Frenzel, 2010). Gifted learners profit in several ways from learning in same-ability groups. Not only is it beneficial to their academic achievement (Hoogeveen et al., 2004; Rogers, 1993), positive socioaffective effects have also been reported (Hoogeveen et al., 2004; Neihart, 2007; Rogers, 2007; Sapon-Shevin & Schniedewind, 1993). It also appears that same-ability grouping leads to a more favorable attitude toward subject matter, a better development of students' career interests, healthy social relationships, and high motivation (Neihart, 2007).

Thirdly, gifted learners tend to be more goal-oriented than non-gifted peers (Calero et al., 2007) and to possess strong self-regulation skills (Hoogeveen et al., 2004; Mooij, 2008; Neber & Schommer-Aikins, 2002). These are both characteristics that enable gifted learners to successfully self-direct their learning, when accepted and facilitated by the school environment. Moreover, working independently leads to positive affective and academic outcomes for gifted learners in childhood (Mooij, 2008), adolescence (Rogers, 2007) and young adulthood (Hébert & McBee, 2007). However, negative experiences may occur when gifted learners are frustrated in their goal-orientation and self-directedness, for example by being compelled to follow the pace of the rest of the class when they have already mastered the content (Rogers, 2007). This does not imply that gifted individuals do not need the teacher. However, gifted learners do seem to value other teaching styles than do their non-gifted peers. Mills (2003) found that teachers who are viewed as effective in working with gifted students seem to prefer abstract themes and concepts, be open and flexible, and value logical analysis and objectivity more than other teachers.

The fourth aspect which is seen in gifted learners more often than in non-gifted learners is multipotentiality: the ability to succeed in many different academic and career options (Emmett & Minor, 1993; Sampson & Chason, 2008). It often causes stress among adolescents and young adults in choosing a career path, because of the abundance of possibilities. Especially in combination with perfectionism, the fifth aspect of gifted learning, the gifted learner can come to postpone the decision to enroll in certain classes or to choose a major in college in anticipation of the perfect option (Sampson & Chason, 2008).

As a fifth aspect of gifted learning, perfectionism is often reported to occur in gifted learners more frequently than in their age peers. While working on a project in small groups, gifted children have reported feeling a high concern for the quality of the work, leading them to do all the work themselves or inadvertently dominating the group (Huss, 2006; Matthews, 1992; Sapon-Shevin & Schniedewind, 1993). As mentioned before, perfectionism may also hinder making a career choice. Although perfectionism often correlates with anxiety and depression, it does not necessarily lead to negative outcomes. Perfectionism can also bring about a healthy pursuit of achievement and corresponding success (Christopher & Shewmaker, 2010; Speirs Neumeister & Finch, 2006).

Finally, the sixth aspect of gifted learning concerns gifted students being highly sensitive to the expectations of others. This can add to the problems in choosing a career path as mentioned before (Emmett & Minor, 1993). Also, societal gender stereotyping often affects the choices adolescents and young adults make, being an extra burden on those who are highly sensitive to these signals (Reis & Hébert, 2008). In combination with socially prescribed perfectionism, this sensitivity may even lead to depression (Christopher & Shewmaker, 2010).

Although the learner characteristics and lived experiences of gifted children and, to a lesser degree, of gifted adolescents and young adults have been extensively researched, research on the gifted adult learner who reentered the educational system appears to be non-existent. In a first attempt at understanding gifted learning in adulthood, the positive and negative learning experiences of gifted adults reentering the educational system are explored. Also, self-reported interpretations of these experiences and solutions to possible problems will be examined. In this research, 'the educational system' will be restricted to formal educational settings, as opposed to, for example, a workshop or an informal course in the workplace. This is done to enhance comparability across the sample. These formal educational settings have in common that they comprise of several years, in which students are assessed in different courses, leading up to a diploma. It is presumed that informal courses are usually shorter in duration and are often not concluded with high stakes assessments.

In the Netherlands, it is custom to immediately continue any further education after finishing high school, sometimes with a gap year of travelling. Gifted adults reentering the educational system are distinguished from these 'regular' gifted adult students by selecting adults who have been away from

the educational system for at least two years of non-education. It is presumed that they experience their studies different because of the differences in life experience and personal circumstances like having a (part-time) job or a family, while pursuing education. The main question of this research is then formulated as: What positive and/or negative experiences with adult education do gifted adults report after reentering the educational system, how do they interpret these experiences, and what solutions do they propose for possible problems? The subquestions are:

1. What positive experiences with adult education do gifted adults report after reentering the educational system?
2. What negative experiences with adult education do gifted adults report after reentering the educational system?
3. How do they interpret these positive and negative experiences?
4. When negative experiences with adult education after reentrance are reported, what possible solutions do gifted adults suggest?

Method

Sample

When aiming to describe a subgroup in depth, homogeneous sampling is essential (Creswell, 2008). Such a sample consists of individuals who have certain relevant characteristics in common. In this case, the subgroup consists of gifted adult reentry students. Recruiting gifted individuals is problematic because of the definitional problems mentioned earlier (Dai et al., 2011). In most cases, schools that seek to identify gifted students for special programs, as well as researchers trying to compose a sample of measurably similar individuals, rely on IQ scores for convenience purposes although reality is much more complex than that (Dai et al., 2011; Hoogeveen et al., 2004). The sample in this research is also based on IQ scores. Mensa is the international high-IQ society of gifted adults. The membership requirement is the Mensa test, with a lowest score of the 98 percentile (this equals IQ 130 and higher). The sample was drawn from the Dutch branch of Mensa, by placing calls for participation in the digital Mensa newsletter and on local electronic Mensa-mailing lists. Participants were selected who had reentered the educational system after having been away from the educational system for at least two years. They were currently studying or had left the educational system again recently (with or without graduation) to ensure they could recall their experiences relatively unambiguously. In figure 1, the sample is depicted by the grey marked squares.

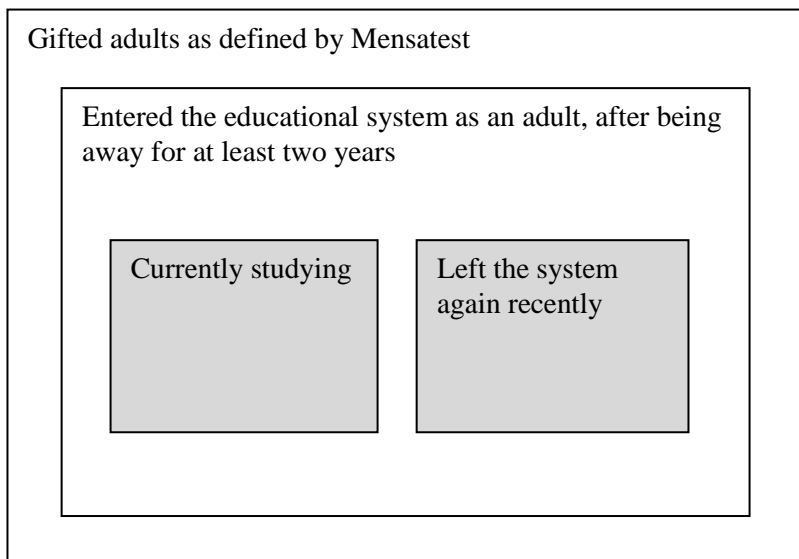


Fig. 1 The sample of gifted adults in this research

Participants who met the criteria were recruited until a minimum sample size of 20 was obtained, and the sample consisted of an approximately equal number of men and women. The resulting sample consisted of 10 gifted men and 12 gifted women, aging from 29 to 61 with a mean of 41 years. The number of years these 22 participants had not been enrolled in formal studies before starting a new study ranged from two to 20, with a mean of 11 years. Of all participants, 16 studied on university level and seven studied on college level. In the sample, 16 participants were currently studying, five had finished their studies recently, one participant had recently abandoned his studies prematurely.

Materials

For the interviews, a brief topiclist was constructed to facilitate an open interview on positive and negative experiences. This allowed for the participants to talk about the themes that were relevant to them, as opposed to themes found in the literature on gifted learning beforehand, leaving room for new insights (Baarda, De Goede, & Meer-Middelburg, 2007). The topiclist started with some demographics: ‘time spent out of the educational system before reentering’, ‘level of current studies’, ‘age’ and ‘gender’. The topic list then went on to address questions concerning the sub-questions of this research, like: ‘What do you consider positive about your current studies?’. After the first three interviews the topiclist was slightly adjusted based on the feedback of the first participants. The adjustments concerned a somewhat more elaborate explanation of the goal of the research beforehand, and of the procedure of the interview. This last adjustment was necessary because some participants, who were not familiar with open interviewing, felt slightly uncomfortable with the perceived lack of structure. The explanation beforehand helped them in feeling free to elaborate on their experiences.

The final draft of the topic list that was used to conduct the rest of the interviews can be found in appendix 1.

Procedure

The participants reacted by email to the call in the newsletter or mailing list. The researcher then checked, by email or telephone, whether they met the criteria, that is, whether they were currently studying or had left the educational system again recently (with or without graduation) after being away from the educational system for at least two years. Their giftedness was already clear from their Mensa-membership. If the participant met the criteria, an appointment for the interview was made. The interviews were conducted using the online video call software Skype and recorded with MP3 Skype Recorder. The interviews took approximately one hour each and were recorded. Each interview began with an introductory explanation of the goal of the research, the procedure of the interview itself and by asking the interviewee for permission to record the interview. With the topic list with initiating questions as a guideline, participants were asked to elaborate on their current lived experiences with studying as a gifted adult. To achieve as valid, clear and complete information as possible from the participant, questions like 'Could you tell me more about that?' and 'How does that relate to what you told me about ...?' were used, as well as techniques to check the accuracy of the interpretation of the interviewer, like regularly rephrasing their story in other words (Baarda et al., 2007). In order to do this, the researcher took notes while interviewing.

Analysis

The interviews were transcribed and analyzed in an iterative process called thematic analysis, as described by Braun and Clarke (2006). This process consists of 6 phases, in which the researcher goes back and forth between the raw data and the codes and themes. See table 2.

Table 2

Phases of Thematic Analysis

| Phase | Description of the process |
|--|--|
| 1. Familiarizing yourself with your data | Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas. |
| 2. Generating initial codes | Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code. |
| 3. Searching for themes | Collating codes into potential themes, gathering all data relevant to each potential theme. |
| 4. Reviewing themes | Checking if the themes work in relation to the coded extracts (level 1) and the entire data set (level 2), generating a thematic ‘map’ of the analysis. |
| 5. Defining and naming themes | Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme. |
| 6. Producing the report | The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis. |

Note. Source: Braun & Clarke (2006)

First, relevant parts of the interviews were transcribed, where participants talked about their experiences as an adult reentry student. According to Braun and Clarke (2006), when the data-analyst is the same person as the one that transcribes the interviews, as is the case in this research, transcription serves as a first step in familiarizing with the data.

In phase 2, these transcripts were read again, and emerging thoughts were written down separate of the transcripts. Then a second reading was done, and initial codes were assigned by hand in the margins. In this process, Braun and Clarke (2006) distinguish between an inductive, data-driven way of coding and a deductive, theory-driven way, depending on the goal of the research. In this case, an inductive, data-driven procedure was followed because of the exploratory goal of the research. This led to codes that were still very close to the raw data, and were very diverse.

In phase 3, the codes were analyzed and related codes placed into themes. These themes were tentatively labeled. It seemed that the themes covered several internal and external aspects of learning.

In this phase some codes were reconsidered or omitted and new codes were added. Several mindmaps were constructed with pen and paper, edited, put aside and reconstructed to aid in the thought process.

In phase 4, the themes were evaluated by checking whether the codes and the data they represented were logically put together, and the themes were really different from one another (level 1 review). In this process, some codes were shifted from one theme to another, and some themes were renamed. Then, a level 2 review was done to check whether the themes related logically to the entire data set (level 2). In order to do this, the transcriptions were reread. While doing this, the researcher checked for possibly missing or faulty codes and adjusted the codes and the overarching themes accordingly.

Phase 5 consisted of further refinement and final naming of the themes by looking at the overall picture again in relation to the themes. The final themes were: Subject matter, teachers, assessment procedures, classmates (external aspects of learning), and self-determination, learning style, and quality standard (internal aspects of learning).

In phase 6, quotes of participants illustrating the results in the report were selected, and the results section was written in several steps of writing and editing.

Finally, a member check (Creswell & Miller, 2000) was conducted. Each participant was sent the parts of the results section that applied to him or her. The participant was asked whether the account was accurate, and if he or she had any additional comments. All but four participants responded either to the first call or to the second, reminder, call. Based on their responses, some minor adjustments were made to the results section.

Results

The positive and negative experiences as reported by the participants covered four external aspects of learning: subject matter, teachers, assessment procedures, and classmates. These aspects lead to positive or negative experiences in interaction with three internal aspects of learning: learning style, self-determination, and internal quality standard. The positive and negative experiences on the four external aspects of learning will be explored in turn in relation to the internal aspect(s). In table 3, the four external and three internal aspects of learning are summed up.

Table 3

External and Internal Aspects of Learning Which, in Interaction With One Another, Lead to Positive and Negative Experiences, as Reported by Participants in the Study

External

Subject matter

Teachers

Assessment procedures

Classmates

Internal

Self-determination

Learning style

Quality standard

Subject matter

Nearly all participants stated they found the subject matter of their study interesting. About half of all participants reported they liked expanding their knowledge and/or being immersed into a conceptual framework entirely new to them. Almost half of the participants mentioned the applicability of the subject matter, either directly in daily practice or later in an apprenticeship, as being an important factor in their positive perception of their studies. There was no difference on this aspect between participants who studied at university level and those who studied at college level.

When writing papers, about half of participants reported a free choice of subject and/or possibilities to draw from their own work experiences in writing their paper. They stated this was highly motivating to them. They explained this by stating they valued self-determination to a high degree. However, other participants did not encounter the freedom to self-determine the subject or approach of a writing assignment and were consequently disappointed.

Approximately one third of participants stated they independently searched for more content than they had to, sometimes even despite already voluminous compulsory subject matter. Two of them even did a double degree, and one of them also took part in an honors program on top of that. Most of the participants who independently searched for more content than they had to explained this by a desire for more context than they were presented with in their basic textbooks or in classes. They wanted to develop a broader understanding of the subject matter, or they wanted to expand their

knowledgebase on other subjects too, and perceived it as a positive aspect of being a student. One woman studying to become an IT-specialist stated:

“I have to teach myself how to write software for my job, but not the software my studies provide. So I am learning this other programming language online now. It is not easy, I never wrote any software before, and it is in English, which I am not very good at, but it seemed fun.” (woman, 44)

About half of the participants experienced a mismatch to a certain degree between their preferred learning style and the way subject matter was presented to them. Most often, they stated they had trouble grasping the subject matter when the individual parts, like definitional terms, were presented first, and the whole, like a model or theory, did not become apparent until much later. For example:

“I really need to see the overall picture beforehand. Then I can zoom in, and I can, like, hang knowledge onto that. Now I know I have to scan the book first, on subtitles, and read the introduction very carefully, so I know what to expect.” (man, 35)

Other situations where a mismatch was experienced between learning style and the way subject matter was presented were too much unwanted repetition or explaining by the teacher during classes and too little ‘learning by doing’. Three participants reported dyslexia or other reading problems, making it difficult for them to learn from a book. Solutions to these problems mostly focused on making teachers, as well as students in an early stage of their studies, aware of different learning styles and learning disabilities and how to deal with them.

Teacher

Approximately one third of participants reported one or more positive experiences with teachers. They were appreciative of teachers who were passionate about their subject, who had an open mind for discussion and who were able to place the subject matter in a wider perspective. A personal approach was often valued by the participants. As these participants relate:

“Good teachers open up a world for you, they light a fire, they arouse an interest. And this teacher really does that.” (woman, 45)

“Over the course of years I discovered you can ask for a lot of freedom. It is not offered to you, but my teachers are very open to new ideas, and to students who want to take an unorthodox approach. They

teach their subject because they are interested, so they are willing to go the extra mile for a motivated student.” (woman, 33)

However, over half of the participants talked about teachers who did not seem to share their high quality standard in one way or another, leading to negative experiences. Frustration was reported in cases where teachers were reported to be narrow-minded, not being open to discussion with students, and only covering the book in class. As this woman relates:

“I get impatient in class sometimes, when the teacher only talks about what’s in the book. I still go because I’m afraid I’ll miss something important, but I’d rather have teachers talk about their own experience in relation to the content.”(woman, 32)

About one third of participants also reported disappointment with the quality of formative assessment provided by the teacher, generally in the context of writing papers, traineeships and practical exams. They mentioned inadequate feedback, and reported that their grades depended too much on subjective measures. Some participants received no feedback, or feedback that did not help them in their learning process:

“My first exam consisted of an essay and a regular test. I got a good grade on my regular test, but a bad grade on my essay. It was then that I discovered I was not very good at writing. So I asked for help. They basically told me, ‘It’s actually easy, first you write the beginning, then the middle and then the end.’ So that didn’t help much. It wasn’t until much later that I realized I approach a subject from so many different angles that it becomes very difficult to put that into a consistent article if you are not good at writing. Not even my supervisor was able to pinpoint that, however nice and supportive he was.” (woman, 40)

“We had to write an essay, and I thought I had handed in a pretty good piece. I received my essay back with the message that it was no good at all, except for one sideline it contained. My teacher told me I had to take this sideline and write my entire essay on that. I left the essay for a couple of weeks, thinking I had done something really stupid. Then I called my teacher and she told me my essay was not as bad as I thought. I then decided to hand it in again, but without this sideline. She told me it was perfect and did not give me any additional feedback. So I thought I would get an A. But then she gave me a C on my essay without telling me why!” (woman, 44)

Others gave examples of teacher subjectivity, like this participant, who had an unpleasant traineeship experience:

“My internship supervisor started bullying me, he even had a nickname for me. I think it’s wrong to make fun of people when you are already in a position where you have some kind of power over them. So I turned to my teacher to tell him what happened. But my teacher chose the side of my supervisor. They went to the same school together.” (man, 47)

These issues led to frustration in the participants. Although some participants reported efforts to explain to their teacher they had expected more of the feedback provided, or that they disagreed with the teacher’s viewpoint, most participants conformed. The reason they gave for this was their dependence on the teacher for their grades and their perception of little room for discussion.

Assessment procedures

Participants’ high quality standards and similar expectations of their studies also came forth when talking about assessment procedures. As mentioned earlier, about one third of participants mentioned the quality of formative testing as contributing to negative experiences. This concerned feedback of teachers and teacher subjectivity.

About half of the participants mentioned summative assessment when describing their positive or negative experiences. All of these participants valued and expected testing procedures which would test deep learning rather than the reproduction of mere facts. Five participants reported disappointment because some, or even all, courses were tested by means of multiple-choice exams, which generally failed to test a deep insight into the subject matter. Some perceived a uselessness of learning certain facts by heart:

“The COTAN is a committee that assesses psychological tests. Their reports are published so you can look up a test you want to use and see what the validity is, for example. The COTAN assesses these tests every couple of years, so you should always use their latest reports before administering a test. There was this one time we got a multiple-choice test and we were asked all kinds of details about specific psychological tests! It is so useless to learn these things by heart!” (woman, 44)

Some experienced cognitive dissonance when studying for an exam:

“I am very interested in things, but I also want to pass the exam. I don’t like the way I start learning so calculative when the exam comes into sight.” (woman, 38)

Four participants were explicitly positive on the subject of summative testing. They stated they were tested on a high level by means of writing assignments or multiple-choice exams that succeeded in testing more than fact retrieval.

Classmates

The subject of classmates came up in nearly every interview. About half of the participants mentioned one or more aspects of meeting with their classmates as contributing to a positive learning experience. A similarity in ability levels was often mentioned as a prerequisite. Sometimes an admittance test had ensured ability levels to be relatively similar.

As a first positive aspect, participants were appreciative of classmates who could contribute in class discussions and group-projects based on their work experience. These participants liked learning from their classmates how they solved problems and applied the theoretical content in their professional life. For example, one woman, studying to become a teacher, purposely sought out her classmates for collaborative projects who already had experience as a teacher because she wanted to expand on her didactic skills.

Second, participants liked meeting people who shared an interest in the subject, some feeling they had lacked that in daily life. A health care professional doing a degree on health care policy, reported:

“In my job I was usually one of the few people interested in the organizational side, and developing policy. Now I meet students and teachers who share this interest.” (woman, 32)

A third positive aspect of meeting with classmates mentioned by participants were the possibilities of complementing each other’s skills and an efficient division of work in cooperative learning. For example, one woman stated she had good English language proficiency but relatively poor writing skills. In group-projects, she and her classmates complemented each other on these aspects.

Other positive aspects mentioned by participants were social pressure aiding in getting things done, and the fact that many classmates were at the same life stage and thus able to understand their situation as an adult student with several other responsibilities like a job or a family.

However, slightly less than half of the participants reported negative experiences in interacting with their classmates. Negative experiences with classmates typically surfaced in cooperative learning arrangements. Many participants experienced a discrepancy between their own high quality standards and those of their classmates. In those cases, a lack of motivation was often considered more

problematic than a difference in cognitive ability. Some stated they would rather work alone if they had the opportunity.

The way participants dealt with the discrepancy in quality standards and motivation, and the results of their efforts, varied widely. One, albeit unsatisfying solution to this discrepancy mentioned by participants, was adjusting to the lower quality standards of others, leading to diminishing motivation. One participant who often had to work on small collaborative assignments during classes said he made up for his loss in learning gain by catching up on what he had missed, at home.

Another solution mentioned was looking for classmates who have the same motivation and quality standard. A free choice in partnering is, of course, a requirement in these cases. Many participants stated this was possible in their situation, at least in later stages of their studies. Based on earlier negative experiences with cooperative learning, one woman sent an email to her classmates stating she intended to work hard to obtain an outstanding result on her bachelor thesis, a collaborative project, and that she was looking for other students with the same attitude. The participant stated this led to the desired result, with the exception of one classmate, who, according to the participant, thought he would automatically obtain a good result by joining this highly motivated group.

A different solution mentioned was trying to motivate and convince group members to join in their train of thought. For example, one participant had had a negative experience in working with a classmate at the beginning of her studies, with whom she was grouped by the teacher:

“This was an exam you had to do in twos. I remember we lost a lot of time on one assignment, where I tried to explain to him why this was the correct answer and he just wouldn’t accept it. In the end, we really had to hurry to get the last assignments done.” (woman, 40)

But after the first courses where she obtained an outstanding result, she gained the trust and respect of her classmates:

“I have completed several exams now, and my classmates can see my results are at the top of the class. As a consequence, it is easier to persuade them when we don’t agree.”

This necessity of gaining the trust of classmates in an early stage to ease cooperative learning was brought up by several more participants.

Five participants never had any contact with classmates because they studied online without any classes in real life. Only one of them reported a sense of loneliness because of it. This feeling was enhanced by the fact that her colleagues at the factory where she worked did not understand her motives for studying, or why she was so passionate about it. As one of her male colleagues stated:

“It’s fine with me that you are studying, as long as you don’t bother me with it.” (woman, 44)

When she started her internship, she met other trainees and was finally able to connect with people who understood her passion and shared her interest.

Discussion

The main question of this research was: What positive and/or negative experiences with adult education do gifted adults report after reentering the educational system, how do they interpret these experiences, and what solutions do they propose for possible problems? The positive and negative experiences as reported by the participants covered four external aspects of learning: subject matter, teachers, assessment procedures, and classmates. According to the participants, these aspects lead to positive or negative experiences in interaction with three internal aspects of learning: learning style, self-determination, and internal quality standard.

The aspect of studying the participants were most positive about was gaining new knowledge and being immersed in conceptual frameworks entirely new to them. The adults in the present research had an inner drive to learn, and were curious and able to enter into a new frame of thinking, which points at their multipotentiality. This is consistent with studies on gifted children and adolescents (Emmett & Minor, 1993; Gardynik & McDonald, 2005; Sampson & Chason, 2008). Participants also mentioned the applicability of the subject matter, either directly in daily practice or later in an apprenticeship, as being an important factor in their positive perception of their studies. Negative experiences concerning subject matter were reported where it was not presented in a manner that matched the way participants perceived their natural way of learning. They voiced a strong preference for contextual content delivery, claiming a fundamental discrepancy between the way they learn and the way content is delivered to them. Based on the participants’ accounts in this research, many of them naturally apply a learning style that in Vermunt’s (1998) classification would be a combination of a meaning-directed and an application-directed learning style. Participants sometimes stated they felt obliged to use what Vermunt describes as a reproduction-directed learning style in order to pass an exam. Self-reported solutions to this mismatch between natural way of learning and the presentation of subject matter mostly focused on making teachers, as well as students in an early stage of their studies, aware of different learning styles, and how to deal with them.

Because of their high internal quality standard, the participants were very appreciative of teachers who were able and willing to place the subject matter in a wider perspective, who were passionate about their subject, and who had an open mind for discussion. A personal approach was often valued. Negative experiences with teachers were also reported. These focused mainly on teachers who did not

possess the aforementioned characteristics, and who provided feedback participants perceived as inadequate. This is consistent with previous research on successful teachers of gifted children and adolescents stating that teachers who are flexible and open, and have a passion for the subject matter are highly appreciated (Mills, 2003). When talking about solutions to negative experiences with teachers, participants mainly looked for solutions in their own behavior. They asked themselves: How can I succeed despite the issues I encounter? This was attributed to their dependence on the teacher for their grades. So most participants conformed, although some reported efforts to explain to their teacher they had expected more of the feedback provided, or that they disagreed with the teacher's viewpoint. They mostly believed problems with inadequate feedback and teacher subjectivity could not be solved. Student frustration with feedback, as well as teacher frustration with the use students make of their feedback, can be found in a number of research studies (cf. Higgins, Hartley, & Skelton, 2001). Although it is clear high quality feedback is essential in a student's learning process, the question as to what can be considered high quality feedback has been highly debated over the past decades (Evans, 2013). In recent years, increasing consensus has been achieved on this matter, and it has become clear that feedback processes can be optimized on different levels, including the teacher's and the student's. Based on her thematic analysis of research on feedback in higher education between 2000 and 2012, Evans (2013) provides twelve practical guidelines for higher education to optimize feedback processes, for example:

“Giving clear and focused feedback on how students can improve their work including signposting the most important areas to address; ensuring training opportunities for staff to enhance shared understanding of assessment requirements.” (Evans, 2013, p. 79)

Also due to their high quality standards, participants expected assessment procedures that test deep learning. Some reported positive experiences on this aspect. They encountered multiple-choice exams testing deep learning, exams with essay questions, and writing assignments. Self-determination played a role in the positive experiences of students who were faced with writing assignments where they were able to choose a subject. Negative experiences are mostly reported where assessment consisted of multiple-choice exams testing mere fact retrieval. But also writing assignments sometimes lead to frustration. The summative assessment as well as the formative assessment of writing assignments was perceived as highly subjective, being dependent on the person of the teacher. It seems that up until now, no research has been done on the attitude of gifted children and adolescents towards different forms of assessment. Solutions to these problems proposed by the participants lie in raising quality standards in the educational system. They suggest that multiple-choice exams should not be the standard and that objectifying of deep-learning assessment procedures is desirable.

Although (appropriate assessment of) deep learning is very important in higher education, fact retrieval may in some cases be inevitable. Domain knowledge is in many fields essential (Van Merriënboer & Kirschner, 2007). In such cases, explaining why fact retrieval is necessary and advising on certain learning strategies may aid in learning.

Participants reported positive experiences with classmates who possessed relevant work experience that they could learn of. They appreciated meeting other students with a shared interest. They were also positive about classmates who are motivated and who employ a similar quality standard as themselves. The possibilities of complementing each other's skills and an efficient division of work in cooperative learning were also valued, as well as social pressure aiding in getting things done. A similarity in ability levels was often mentioned as a prerequisite. They mainly reported negative experiences where classmates were not as motivated as them to obtain a good result in cooperative learning. This can also be found in the literature on gifted children and adolescents (Huss, 2006; Matthews, 1992; Preckel et al., 2010). Solutions to problems with classmates, reported by the participants included: conforming to the standards of classmates, trying to convince classmates to join in their train of thought, and purposely selecting group members to work with on projects. Although the debate over same-ability grouping has been going on for several decades, acceptance of the idea of same-ability grouping is growing as an emerging body of research shows that gifted students profit in several ways from learning in same-ability groups. Not only is it beneficial to their academic achievement (Hoogeveen et al., 2004; Mooij, 2010; Rogers, 1993), positive socioaffective effects have also been reported (Hoogeveen et al., 2004; Neihart, 2007; Preckel, Götz, & Frenzel, 2010; Rogers, 1993).

Recommendations

Based on the results of this study, a few recommendations can be made. First, educational institutions serving adult students should utilize the (work) experience of their students for the better of the whole group. Facilitating formal or informal discussion between students, either in class or online can add to a positive learning experience. Second, taking into account differences between learners when designing instruction may help all students to reach their potential. Instructing students about different learning strategies and when to use them may also aid the learning process. Third, flexibility is also recommended when cooperative learning is concerned. Enabling students to freely choose group members to work with, can be helpful in preventing problems due to interpersonal differences in quality standards. When the aim of the cooperative learning arrangement is not to simulate authentic (job-related) circumstances and learning how to work together productively is not an objective, it may be useful to enable gifted students to work alone if desired. Finally, summative assessment should focus on deep learning, whenever possible. Where fact retrieval is necessary, it may be helpful to

some learners to explain why it is needed, and which learning strategies could be used. A middle ground should be sought between fast and easy ways of testing and thorough testing of deep learning gains. This may raise the quality of education for all students.

Limitations of the study

The results of this study must be interpreted with the following limitations in mind. Although an open qualitative approach as applied here is useful where the existent knowledge base is poor and the aim is exploration, it bears the risk of subjectivity at several stages in the process. First, the decision to use a topic list instead of a static list of predetermined questions was deliberately made to make sure participants felt the freedom to bring to bear the experiences that were important to them. However, this poses a risk to reliability because the way the interview is conducted is highly dependent on the performance of the interviewer, and completeness of the information cannot be guaranteed. Next, although the member check that was done reduces the risk of subjectivity, the analysis of the interviews is still prone to subjectivity. This risk was further increased by the fact that only one researcher was involved in the process. Furthermore, a systematic analysis of the functioning of education has not been done, which is necessary to both validate the present research results and base improvements for gifted students.

A second limitation is the sampling procedure. By drawing a sample from the Mensa society, only participants were selected that were defined as gifted in terms of intelligence as measured by an IQ test. This is a very restrictive definition, considering the multidimensional nature of giftedness (Dai et al., 2011; Hoogeveen et al., 2004; Mönks, 1992; Reis & Renzulli, 2010). Sampling from the Mensa society also, by definition, excludes all gifted adults who are unaware of their giftedness, and all gifted adults who are not a member of Mensa. Also, the first 22 participants who met the criteria were included in the sample. This procedure is called convenience sampling. The individuals who responded to the call in an early stage of the research may differ from individuals who responded later or not at all. Because of these different issues, the sample cannot be regarded as representative of the population and the results should be interpreted correspondingly.

Fourth, the participants' experiences were not compared to the experiences of non-gifted adult learners. This was not the goal of the study, but is necessary to answer the question as to what extent the reported experiences are specific to gifted learners.

Future research

This study is only the first step towards a deep knowledge of gifted learning in adulthood and, in a broader sense, talent development over the lifespan. In the context of lifelong learning and talent

development, it is an important field of research. Future quantitative research needs to be done on larger groups of gifted adults, sampled from more sources than the Mensa society alone. Moreover, to obtain a clear image of the learning characteristics distinctly related to giftedness in adulthood, gifted participants should be compared to non-gifted participants. In addition to research in the affective domain, it could focus on factors positively and negatively affecting educational outcomes. For example, in what way can individual differences be taken into account and what are the effects on learning outcomes? The overall question of future research should be: How can gifted adults be facilitated to reach their full potential?

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Appendix 1: Topic list

Introduction by interviewer:

- goal of research
- ask permission for recording the interview
- explain why I take notes
- ask if participant has any questions

Topic list

- Personalia:
 - Name and corresponding number
 - Gender
 - Age
 - Current (or last) education
 - Level current education
 - Time period without studying until current education
 - In short: prior history of education/work experience
- Current experiences:
 - Experience in general (How do you experience your studies?)
 - Positive learning experiences (What aspects about your current studies do you perceive as positive?)
 - Interpretation/explanation (Why does that work for you? What does this tell about you? Where does this come from? [dependent on choice of words of participant])

[parafrese]

- Negative learning experiences (What aspects about your current studies do you perceive as negative?)
- Interpretation/explanation (Why does that not work for you? What does this tell about you? Where does this come from? [dependent on choice of words of participant])

[parafrese]

- Solutions (How could this problem be solved?)
- How could this problem be prevented in the future?

[paraphrase participant's story]

Did we forget to discuss things that are important to you in this context? Did I miss anything important?

Questions and techniques to stimulate participants to elaborate on each topic:

- *Could you tell me more about that?*
- *How does that work?*
- *Earlier, you told me,is that connected to what you tell me now?*

- Paraphrasing and checking with participants
- Non-verbal: nodding, eye contact
- Silence tolerance