Gelijkheid troef in het Nederlandse basisonderwijs: onderzoek naar het onderwijs voor zeer makkelijk lerenden

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17 Summary

The paradigm of equality in Dutch primary education.

Research into education for double-quick learning children.

In society, politics and education in the Netherlands, there has been an on going debate on the possible adjustment of education of highly gifted pupils. Since the debate continues, the question of my research is as follows:

"What factors determine the extent to which scientific knowledge of education of double-quick learning children in Dutch primary education is applied?"

To answer this question, the key concepts have been defined in § I. In § II the research design is described. The research question is answered in § III. Recommendations are included in § IV.

I Key concepts

For defining the key concepts of this thesis, a literature research is conducted. As will be explained in this pharagraph the key concept double-quick learning children is interchangeable with the concept of highly gifted children. To define this concept and the key concept scientific knowledge on education of double-quick learning children, scientific literature in the fields of psychology, pedagogy and giftedness has been analysed.

Double-quick learning children
In this research, highly gifted pupils are called *double-quick learners* or *double-quick learning children* (in Dutch: zeer makkelijk lerende or zmal-kinderen), rather than highly gifted of highly talented children. This is consistent with the classification that is used in the Dutch school environment in case IQ scores are lower than 90. In an education environment, an IQ score from 50 to 69 usually is referred to as *double-slow learning children* (zeer moeilijk lerende or zml-kinderen) rather than intellectually disabled children. The classification double-slow learning children indicates that there is a cognitive deficit. For those students, parents and school actors concerned it appears to have added value if the classification is adjusted to the environment. This clarifies the situation of the child without a certain connotation. Since the present investigation involves primary education, the rating at IQ scores of 90 or higher is also adjusted to the use of this score in the school environment.

Since the beginning of the 21st century, there has been unanimous agreement in scientific literature on the definition and structure of intelligence. Furthermore since 1959 there has been agreement on the definition of intellectual disability. Remarkably, there is still no agreement on the definition of highly gifted pupils, or as we called them, double-quick learning children.

The classification highly gifted is a psychological classification awarded to an IQ score of 130 or higher. Therefore in this study, this classification is derived from psychological literature on intelligence. By comparing the psychological definition of highly gifted children with commonly used definitions of these children, it can be concluded that the definitions to a large extent match. The following definition remains.

> An individual is a double-quick learner if he has a very high general intelligence that can be expressed in an IQ score exceeding 130.
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> The intelligence test that is used for this purpose should be based on the Cattell-Horn-Carroll- or CHC model.

The IQ score based on the CHC model to a certain extent includes the influence of the environment and of the personality of the individual.

In the daily practice of Dutch education, a completely different definition of intelligence is popular, namely the theory of multiple intelligences of Gardner. From Gardner's perspective there is no general intelligence or *g*. He argues that various different and independent intelligences can be distinguished that are associated with different brain functions. At first he differentiates eight types of intelligence and extends this later on to ten[1]. According to Gardner, each individual possesses all of these intelligences, albeit in varying degrees. In this way he explains differences in performance.

However, many scientists fundamentally criticize this multiple intelligence theory. One of the most essential arguments is that different human skills are called intelligences. As an example communication skills are considered as a kind of interpersonal intelligence. Scientists argue that giving the concept of intelligence such a wide interpretation, creates confusion. After all, there is a difference between intelligence in its cognitive meaning and intelligence understood as having talents and skills. According to Mackintosh, Gardner does not care whether we call his intelligences skills, competences, talents, or abilities, provided that we use the same term for all of them, "Otherwise, he argues, those called 'intelligences' will be perceived as

1 That is to say: (1) verbal-linguistic intelligence, (2) logical-mathematical intelligence, (3) visual-spatial intelligence, (4) bodily-kinesthetic intelligence, (5) musical-rhythmic intelligence, (6) intrapersonal intelligence, (7) interpersonal intelligence, (8) nature-oriented intelligence, (9) spiritual intelligence and (10) existential intelligence.

more important or valuable than those called mere talents or skills."[2] For the definition of double-quick learners the multiple intelligence theory will be ignored, because of the above-mentioned fundamental criticism of scientists.

Scientific knowledge on education of double-quick learning children
Already in 1900, at the introduction of compulsory education in the Netherlands, the question whether the education of double-slow learning children needs to be adjusted has been answered affirmative. However, adjustment of education of double-quick learning children is still topic of debate today.

This study addresses the question why adjustment of the education of double-quick learning children is needed. This is investigated by analysing the nature-nurture debate, by considering the learning process of pupils with atypical intelligences and by mapping the impact of atypical learning processes. Subsequently, it examines the areas on which double-quick learners need adjusted education and existing international experiences with such arrangements.

The key concept scientific knowledge on the education of double-quick learning children is defined in the following 8 points:

1 It is essential to adjust education to the cognitive level of double-quick learners. This statement is based on the following research results.

Many scientific investigations and reports conclude that human intelligence is the result of both nature and nurture. Although intelligence is innate (nature), parenting and education (nurture) are important for its development. Mackintosh states, that the effect of the environment or nurture on children's test scores declines as the children grow older. However, genetic effects on IQ increase as children grow older.[3] "By the age of 8 or so, indeed, childhood IQ predicts adult IQ surprisingly well, and your IQ score remains reasonably stable throughout your adult life."[4] For education, this means that the curriculum must be related to the cognitive level of the individual pupil and that the pupil has to practice his skills on his own level.

Psychodiagnostic literature on the learning process of pupils with deviating intelligences has shown, that learning processes are to a large extent dependent on the intelligence level of the pupil. Regular education turns out not to be sufficiently adjusted to the learning process of children with an IQ under 85 and above 130. Double-slow and double-quick learning children need adapted education, because of their different learning processes.

2 Mackintosh 2011, p. 237.
3 Mackintosh 2011, p. 287.
4 Mackintosh 2011, p. 187 en 188.

2 Primary school actors can identify a double-quick learning child by conducting (individual) screenings research.

Retardation or advantages in learning processes are to be quantified by primary school teachers. They should verify whether the learning results of children match with the expected learning results.

3 Pupils may show learning and behavioural problems, if the educational environment insufficiently connects to their required learning processes. Problems and experiences which children encounter in their school and in their learning process, may have important negative consequences for them. Their self-image and feeling of competence are significantly determined by these problems and experiences. Therefore these do not only affect their functioning at elementary school, but also their functioning in higher education, or even their access to society.

4 The learning and behavioural problems of double-quick learning children may be or may become very severe. The problems may be reflected in underachievement, obstructions in the development of the child, loss of motivation, boredom, depressive disorders, social and emotional problems and mental health problems. When pupils are not adequately supervised, they may even quit education.

5 The learning and behavioural problems of double-quick learners are almost exclusively caused by matching problems. These matching problems can be one-sided or two-sided. When environmental actors underestimate the cognitive, social and emotional capabilities of the quick-witted learner for an extended period of time, the matching problems are one-sided. In this study, we call this *underdemanding*. When also the environmental actors do not or insufficiently meet the cognitive, social and emotional expectations or requirements of the double-quick learners, the matching problems are two-sided. We call this in this study *incongruity*.

6 Education adjustments should focus on the following three areas to prevent cognitive, social, emotional and psychological problems of double-quick learning children:
   a) provide cognitive challenges, with important tools as acceleration and qualitative enrichment;
   b) create a positive and understanding environment in which social contacts are encouraged and
   c) provide personal support and guidance.

7 Efforts to offer double-quick learners a stimulating environment turn out to be effective. Many (inter-) national studies have found that accelerated double-quick learners function cognitively better and social-emotionally similar or better than their 1-year-older classmates. These learners show little to no adjustment problems.

II Research design

In this paragraph the conceptual model is explained. Also the sub-questions of this research and the research methods are described.

Conceptual model
For this research, the extent to which education and policy actors effectively apply scientific knowledge regarding the education of double-quick learners and factors that affect the application process have been analysed. As conceptual model for this analysis the Reasoned Action Approach (RA-approach) of Fishbein and Ajzen has been used. With this approach the behaviour of a person, group of persons, an organization or society as a whole can be studied.

In the RA approach behaviour is considered as a target-oriented action and an observable event that takes place at a particular time and in a particular context. Behaviour therefore shows four elements: (1) the action performed; (2) the target at which the action is directed; (3) the context in which the action is performed and (4) the time at which the action takes place. These four elements can be defined at different levels of abstraction, from general to very specific.

Fishbein and Ajzen assume that the behaviour of an actor is based on his beliefs (Figure 1 in paragraph 1.2.2). These beliefs serve to guide in a logical, coherent and often automatic way the intention or the plan of an actor to perform or not perform planned or spontaneous behaviour. This behaviour does not need to be rational, as the beliefs of the actor may be inaccurate, biased or irrational.

The intention is the best single predictor of behaviour, provided that the actor is actually capable and in the position to implement his intention. Two factors are essential for resulting into actual the behaviour: (1) the actor needs to have the necessary skills and abilities to implement the behaviour and (2) the environmental factors need to facilitate the implementation of the intention, or at least not to prevent the actor from carrying out his intentions. Examples of such environmental factors are colleagues, management, social environment and government policy (Figure 2 in section 1.2.2).

The beliefs of an actor represent his substantive reasons to show certain behaviour. These beliefs form a deeper level of analysis than the intention. The beliefs of the actor explain the way in which he looks at the behaviour. In the RA-approach three beliefs are distinguished: behavioural, normative and control beliefs. People show their behavioural beliefs when they express the positive or negative consequences they might experience if they perform the behaviour. People demonstrate their normative beliefs when they act in accordance with the beliefs of important individuals or groups who approve

or disapprove of specific behaviour. And people finally exhibit their control beliefs if they show their beliefs on personal and environmental factors that can help or impede their attempts to perform their behaviour. These beliefs cause the ultimate attitude of the actor, the experienced social pressure and the assessment of its own effectiveness (Figure 3 in § 1.2.2).

The beliefs of an actor are influenced by background factors. In the conceptual model personal, socio-cultural and information-background factors are identified (Figure 4 in § 1.2.2). Background factors of the actor might explain the origin of his beliefs and the reason why the actor cherishes certain beliefs.

Sub-questions
For a thorough investigation of the behaviour of primary school actors it is necessary that also the behaviour of the pedagogical academies (pabo's) and the dominant beliefs in Dutch society are examined.

Pabo's, the institutions for schoolteacher-education in the Netherlands, are the main suppliers of knowledge for primary school actors. They therefore form the common information-background factor of these actors in terms of the conceptual model. In this way, pabo's influence the behaviour of the primary school actors.

The dominant beliefs in Dutch society affect both the behaviour of education and policy actors by influencing their beliefs and the national education policy by influencing politics. The beliefs of the actors and the national education policy may either facilitate or hinder the application in practice of scientific knowledge on double-quick learners. Therefore the dominant beliefs in society form the most important common socio-cultural background factor of education and policy actors and the most important environmental factor of primary school actors in terms of the conceptual model.

In this thesis the following questions are examined.

1 Which factors are decisive for the extent to which scientific knowledge regarding education of double-quick learning children is being applied in primary school?
2 Which factors determine the extent to which transfer of scientific knowledge regarding the education of double-quick learning children is included in the programming of pabo's?
3 Which dominant beliefs in Dutch society ultimately form the basis of the education of double-quick learning children?

Research methods
For each sub-question a separate research has been carried out. That is, a literature study for primary school level, a case study for pabo level and a genealogical analysis for society level.

For the literature study scientific studies, publications and (policy) documents regarding the educational situation of double-quick learners in Dutch primary schools have been analysed.

A case study with 3 embedded units of analysis has been carried out to analyse the behaviour of the pabo's. These cases have been selected from the group of 25 institutions of higher education in the Netherlands that provide a pabo-education. These institutions are active at 46 different locations. The behaviour of three of them has been studied more extensively. As embedded units those pabo-locations have been selected that are expected to provide most information, as well as most varying information. The first pabo is the only one in the Netherlands that offers a minor regarding the education of double-quick learners. The second pabo is the only one in the Netherlands that has a lectureship on *fitting education* [so-called *passend onderwijs*] for double-quick learners among other pupils. The third pabo is selected because this pabo is one of the two pabo's which have not included any indication in their published curricula of the academic year 2014-2015 regarding transfer of knowledge on double-slow and double-quick learning children, fitting education and dealing with differences between pupils.

The third study relates to the dominant beliefs in Dutch society, and is based on a genealogical analysis. Genealogy concerns research into the origins, the *wirkliche Historie* according to Nietzsche. In this genealogical analysis the underlying dominant beliefs regarding education of double-quick learning children in Western society in general and in the Netherlands in particular have been described. Hereto the dominant beliefs on atypical children, and in particular on children with an abnormal intelligence, have been analysed concerning the period 1813 to 2015. The genealogical analysis is carried out from a political, legal, economic, pedagogical, psychological and sociological perspective.

III Conclusion

Based on the results of the literature study, the case study and the genealogical analysis, the research question is answered.

The scientific knowledge regarding double-quick learners and the education of double-quick learning children is hardly applied in primary education, because

1 dominant beliefs in Dutch society hinder the application of scientific knowledge;
2 education and policy actors in society, pabo's and primary schools have insufficient knowledge of this scientific knowledge.

The dominant beliefs in Dutch society regarding double-quick learning children and special education for this group are mostly negative or rejective. There is a negative attitude and negative social pressure.

Traditionally, there is a negative attitude in Dutch society regarding double-quick learning children and education adjusted to them. This attitude is based on three dominant beliefs.

The first is the relationship that is established between precocity and insanity. The rhyme of Dutch poet Jacob Cats is often cited: *early ripe, early rot, early wise, early mad*.

The second conviction concerns the emotional resistance against adjusted education for an *intellectual elite*.

By adapted education double-quick learning children would be given preferential treatment while they already are in a favourable situation, as perceived by many actors. The emotional resistance is inspired by the eugenic ideology. In eugenics, intelligence symbolizes the superior and stupidity the less-worthy or inferior. After the degeneration of the eugenic ideology during the Second World War this emotional resistance seems to have gotten a permanent character.

The third dominant belief in Dutch society is the opinion that specific attention towards double-quick learning children is not necessary and comes at the expense of attention to others.

The prevailing negative social pressure is based on the dominant political egalitarian norm and negative public opinion. Attention to double-quick learning children is considered to be in contradiction to egalitarianism. Therefore, providing special education for these children is rejected. Instead, the double-slow learning and weak students should be helped. Equity and excellence are considered as antagonists.

The negative public opinion is also reflected in the media and establishes a threshold for the adjustment of education.

The genealogical research into Dutch society shows that the attention to double-quick learners is cyclical. Often in times of political or economic crises, the negative attitude and the negative social pressure are temporarily suppressed, to flare up later on.

> The dominant beliefs in society result in a predomination of the paradigm of equality in Dutch primary education, a political-egalitarian motto.

Besides the mostly negative or rejective dominant beliefs in society, there is also a general lack of scientific knowledge regarding double-quick learners and appropriate education of these children.

The education and policy actors are not aware of the severe consequences, as mentioned earlier, of underdemanding and incongruity in regular education for double-quick learning children.

The lack of scientific knowledge among education and policy actors in society, pabo and primary school is succinctly expressed in the remarkable fact that Gardner's multiple intelligences theory is popular among these actors. Gardner's theory is consistent with the dominant politico-egalitarian norm in society. The fundamental criticisms on this theory by many scientists since its publication in 1983, appear not to be heard.

The negative dominant beliefs and the lack of scientific knowledge in society, finally result in the situation that it is nearly impossible for primary school actors to apply the scientific knowledge that is available in educational practice.

IV Recommendations

The findings of this study lead to the following recommendations.

1 Double-quick and (double-)slow learning children should both be considered as pupils whose education should be adapted to their different learning processes.
2 The classification for children with IQ scores of 90 and higher should be adapted for use in the school environment
3 At primary school, pabo and society level, knowledge should be spread regarding double-quick learners and the necessary changes in their education.
4 The knowledge and skills to adjust the education to double-quick learning children should become one of the professional requirements for teachers. As a result, education actors could also be capable of adjusting the education to quick-learners and above-average learners.
5 The scientific knowledge concerning double-quick learning children should actively be shared with doctors, clinical staff, social workers, educators, psychologists, psychiatrists and others who are faced with requests for help from double-quick learners. It should be shared with school boards, politicians, policy makers and policy advisors of the Ministry of Education as well.
6 Theories like the multiple intelligence theory and models like the Munich model should no longer be applied in education and in education policy. These theories and models are only applicable in the field of talents and skills, not in the field of intelligence.
7 Myths on double-quick learners should be unmasked and contested. These myths can be invalidated through study and information material, textbooks, education and training of students, teachers and actors as mentioned under point 5.

8 Study material of teacher training programs (pabo's) should include scientific knowledge concerning the education of double-quick learning children and the need to adjust the education of these children. This knowledge should not only be available to the students in textbooks, but also actively be communicated by the pabo teacher.
9 At primary school, pabo and in society measures should be taken to facilitate that double-quick learning children receive sufficient educational care that is adjusted to their learning processes.
10 The scientific knowledge concerning the education to double-quick learners should be transferred to students in the main phase of the schoolteacher (pabo-) programming with a minimum workload of 5 ECTS.
11 The data from the student tracking system should be used to identify children that are developing quicker than average. The data should also be used to adjust the education to their learning process.
12 The curriculum offered in education should not only be in line with the cognitive level of the individual pupil, but also offer the child the opportunity to practice his skills at his own level.
13 The scientific knowledge regarding double-quick and double-slow learning children should be combined into a multidisciplinary research centre at the university.

    Members of this knowledge centre should provide for study material, after – and refresher courses and training to education and policy actors at primary school and college (pabo's). They should also share their knowledge with at least the actors mentioned before, initiate a public debate about education concerning double-quick and double-slow learning children and create support for continuous adjustments of the education for these children.

If these recommendations are followed, this should lead to egalitarian education, which does not mean "everyone is entitled to the same education" but "everyone is entitled to the same educational challenge".[5]

5 Van Harten - De Heer 2016, p. 235.