

Provocative Pedagogy; Or Youngsters Need the Brain to Challenge Worldview Formation

Dr. K.H. (Ina) ter Avest, dr. G.D. (Gerdien) Bertram-Troost, prof. dr. S. (Siebren) Miedema
VU University Amsterdam, Faculty of Psychology and Education, Amsterdam, The Netherlands.

Abstract. *Neuro-linguistic programming (NLP) enhances teaching skills in the field of religious education by enabling us to better communicate with our students. It provides a way of recognizing if students are visual, auditory or kinesthetic and therefore adapt and facilitate our teaching according to how the brain learns.*

Introduction

Today gender is a hot item in the Netherlands, not only in popular media (like monthly magazines for parents), but also in respected news papers and academic journals. In a recent volume of *Pedagogiek* ('Pedagogy'), a Dutch academic journal for education and edification, an overview is presented of theories on gender differences, in which approaches from a 'nature' (brains) as well as from a 'nurture' (socialization) point of view are represented (Driessen & Van Langen 2011, 155-171). It is on these recent developments in brain research ('nature') in its relation to pedagogical strategies of Religious Education (RE) that we focus in our presentation.

In the first section we describe some recent developments in brain research, in particular concerning the development of (so-called female and male) brains of students in their puberty and early adolescence. In the second section, we focus on the influence of culture on the difference between girls and boys, in particular the possible influence of the feminine character of education. In the third section we describe Marcia's approach to identity development in puberty and early adolescence. We point to the relation between biological/neurological theories and the practice of identity development. The fourth section bring these findings from the different areas of research together and is dedicated to the issue we coin as 'provocative pedagogy'. A pedagogical strategy is postulated in this fourth section, combining recent findings of brain research with Marcia's model of psychological development. This all in relation to RE in an educational context characterized by femininity and ethnic and religious diversity. We conclude in the fifth section with recommendations for further research to improve provocative pedagogical strategies in present and future day teaching for religiosity

1. Brain research and gender differences

In general the development of youngsters in secondary education can be described as a change in their commitment to their lifeworld in relation to the growth of their body and their brain. Of course this is not a characteristic of puberty and early adolescence; change is part of life span development. From early childhood to old age on change within a person is an inherent part of development, and by consequence the situatedness of a person within his context is subject to change – imagine a baby who's physical growth enables him first to go

on hands and knees, then stand on his feet and then walks all by himself. In a similar way the youngster's commitment to his context changes due to the growth of his brains. The Dutch researcher Eveline Crone in her recent publication on 'the pubering brain' shows that the growth, or the lack of growth, in certain parts of the brain is related to the way the youngsters feel committed with people in their environment (Crone 2008, 86 ff; see also Schwaab 2011, 216 ff). Crone in particular points to relation of the growth of certain parts of the brains in its relation to the adolescent's abnormality of the ordinary rhythm of sleeping and waking and his readiness for risky behavior. Crone's research shows that the urge for exploration, the sudden change in options (today a 'punk', tomorrow a 'snob') as well as the change in moods are related to the growth and development of those parts of the brain that are related to the assessment of long term consequences of behavior, and the competency to correctly judge the emotions of others involved in the situation (Crone 2008, 92 ff). Not only the physical growth of the brain is of importance for youngsters' feelings of empathy and moral development, also the increase and further differentiation of short term and long term memory allows for more complex and articulated networks of knowledge about and experiences within a context; a context that as such changes the youngsters situated knowledge of the environment he lives in.

The developments of new techniques in brain research show new insights in the increase and growth of specific parts of the brain, like the prefrontal cortex and the amygdale. These insights throw another light on possible relations with the development of social and anti-social behavior of youngsters. New techniques in brain research in combination with new knowledge on the effect of the hormonal level have resulted in more articulated knowledge about the relation of 'nature' and cognitive functioning (see Driessen & Van Langen 2011, 158) and 'nature' and behavioral attitudes (Pinker, 2008, 193 ff). An important finding is that the growth of the brain continues for a far longer period than was assumed; knowledge which should be included in educational policies (see Schwaab 2011, 121). Should we thus change our present day thinking of RE and make it more challenging, or more provocative in a caring way to accommodate better to the growth of the adolescent brain?

Some of the authors involved in brain research point to the fact that no difference is found in the development of the brains of girls and boys, although there might be a difference in the pace of development. Others, however, articulate the difference between girls and boys; these researchers talk about a differentiated male and female brain, noticeable in the difference in growth and function of different parts of the brains like the amygdale, the basal ganglia, the frontal lobe, the right hemisphere and its relation with the hormonal level of testosterone (see Driessen & Van Langen 2011, 158-159; Schwaab 2011, 82 ff.).

Interesting is the shift in focus: whereas in earlier days the growth or lack of growth of the brain was used to explain the lag in success in education of girls, nowadays the development of brain is used for the interpretation of the lag of success of boys' educational career. For this shift in the interpretation of research findings the Dutch feminist philosopher Rosi Braidotti coins the concept of 'nomadic' meaning (Braidotti 2004, 83). What does this shift in focus mean for a gendered approach in RE? Will there be a nomadic drift to a provocative and more caring approach?

2. Gender differences and culture

Simone de Beauvoir was the first author who pointed to the relationship of culture and gender identity. In her opus magnum *Le Deuxieme Sexe* (1949) De Beauvoir wrote that a child is not

born as a woman, but made a woman by socialization and enculturation. Following this line of thought Rosi Braidotti states that a person is made a man or a woman by a chain of social dependencies as well as a web of social, legal, medical and other discourses together constructing the 'normal' woman and man (Braidotti 2004, 89-90). Gender identity is multivoiced and relational, since it is constructed in dialogue with others – others who in their own way interpret and live out as an 'example of good practice' womenliness and manliness (Pinker 2008, 117-119). The ideal woman is studious, conformative, obedient; the ideal man is a he-man, aggressive and rebellious. Boys who show aggressive behavior, with a possibility at the end of the day to result in radicalization (Pels & De Ruyter 2011), respond to social expectations ('laddish behavior'; 'too cool for school'). However - possibly due to processes of emancipation - as Jackson has pointed out this kind of behavior also is noticed amongst girls ('laddettes') (see Driessen & Van Langen 2011, 163).

Findings of brain research demonstrating the non-existence of a so-called male or female brain force us to deconstruct and reconstruct the cultural and stereotypical gender related expectations of behavior in puberty and early adolescence, like aggressive and risky behavior for boys and obedient and confirmative behavior for girls. Femininity and masculinity are not isolated 'voices' in the multivoiced self; gender is interrelated with other distinctions, like characteristic aspects with regard to 'colour', ethnicity, social class and upbringing (Braidotti 2004, 97). So the lads and laddettes in our classrooms today will need different and more articulated pedagogical strategies to stimulate their brains towards religious identity development. Is the culture in our Dutch and Western secularized, individualized, multicultural and multireligious classroom ready for that challenge?

Gender and the culture of the Dutch educational system

The Dutch educational system is characterized by a white middle class culture, embodied for the greater part by female teachers. This is for the case in primary education (where most of the teams of teachers are women except for the principal and the doorkeeper who is thus most often also a man) and to a lesser extent for secondary education. Are the female teachers prepared for a brain- and gender-differentiated approach in RE? In an overview of recent changes in pedagogical strategies in teaching language skills (a change from competence to performance), the Dutch educationalist Greetje Timmerman points to the fact that these changes in strategies were initiated in a period that men dominated the pedagogical scene (Timmerman 2007, 179 ff). The Committee of Language Teachers was dominated by men, as were the contributions in Dutch professional and academic journals on teaching language skills. The development of 'communicative competence' as a new pedagogical strategy of language teachers also was dominated by men's deliberations. The new interpretation of the role of the teacher Timmerman is pointing to for language teachers, is illustrative for the change of the Dutch educational scene. The teacher no longer is the student's master, the director of the learning process, no longer the one who introduces the student into a culture of knowledge. The teacher has turned into the student's equal in a communicative process; student and teacher are partners in dialogue. The focus on 'being the student's equal' instead of being an authority in the culture of knowledge is seen as a change from a masculine educational climate into a feminine educational culture. Students, girls and boys, these days are confronted with a feminine educational culture embodied for the greater part by women. How does this feminine culture relate to findings of recent brain research and current models of identity development?

3. Identity development, according to Marcia

Above we have shown that the (under)development of parts of the brains is related to explorative and risky behavior. Exploration is, next to commitment, a key concept in the theory of identity development of the psychologist James Marcia (Marcia 1980; see also Bakker&Ter Avest 2001; 2008; see *in extenso* also Bertram-Troost, De Roos & Miedema, 2006; 2007). Central in Marcia's theory on identity development are the inter-individual differences with regard to affective commitment to the family in which the young adolescent was socialized on the one hand, and a natural tendency to explore other and alternative points of view and ways of life, ending up in an own authentic (religious) identity. Marcia speaks of a change in the (positive or negative) *commitment* between the individual and his environment. Marcia's focus is on the youngster leaving 'home' and exploring 'the world'. An *explorative* attitude is preconditional for such a journey. Identity, according to Marcia, is the process or the tension between commitment and exploration. Commitment in Marcia's view is constituted of an affective relation of a person with an other person or a theme, a feeling of solidarity, and the readiness to put considerable effort for the sake of this person or theme. Commitment means that a person sticks to his principled position and is ready to go for it. With the concept of exploration Marcia points to a challenging curiosity, the will to give alternative ways of thinking and living a try. Based on his earlier research relevant themes for youngsters seemed to be, according to Marcia, the professional world, and political and religious worldviews. Later, due to intense discussions with female critics and extended research he added to these fields of commitment the theme of friendship and intimate relationship of partners for life. These themes appear to be constitutive for a person's identity development. In the process of identity development Marcia distinguishes four stages. The first distinctive stage is called 'diffusion', pointing to the fact that nor exploration nor making a choice is at stake. The youngster is not yet ready to focus on one theme, nor is in need of a focus in his life. Not challenged by whatsoever, everything is in a similar way (un)important and (un)interesting. The second stage is called 'moratorium', a kind of 'pause' period. The youngster likes to explore alternatives, but is not yet ready to make a choice. 'Pause' in Marcia's interpretation does not mean 'rest'; the youngster is busy, curiosity leads him from one theme to another, 'today a punk, tomorrow a snob'. 'Foreclosure' is the concept Marcia uses for the youngster who does feel committed to a theme – for example his parents' worldview - however without exploring alternative beliefsystems. A 'foreclosure'-youngster is very committed, but has not explicitly made a choice for a particular theme of commitment. 'Foreclosure' in Marcia's view, is the opposite of 'moratorium'. For the youngster who has been exploring alternatives, who has shown the competence to focus on a theme, and to develop a sense of commitment to that theme, is referred to with the concept of 'identity achievement'. Although to start with Marcia saw these concepts as part of a linear developmental process, ending in adulthood, nowadays we see these concepts as part of a cyclic spiral movement of life span development (Stephen, Fraser and Marcia 1992); a process for which Braidotti uses the metaphor of 'a nomadic process', since nomads always do return to the places they touch at during their drift from one fertile place to the next (Braidotti 2004, ...). For example, a person can show the characteristics of 'foreclosure' with regard to gender identity, and 'identity achievement' in his professional role, and returning to the theme at a later moment in his development and living in a different context, change to 'moratorium' in gender identity development and 'diffusion' in the professional role.

Interrelatedness of theory and practice

The findings of the research of Crone (2008) and Schwaab (2011) show that the development of certain parts of the brain might hinder our students in puberty and early adolescence to oversee the consequences of their actions. This is a possible clarification for their risky behavior. Could this also account for their blind optimism with regard to living together with people with different religious convictions (Ter Avest & Bertram-Troost 2009)? Is the lack of a long term perspective a clear explanation for their high expectations about ‘more knowledge about the other’ resulting in ‘peaceful living together with the other’? Or, to put it differently: is it possible not to see the lack of a long term perspective as a disadvantage, but as an advantage to respond to the challenge of living together amidst social, economical, cultural and religious differences? Can the noticed disadvantage to oversee long term consequences (problems and complexities) be transformed into an advantage to take the short term risk of facing up to the societal need to construct social cohesion? Are the concepts of today’s RE the answer to these high expectations for tomorrow’s society? It is generally assumed that a rich environment of a new born baby stimulates the growth of the brain after birth (a.o. Schwaab 2011, 49, 53). We will need more evidence on what exactly stimulates the adolescent brain of female and male students.

In puberty the development of the brain is heavily influenced by the activities of the hypophysis (Schwaab 2011, 117). As a result the young adolescent leaves home, literally and metaphorically; he starts to explore alternative ways of thinking and living, different from the family he was raised in. At the same time, as we learn from the research of Crone (2008), we should not underestimate the vulnerability of youngsters leaving home. It is fascinating to combine these new insights in the physical development of the brains, with the core concepts of exploration and commitment of the identity development theory of Marcia, in our focus on worldview formation. The strength of a possible new pedagogical strategy is to be explored. This strategy is characterized as ‘provocative pedagogy’.

4. Provocative pedagogy: use the brain!

In her earlier mentioned book Crone elaborates on the ‘risky behaviour’ of youngsters, their conflicts with parents and by consequence their unstable identity.¹ We see this vulnerability through ‘risky’, explorative behaviour not only with regard to physical challenges, but also in the practice of leaving home, a process that is accompanied by psychological and social vulnerability. We take youngsters’ ‘risky behaviour’ vis-à-vis physical, social and emotional/affectional challenges as our starting point to elaborate on the attitude of youngsters regarding the exploration of worldviews during puberty and adolescence. We claim here that the impossibility to assess situations in a realistic way is not only a hindrance, but -on the contrary – also facilitates youngsters’ explorative behaviour with respect to answers given to existential questions in different worldviews, thus in religious and secular traditions. It provokes their interest and is highly motivating for their dialogues on existential questions.

Explorative behaviour, according to Marcia, is necessary, though not enough, to arrive at an authentic worldview. In case the exploration has not started on the initiative of the youngster himself, it should be provoked by the RE teacher. Teachers in RE should take advantage of the ‘natural tendency of risky behaviour’ of their female and male students. When teachers provoke students to ‘use their brain to rise to the challenge’ of exploring religious and secular

¹ Conflict however is the forerunner of development, as we know since Piaget. In particular Erikson (1964) emphasizes that ‘a heightened vulnerability signals the emergence of a potential strength, creating a dangerous opportunity for growth, “a turning point for better or worse”’ (Erikson, in: Gilligan 1993, 108).

answers to existential questions, they at the same time should be aware of the vulnerabilities of different kinds that accompanies students in this 'risky behaviour'. A provocative pedagogy is challenging and caring at the same time. Challenging to a 'flirtation' with other 'gods' as well as safeguarding the youngsters' family bonds and earlier developed god concepts. Challenging the encounter with 'the other'. 'Provocative' not only points to the challenge that should be presented to the students, answering the natural need of their brains for risky behaviour. But – in concordance with the original meaning of the word, and that is probably even more important – 'provocative' also points to the caring attention of the teacher whose pedagogical strategy is characterized by 'guided openness' and trying to offer a secure relationship (Ter Avest 2009; Ter Avest & Miedema, in press). The teacher provokes (Mills 2008) and presents and represents a caring attitude, an approach that on the one hand answers the need of the brain, and on the other hand answers the need of vulnerable young adolescents, both females and males. The teacher is 'the master' who knows the impact of leaving your home, what the consequences may be of a critical reflection upon your parents' beliefs, to say farewell to that comfort zone, and to explore new approaches and perspectives in order to achieve authenticity in one's own commitment to new persons, themes and fields of experiences. Being on the way of forming an authentic (religious or secular) worldview. Since it is generally known that learning by example is the best way to transform a learner's attitude and behaviour, the teacher himself must be an 'expert by own experiences' in exploration and commitment. The teacher himself should have gone beyond the confusion of the encounter with 'the other' (Ter Avest 2011). As such the teacher adds to Grimmitt's categorization of teaching *in*, *about* and *from* religion, the practice of 'teaching *by* religiosity'. Provocative pedagogy provides a powerful strategy for the transition from 'risky behavior' to 'blind optimism' for living together in a context of diversity.

5. Recommendations

Above we have presented a provocative pedagogy as a promising strategy, combining the outcomes of recent brain research and a well known theory on identity development in puberty and adolescence. Provocative pedagogy is presented as an answer for the brain's readiness for 'risky' behaviour, the young adolescents' need for exploration as well as their need for console and support in their nomadic journey from one comfort zone to new and yet unknown themes, experiences and fields of knowledge, which together constitute his/her own authentic (religious or secular) worldview and identity. In a cultural climate where care is seen as a female characteristic and provocation as a male trait, more research is needed on the competencies and performative skills of both female and male teachers in secondary and higher education to stimulate the development of an authentic (religious or secular) worldview of their female and male students with provocative pedagogical strategies.

References:

Bakker, Cok and Ina ter Avest (2001). *Case oriented education and the development of the competent, reflective and reflexive practitioner; implications for citizenship*. Presentation at the IRE conference 'Citizenship and Education', Warwick: September 3 – 9.

Bakker, Cok and Ina ter Avest (2008). *Opnieuw denken: de visie van Marcia op identiteitsontwikkeling*. [Rethinking Marcia and identity development in primary education]. In: K. Meijlink c.s. (2008). *Reflecties op multiculturele identiteit*. Onderwijspakket *Stel je voor; De kunst van het beleven en*

ontmoeten; Identiteitsontwikkeling in de basisschool. Utrecht: Marnixacademie / Utrechts Centrum voor de Kunsten. pp. 7-15.

Bertram-Troost, Gerdien, Simone de Roos and Siebren Miedema (2006). Religious identity development of adolescents in religious affiliated schools. A theoretical foundation for empirical research. *Journal of Beliefs and Values*, 27 (3), 303-314.

Bertram-Troost, Gerdien, Simone de Roos and Siebren Miedema (2007). Religious Identity Development of Adolescents in Christian Secondary Schools: Effects of School and Religious Backgrounds of Adolescents and their Parents. *Religious Education*, 102, 2, 132-150.

Braidotti, Rosi (2004). *Op doorreis. Nomadisch denken in de 21^e eeuw* [Passage. Nomadic reflections in the 21st century]. Amsterdam: Boom.

Driesen, Geert and Annemarie Van Langen (2011). Mogelijke verklaringen van onderwijsachterstanden van jongens [Possible interpretations of boys' retardedness in education]. In: *Pedagogiek, wetenschappelijk forum voor opvoeding, onderwijs en vorming*. Jrg. 31, nr. 2, pp. 155-171.

Gilligan, Carol (1993). *In a different voice*. Cambridge/Massachusetts, London/England: Harvard University Press.

Marcia, James E. (1966). Development and validation of ego-identity status. In: *Journal of personality and social psychology*. 3, 5, 551-558.

Marcia, James E. (1980). Identity in adolescence. In: Adelson, J. (Red). *Handbook of adolescent psychology* (pp. 159-187). New York: Wiley.

Mills, Jon (2008). An Unorthodox Pedagogy: Fostering Empathy through Provocation. In: J.Mills (Eds). (2002). *A Pedagogy of Becoming*. Amsterdam: Rodopi. pp. 117-141.

Pels, Trees and Doret de Ruyter (2011). De relatie tussen opvoeding, socialisatie, ontwikkeling en radicalisering: overzicht van hiaten en beschikbare kennis [The relation between education, socialisation, development and radicalization: an overview of gaps and available knowledge]. In: *Pedagogiek, wetenschappelijk forum voor opvoeding, onderwijs en vorming*. Jrg. 31, nr. 2, pp. 117-133.

Pinker, Susan (2008). *De Sekse Paradox, mannen en vrouwen en hun kansen op succes* [The Sexual Paradox. Men, Women and the Real Gender Gap]. Amsterdam/Antwerpen: Uitgeverij Contact.

Schwaab, Dick (2011). *Wij zijn ons brein. Van baarmoeder tot Alzheimer* [We are our brain. From Uterus to Alzheimer]. Amsterdam/Antwerpen: Uitgeverij Contact.

Stephen, J., Fraser, E. en Marcia, J.E. (1992). Moratorium-achievement (MAMA) cycles in lifespan identity development: value orientations and reasoning system correlates. *Journal of adolescence*, 15, 283-300.

Ter Avest, Ina and Gerdien Bertram-Troost (Eds.) (2009). *Geloven in samen leven* [Committed to living together]. Amsterdam: Science Guide.

Ter Avest, Ina (2009). Dutch Children and their God. *British Journal of Religious Education*, vol. 31-3. p. 251-262.

Ter Avest, Ina (2011). *Voices*. Inaugural address Inholland University of Applied Sciences. Amsterdam.

Ter Avest, Ina and Siebren Miedema (2011). *The child's inner world as a particular context. Interplexity of outer and inner context in religious identity development* (in press).

Timmerman, Greetje (2007). 'Tuning in'; de communicatief competente leraar. Feminisering en didactisering van het lerarenberoep (1871-1950) ['Tuning in'; the communicative competent teacher. Feminization and didactization of the profession of teaching (1871-1950)]. In: Timmerman, G., N. Bakker, J.J.H. Dekker (Eds.). *Cultuuroverdracht als pedagogisch motief. Historische en actuele perspectieven op onderwijs, sekse en beroep*. Groningen: Barkhuis. pp. 179-198).