

Teacher education is the key to changing the identification and teaching of the gifted

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In this response to Dr. Sternberg's article ACCEL: A New Model for Identifying the Gifted, I reflect his ideas as an European scholar and teacher educator. In many European countries, including my own country Finland, education is holistic in nature and aims to educate the whole personality of students, not only their academic achievement. Regardless of this emphases Finland has been the best achieving European country in the Program for International Student Assessment (PISA) through the 21st century (OECD, 2004; 2011; 2016). Based on PISA studies, Finnish ninth graders outperform their American peers in mathematics, science and reading. However, the two most recent PISA results have revealed that Finnish students' achievement has started to decline and this decline has concerned high achieving students as well. One speculation for this trend is that, in Finnish schools today, there is no will to confront situations or deal with content that requires students to move out of their comfort zones (Kuusisto, Laine & Tirri, 2017).

I have proposed a holistic approach to school pedagogy that includes educating for growth mindset in learning that allows challenges and creative ideas to bloom in the classroom. Educating for growth mindset in learning is one of the most important pedagogical approaches in developing creativity for all kinds of learners. Growth mindset encourages also the gifted students to try harder instead of simply trusting their current abilities (Tirri, 2016). According to Carol Dweck, the American creator of mindset theory, students who see intelligence fixed-mindedly emphasize performance goals more ("looking smart") whereas students with a growth mindset emphasize learning goals more ("becoming smart"). The former leaves students vulnerable to negative

feedback and can lead to an avoidance of challenging learning opportunities, whereas the latter helps students to rebound from their mistakes (Dweck, 2000).

The focus on classic intelligence tests support the emphases on performance goals and promotes easily the fixed mindset approach to giftedness as well. Our recent studies on teachers' implicit theories have revealed that Finnish teachers have fixed, growth or mixed mindsets regarding students' giftedness which can influence teaching and learning behavior in schools (Laine, Kuusisto, & Tirri, 2016; Rissanen, Kuusisto, Hanhimäki, & Tirri, 2016). In our current research project in Finland our aim is to construct a pedagogical mindset program that could be used to educate growth mindset in school environment. In this program the students are taught that intelligence is not heritable and they can practice their brains that continue to develop in all the domains of multiple intelligences. In this respect, I fully agree with Dr. Sternberg's arguments on not using IQ tests as the only criteria for selecting students into gifted education programs and on the importance of creativity in the education for 21st century competences for the gifted students. Growth mindset promotes creativity and encourages the will to take sensible risks in learning. We have research evidence that educating for growth mindset also promotes resilience to continue with challenging learning tasks.

Dr. Sternberg also calls for clear goals for gifted education. We need to clarify the ends for our education, not only the means. I totally agree with him and propose that we need to verbalize the purpose of gifted education and after that we can educate the gifted students for their purpose. It is very easy for me to adhere to Dr. Sternberg's vision: "Gifted education should be promoting the next generation of active concerned citizens and ethical leaders" (p. 16). As a teacher educator,

I think that we need to first educate our teachers for purposeful teaching to them to help the gifted students to find their purpose in life (Tirri, Moran & Mariano, 2016). With 'purpose' I refer to 'a stable and generalized intention to accomplish something that is both meaningful to the self and of intended consequence to the world beyond the self' (Damon, Menon & Bronk, 2003, 121). The degree to which one may be considered purposeful rests on whether one's major life goals focus on making an impact on the world beyond only gratifying one's own needs and engagement toward actualizing those life goals (Bundick & Tirri, 2014, 4). Gifted students with purpose would be those citizens Dr. Sternberg wants to have with the goal to change the world and to go also for the long-term goals that involve risk-taking and uncertainty. Purpose is needed for transformational leadership, passion and, also for ethical thinking skills.

I have addresses ethical skills, especially ethical sensitivity as important competences for 21st century (Tirri, 2016). Like Dr. Sternberg argues, real-life ethical problems and dilemmas require the skill to identify new ethical issues that are not easy to solve. Moreover, skills in ethical sensitivity are necessary to combine excellence and creativity with ethics (Tirri, 2011; 2013). High ability students have been shown to be superior in moral judgment when compared to students of average ability. However, high academic ability does not always predict high moral judgment (Narvaez, 1993; Tirri, 2011). Morality includes other components as well, such as sensitivity, motivation, and character. In the research on ethical sensitivity of gifted people in science, we have used the definition by Bebeau, Rest, and Narvaez (1999) on moral sensitivity. According to them, moral sensitivity is about the awareness of how our actions affect other people. Thus, without possessing a moral sensitivity it would be difficult to see the kind of moral issues that are involved in science. However, to respond to a situation in a moral way, a scientist must be able to perceive

and interpret events in a way that leads to ethical action. A morally sensitive scientist notes various situational cues and can visualize several alternative actions in response to that situation. He or she draws on many aspects, skills, techniques and components of interpersonal sensitivity. These include taking the perspective of others (role taking), cultivating empathy for others, and interpreting a situation based on imagining what might happen and who might be affected. Moral sensitivity is closely related to a new suggested intelligence type, social intelligence, which can be defined as the ability to get along well with others and get them to cooperate with you (Albrecht, 2006). I have also suggested a new kind of ethic, 'the hacker work ethic' introduced first by (Himanen, 2001), that has replaced the dominance of the Protestant work ethic with a passionate attitude and relationship to one's work. With the word 'hackers', Himanen referred to people who did their work because of intrinsic interest, excitement, and joy, whereas the Protestant work ethic emphasized work as a duty and a calling. The successful scientists resemble the hackers with their strong inner drive to excel (Koro-Ljungberg & Tirri, 2002; Tirri & Campbell, 2002). Hacker ethic also include passion that Dr. Sternberg identifies as important component of his new suggested model for identifying the gifted. I strongly support this component based on the European and Finnish perspectives.

To conclude my response to Dr. Sternberg's wise insights I also stress the importance of teacher education in changing the practices in schools and in gifted education. Teachers are the key agents in identifying and nurturing all kinds of talents. They are ethical professionals who can change the world. Americans could learn from Finnish teacher education to give more freedom to their teachers to design their curricula in schools and the learning environment for their students (Tirri, 2014). This requires investment to the selection of teachers and their pre- and in-service

education. When the teachers learn, and commit to the ends of gifted education presented in Dr. Sternberg's model we can see big changes in schools. This change requires intervention studies with teachers with the goal to teach them their purpose and the ends they are striving for. The researchers and scholars in gifted education should include this mission into their work and commit to co-operation with schools. We should take the ethical leadership and engage to this task with both our research and teaching.

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