

GENDER DIFFERENCES IN SELF-CONCEPT OF GIFTED PUPILS

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Abstract: The self-concept is the utmost frequently studied area of gifted pupils. The emotional and social issues of highly gifted pupils often stem from inadequate self-concept. The structure of self-concept is being formed by traditional variables such as age, gender and culture. The centers of our focus are gifted pupils and differences in self-concept between gifted boys and gifted girls. The self-concept model created by Marsh and Shavelson in 1985 has a hierarchic structure. The highest level of the self-concept is known as the general self-concept. It is divided into academic self-concept and non-academic self-concept. The Self-description Questionnaire - short form (SDQ-II-S) was the research tool used to measure pupil's self-concept. The grades in math and their mother tongue language (Slovak) as well as their GPA (Grade Point Average) were examined and compared. The research sample consisted of 56 gifted pupils at secondary school. In order to better understand the academic self-concept, we also examined the preferences of inner motivation for learning. The biggest motivator that prevailed in the group of boys was positive social motivation, but in the group of girls it was the feeling of good work done. The most significant difference we have remarked was in the area of verbal academic self-concept. The girls had an average score of 23.44 while the boys only 13.94. The development of self-concept and the possibilities of its improvement are important, because self-concept affects school performance and the overall behavior of pupils.

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Introduction

One of the main factors influencing pupil self-concept is success in school. The success in school contributes to the formation of self-image and predetermines the further direction of the pupil. Because of the regulatory function, integration function and defense function it is more than desirable to investigate self-concept. As reported in a number of reviews (Ziegler & Raul, 2000; Heller & Schofield, 2002; Coleman, 2006) the most frequent topics in the research of gifted students are their personality characteristics and the issues of their education. The interest of scientists (James, 1890; Mead, 1925; Freud, 1949; Maslow, 1954; Shavelson et al., 1976; Turner & Brown, 1978; Higgins, 1987; Rogers, 1995; Cooley, 1998; Descartes, 2004) who engaged with issues pertaining to self-concept, has a long history and is one of the oldest areas of research within social science. One direction that has contributed significantly to the research is socio-cognitive psychology.

Self-concept

Self-concept is in the broadest sense the perception of one-self. The question of personal identity in the first half of the 21st century in the area of philosophy is investigated as a problem of being one-self. In French it is known as "Soi", in German as "Selbst". The literal expression of "Soi" according to Sivák (2010) also includes a self-knowledge and self-awareness aspect.

Macek (1997) presents the view of contemporary cognitive social psychology on the issue of the self-concept. To summarize the self-reflection content aspects, he uses the term of self-system. He perceives self-concept in a narrower sense, as a cognitive content and structure of conscious reflection. Among other self-system components that represent the emotional area, Macek advises self-esteem and representation of the behavioral aspect, such as self-presentation. Every person has a certain idea about themselves. It is an idea of one's own abilities and skills, knowledge, qualities and of course the level of one's intelligence, even though this idea is not always legitimate.

The conception of self-concept has different divisions. In this paper, we focus on the academic and non-academic self-concept based on the hierarchic structure presented by Shavelson et al. (1976). General self-concept is divided into academic and non-academic self-concept. The academic self-concept is divided by general subjects at school and non-academic self-concept into physical, emotional, and social components that are further subdivided into more specific components. This diagram has provided a model for creating multidimensional tools for measuring self-concept at different ages. Marsh and

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Shavelson revised the model further in 1985; academic and non-academic self-concept were replaced by three factors: non-academic, academic / verbal, and academic / mathematical.

From a developmental point of view, the content of self-concept is characterized by a gradual increase in information about your-self on the basis of feedback information from the environment or on the basis of one's own judgment and self-observation. In studies by Klein & Cantor (1976), Janos, Fung & Robison (1985), Betts (1986), and Freeman (2006) there are conclusions that intellectually gifted pupils experience problems with inadequate self-image, with feelings of being different and social isolation.

Mudrak (2015) points out that the development of gifted pupils, whether their potential is applied or not, is determined not only by the successful development of their abilities, but also by the successful development of their motivation.

Research studies of scholars by Junge & Dretzke (1995), Pajares (1996), Schunk & Parajes (2005), and Bandura (2006) show that the crucial decisions that young people make about their educational and professional direction are determined by motivational beliefs rather than by their objective skills.

Bandura (2006) considers the motivational aspect of gift development to be crucial during adolescence. During adolescence, gifted pupils become actors in their own education, so they need to acquire self-regulation skills, such as planning, estimating the impacts of their own activities or perceived self-efficacy.

In the educational process there are often stereotypes that one group is less gifted in certain area. Spencer, Steele & Quinn (1999) found that the results of men and women in mathematics can be significantly influenced by the notion that women are less gifted in mathematics than men. The female participants achieved in this experiment significantly worse results in challenging tasks in situations where they were subjected to stereotyped expectations before starting the test. On the contrary, in situations where participants did not receive stereotype information, the results of men and women were equal.

The age of adolescence is a very sensitive period for self-concept. Physical changes, a new qualitative reasoning and hormonal mood swings lead to fundamental personal changes. The development of both overall and gender identity is a more conscious matter. Both boys and girls are aware of the social expectations that target members of both gender groups. Janořova (2008) writes that girls are subjected too much stronger social pressure based on the expectations of the role of an adult woman. Girls often have to deal with the demand of increased care for their looks. This is closely linked to the need of gaining the interest of the male gender.

It was precisely because of the stereotypical expectations and studies of gifted pupils and their problems that we focused our research on the problem of self-concept and the differences between boys and girls.

Participants and Methods

This research can be called a pilot study of the thesis "Self-concept and learning performance of gifted pupils". We wanted to verify that all the questions were clear, whether the answers could be evaluated and whether we had enough information about the respondents. We were also wondering if there would be any differences in a smaller sample.

The survey sample was composed of N= 56 gifted pupils at secondary school (with the average age of 14.04). Of those, 31 were boys and 25 were girls. Two questionnaires were used: a Self-description Questionnaire (SDQ-II-S) and a questionnaire of internal motivation for learning.

The Self-description Questionnaire (SDQ-II-S) was the research tool used to measure the pupil's self-concept (Ellis, Marsh & Richards, 2002). Pupils completed the questionnaire by self-rating items on a 6-point, Likert-type scale. This scale ranges from 1 (I do not agree) to 6 (I agree). The questionnaire is composed of 11 factors: General self-concept, General school self-concept, Math academic self-concept, Verbal academic self-concept, Physical ability, Physical appearance, Opposite-sex relations, Same-sex relations, Parent relations, Honesty/Trustworthiness, Emotional stability. The grades in math and mother tongue language (Slovak language) as well as GPA we examined and compared.

The internal motivation preference questionnaire (Navratil & Mattioli, 2011) is designed so that in 15 lines there are two statements against each other and with one of them the respondent should identify. The questionnaire consists of 6 motivation preferences: Positive social motivation, Cognitive motivation, Moral motivation, Fear of aftermath, Desire for excellence and Good feeling of work done.

Results

The participants were 56 gifted pupils at secondary school. The SDQ-II-S had 45 items. As far as academic self-concept is concerned, the biggest difference can be seen in verbal academic self-concept, which has up to a 10 point difference. Because factors do not have the same number of questions and therefore we have also written the minimum and maximum points that the respondent could obtain.

As we can see in Table 1, girls have better results in both math and Slovak languages. In the subject of math, girls have better results than boys, however their score of self-concept in math is lower than boys. It may be because of the stereotypes mentioned that girls are not good at math. Despite better results in both GPA and grade averages, girls have a total self-concept lower than boys. We can say that they are more self-critical than boys.

Table 1: Academic self-concept of gifted pupils

	Average of age	N	Average the grades in math	Math academic SC	Average the grades in Slovak language	Verbal academic SC	General school SC	General SC	GPA
Points				Min 3 Max 18		Min 5 Max 30	Min 3 Max 18	Min 6 Max 35	
Boys	14.16	31	1.26	13.94	1.55	13.94	14.13	26.36	1.47
Girls	13.88	25	1.16	12.36	1.16	23.44	14.75	25.16	1.20
Sum	14.06	56	1.21	13.23	1.36	20.93	14.34	25.82	1.32

**Note: N = number of participants, SC= self-concept, GPA= Grade Point Average, Min= minimum, Max=Maximum.*

Source: Authors

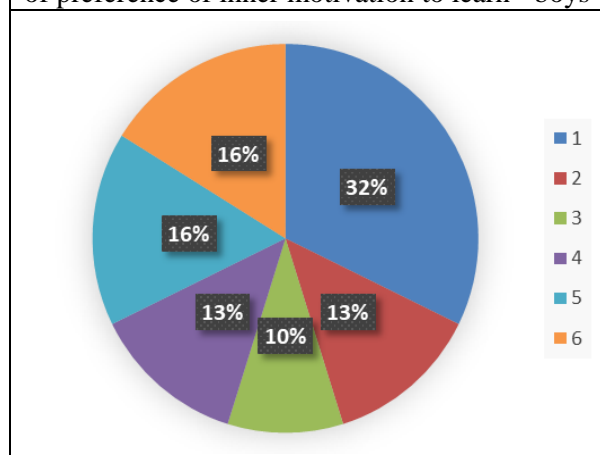
Table 2: Non-academic self-concept of gifted pupils

	N	Physical ability	Physical appearance	Opposite-sex relations	Same-sex relations	Parent relations	Honesty	Emotional stability	General SC
Points		Min 4 Max 24	Min 3 Max 18	Min 3 Max 18	Min 4 Max 24	Min 4 Max 24	Min 5 Max 30	Min 5 Max 30	Min 6 Max 35
Boys	31	18.58	11.74	12.84	20.29	19.65	16.77	15.16	26.36
Girls	25	16.86	10.40	12.52	19.56	20.12	14.88	20.56	25.16
Sum	56	17.79	11.14	12.70	19.96	19.86	15.93	17.57	25.82

**Note: N = number of participants, SC= self-concept, Min= minimum, Max=Maximum.*

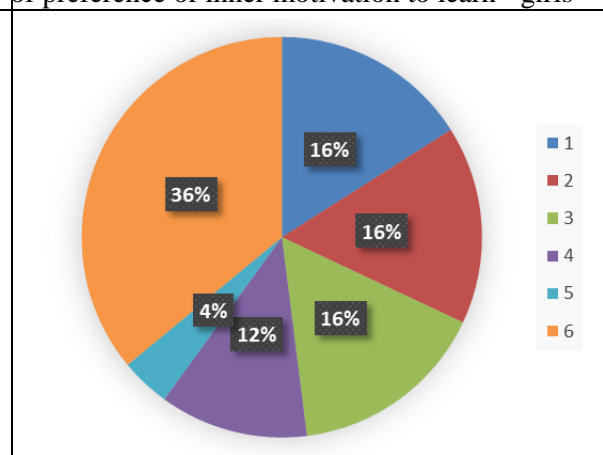
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Figure 1: Results of answers from Questionnaire of preference of inner motivation to learn - boys



Source: Authors

Figure 2: Results of answers from Questionnaire of preference of inner motivation to learn - girls



Source: Authors

The results of non-academic self-concept can be seen in Table 2. The biggest difference can be seen in the area of Emotional stability. The higher score in emotional stability means a higher probability of issues within the emotional area. That is a certain stereotype that girls are much more emotional than

boys. For other items, the score is not very different. As far as social relations are concerned, both groups are more familiar with the same sex.

The internal motivation preference questionnaire is composed of 6 motivation preferences: 1. Positive social motivation, 2. Cognitive motivation, 3. Moral motivation, 4. Fear of consequences, 5. Desire for excellence and 6. Good feeling of the work done. The results can be seen in Figure 1 and Figure 2.

In the group of boys, the most common answer was answer number 1- Positive social motivation, where the questionnaire statement was: I want the teacher to have a good relationship with me.

In the group of girls, the most common answer was answer number 6 - Feeling good about the work done, where the questionnaire was: I feel good when I learn something well.

In the characteristics of gifted pupils, we know that they are very interested in new knowledge, everything they care about, they need to know everything and understand everything therefore our assumption was that their preference would be cognitive motivation, but this assumption was disproved. However, we cannot refine the results for all gifted pupils.

Conclusion

As stated in various studies (Foglová, 2017; Konečná, 2010; Mudrák, 2015) crucial factors for the formation of self-concept within the school environment are the personality of the teacher, class and school environments, school grades, teaching materials and others. In school age, the self-image is quite unstable and can change quite a lot. School self-concept is precisely fixed on school performance, where pupils evaluate and compare their performance. Therefore, it is needed that schools develop support programs and activities aimed at preventing problems in social relations, developing social skills and supporting the positive growth of pupil's concept. The results show that girls' total self-concept is lower than the total self-concept of boys. And because of that, it is needed to help them to booster their own self-concept.

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