

Personality traits and domain-specific quality of giftedness

Znanstveni članek

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KLJUČNE BESEDE: nadarjenost, domene nadarjenosti, domensko specifična kakovost, osebnostne lastnosti

POVZETEK – Izhajajoč od sodobnega dojemanja nadarjenosti kot domensko specifične kakovosti, ki se kaže ne le v razvitosti določenih vrst zmožnosti, temveč tudi v različnih kombinacijah osebnostnih lastnosti, smo izvedli raziskavo s ciljem ugotoviti značilne osebnostne lastnosti dijakov, nadarjenih na različnih področjih: glasba, likovna umetnost, šport in matematika. Kot odvisne spremenljivke se pojavljajo bazične dimenzije osebnosti – “velikih pet” in nagnjenost k originalnosti. Raziskava je bila izvedena v Srbiji, na vzorcu 473 dijakov, ki obiskujejo specializirane srednje šole za nadarjene v Novem Sadu, Beogradu in Kraljevu. Rezultati so pokazali pomen osebnostnih lastnosti za nastanek specifične kakovosti nadarjenosti, ki se pojavlja na določenem področju. Sklepamo, da lahko pojav nadarjenost natančno zaznamo le, če se nahaja v okvirih posameznih področij, in da mora biti referenčni okvir raziskovanja problema definiran ne le z multidimenzionalnega vidika, temveč tudi na podlagi konkretnega področja, kjer se izvrstnost pojavlja.

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ABSTRACT – Starting from the contemporary understanding of giftedness as a domain-specific quality, which is not reflected only in the development of certain types of skills, but also in different combinations of personality traits, the research was conducted with the aim to determine distinctive personal characteristics of gifted students in different fields: music, arts, sports and mathematics. Dependent variables were the following: basic dimensions of personality – the “Big Five” and disposition towards originality. The research was conducted in Serbia, on a sample of 473 respondents attending specialised high schools for gifted in Novi Sad, Belgrade and Kraljevo. The results pointed to the importance of personality traits for the development of specific quality of giftedness, manifested in a particular domain. The conclusion is that the phenomenon of giftedness could be precisely perceived only if it is set in the framework of individual domains, and that in addition to the multi-dimensionality, a reference framework of the research on this issue has to be defined and placed in terms of the specific domain of manifesting excellence.

1. Introduction

From the very beginning of humanity, outstanding achievements of people in different domains have opened a wide range of issues that still occupy the interest of scientific public. From historical point of view, reflection on the phenomenon of giftedness started with the discussion on the issues of origin and essence of this phenomenon, thus evolving from the conception of giftedness as a category of supernatural into empirically supported scientific demystification of its real nature. The credit for the introduction of giftedness into the repertoire of scientific problems was attributed

to Francis Galton and Lewis Terman, who paved the way to various positions of considering the complex nature of giftedness, being guided by the setting of possibilities of quantifying individual differences in terms of intelligence.

Unlike Terman (1922), who considered that geniuses in all fields were recruited from among the children with high IQ, Galton (1869) went the other way, and without using the tests as a support, “recruited” his gifted respondents among eminent people of different profiles. However, according to his conception of ingenuity, Galton essentially had to believe the same as Terman – that eminency in various fields was based on general, intellectual abilities. Ultimately, therefore, both approaches reflected the same, “unidimensional” understanding of the nature of giftedness.

The first indications that this situation was going to change occurred in the late fifties of the twentieth century, when it was proposed to “expand the definition of giftedness and consider as gifted every child who shows consistently high achievement in any potentially valuable area of human activity” (Witty, 1958, according to: Altaras, 2006, p. 26). The request that intelligence should make space for other skills was made official in 1972, with the emergence of Marland report, which defined giftedness as a high impact and/or potential in one or more of the following areas:

- general intellectual ability,
- specific academic skills,
- creative or productive thinking,
- leadership,
- visual and performing arts, and
- psychomotor skills (Marland, 1972).

It is emphasised in the literature (Renzulli, 2005) that most contemporary authors do not miss the opportunity to draw attention to the errors contained in this definition (overlapping of categories, confusing processes and products), as well as to the significant role it has played in spreading the conception of giftedness to the whole range of human skills and various domains of human activities.

However, even if the conception of giftedness has never been extended beyond the boundaries of intellectual abilities, it does not mean that it should stay one-dimensional forever. Namely, the very concept of intelligence has grown and developed. Undoubtedly, Howard Gardner was the most significant among those who contributed to spreading of the concept of intelligence in the last decades of the twentieth century. Starting from the standpoint that the intelligence was not only “in the head of an individual”, Gardner made a big step forward compared to the classical theories, and established a conception of intelligence as “the ability to solve problems or design products that are important in a particular cultural setting or a community” (Gardner, 1993, p. 60). In the first version of his theory, Gardner indicated seven different intelligences, allowing the option of changing their numbers: linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, interpersonal and intrapersonal intelligence. By specifying different types of intelligence, Gardner seriously undermined the idea of operationalising the intelligence (and giftedness as well) over the

intelligence quotient, suggesting the multi-dimensional nature of the construct (or constructs).

Following such tendency, the contemporary conceptions of giftedness continued to differentiate the domains of manifestation of skills, precisely elaborating those which “insulted the logic” of the traditional approach to the intelligence study. Therefore, the contributions of Gardner’s theory of multiple intelligences intensified the expansion of the conception of giftedness to extra-intellectual domains, which greatly contributed to its rise from one-dimensional to multidimensional quality.

The fact that giftedness today applies to a multitude of different skills, should not bring to the conclusion that the gifted are those who show skills and success in all fields. On the contrary, the expansion of the conception of giftedness means narrowing of expectations in terms of skills repertoire of a gifted person, and abandoning the conception of universal giftedness that accompanies the conceptualisation of the phenomenon as a high general intellectual potential. Contemporary conceptions of giftedness almost without exception promote the idea that whoever is good for one thing may not be good for everything (Jackson, 2000; Mayer, 2005; Purcell, 1996; Tannenbaum, 1986; Winner, 1996).

It is significant that giftedness manifested in a particular domain has no general intellectual ability for the substrate that is by chance directed towards the domain. However, it already has an origin in the highly developed specific skills that correspond to the given domain or the specific knowledge base. Taking into consideration the fact that the domains mutually differ in the content and structure of knowledge which they include, it is reasonable to assume that the relationship between the skills and domains is the two-way relationship. While specific skills direct an individual to a specific domain, the domain directs further development of these skills with its specific requirements placed before the individual. In addition, the domain-specific quality of giftedness is reflected not only in the development of certain types of skills, but the prevailing conception is the one which emphasises that talents manifested in various domains imply different combinations of extra-intellectual factors, which are related both for the personality space and the environmental context (Benbow & Minor, 1990, according to: Pekić, 2010).

Given the fact that contemporary research corresponds to modern interpretations of the nature of giftedness, the effect of diverse extra-intellectual factors becomes a point of reference in explaining the emergence of the domain-specific quality of giftedness. Meta-analysis of many studies dealing with this issue point to the fact that the researchers’ interest in this segment has been the most focused on the personality space, i.e. on the search for distinctive personality characteristics of the gifted in different domains. Some studies (Csikszentmihalyi et al., 1997) suggest that students who are gifted in an academic domain show much higher level of self-confidence and security in terms of their own skills, compared to students gifted in the domain of music or visual arts, as well as that the unconventionality trait is more inherent to students gifted in the arts domains than in the academic domains. Also, there are find-

ings (Csikszentmihalyi & Getzels, 1973, Drevdahl & Cattell, 1958, Kemp, 1981, all according to: Feist, 1999; Pekić, 2010) that describe arts gifted individuals, compared to academic gifted, in terms of more pronounced nonconformity that is understood as a tendency to review the social norms and values. For the category of academic gifted, there has been established a tendency of achieving a higher score on the dimension of conscientiousness, which includes the following personality traits: organisation, propensity for planning, responsibility and order (John, 1990, by: Feist, 1999; Pekić, 2010). Some studies of personal distinctions between academic and arts gifted students indicate that the latter show a much greater interference in the aspect of social adaptation, most likely because the society, and consequently, the school system value giftedness in the artistic domains less (Olenchak, 1999; Pekić, 2010). It is considered that this is the reason why this category of gifted students may be denied for attending the special programs, which have a positive impact on social development due to gathering of similar individuals.

Studies have also shown that arts and academic gifted individuals differ in the emotional sphere, where the previous are characterised by “disposition toward more intense emotional experiences” (Andreasen & Glick, 1988, according to: Feist, 1999, p. 283). Some authors interpret such findings by the characteristics of the given domains, and by the fact that the domain of arts stimulates introspectiveness, turning it to an intrapsychological plan, while the academic domains are characterised by the focus on external reality (Gardner, 1973, according to: Feist, 1999; Pekić, 2010). There are also significant findings (Freeman, 2000; Pekić, 2010) suggesting that the music gifted individuals, compared to the academic gifted, are characterised by a lower level of emotional maturity, which is then related to differences in education and upbringing of gifted children depending on the type of the domain.

It could be concluded that despite the multiple treatment of this issue, the question “what constellations of personality traits contribute to the acquisition of knowledge in a domain” remains open. This question has been the starting point for conducting an empirical study that tends to complete the knowledge in the field of extra-intellectual sphere of the gifted students.

2. Method

The Aim of the Research

The aim of the research is to determine distinctive personal traits of students, gifted in different domains, with the expectation that the research will indicate personality variables that explain the emergence of the domain-specific quality of giftedness. In an effort to find the answer to this question, the research focuses on the four domains of giftedness: music, arts, sports and mathematics.

Variables and Instruments

Giftedness appears in the capacity of independent variable in the research, which is understood as the above-average development of specific skills to master a certain domain (music, arts, sports, mathematics). Such understanding of giftedness corresponds with the theoretical concepts and empirical findings, which suggest that it is most justified to operationalise giftedness through high performance on the tests of specific skills.

Dependent variables in the research are the following: *basic personality dimensions – the “Big Five” and disposition toward originality*.

According to the Five-Factor personality model known as the “Big Five”, the following five personality dimensions take the basic place in the personality structure: *neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness*. The basic dimensions of personality are, in fact, defined as non-cognitive, time-stable, and, in relation to the characteristics of the sample, invariant dispositional constructs that explain the largest part of the variance of individual differences (Knežević et al., 2004).

To estimate the basic personality dimensions, a Serbian translation of the Big Five Inventory instrument (Big Five Inventory – BFI; John & Srivastava, 1999) was used. This 44-item scale, which was created as an attempt to operationalise the constructs of the “Big Five” models, proved to be an adequate measure of the dimensions included in the mentioned model. Answers were given according to the five-point Likert scale (from 1 – strongly disagree, to 5 – fully agree). Previous researches (John et al., 2008) showed that the inventory has excellent psychometric properties.

Disposition towards originality is defined as the area of mind in transition between the conscious and the unconscious, where there are generated concepts and perceptions which are basically originality (Holland, 1968, according to: Štula 2007). The reasons for expanding the repertoire of the research variables with disposition toward originality are contained in the observation that the Five-Factor model does not consider this property in sufficiently explicit manner (Knežević et al., 2004). In fact, although this model includes a domain *openness to experience* which correlate, it is a subconscious activity (McCrae, 1996, according to: Knežević et al., 2004); none of the narrower aspects of this domain is not specifically determined as originality.

Disposition towards originality is implemented through the score on the subconscious activity scale (SPA) authored by Holland and Baird (1968). The scale is designed as an instrument that should provide a general measure of originality, where the high score means the efficiency of an individual in using his/her own subconscious processes, which, among other things, implies the acceptance of daydreaming and irrationality as a source of ideas, preference of novelties, greater tendency towards expressiveness and creativity, independence of thinking and tolerance for independent and ambiguous contents. The instrument consists of 38 claims, for which the respondent should assess whether they are related or not related to him/her, i.e.

whether they are true or false when he/she is personally concerned. The previous researches (Altaras, 2006) showed that the scale has good psychometric characteristics.

Sample of Respondents

The sample of the research was convenient. However, the mode of sampling contained elements of the stratified sample, since its stratification was conducted according to the domain of giftedness (music, arts, sports, mathematics). Within four strata, the questionnaires were given to the total of 473 students of specialised secondary schools for the gifted in Serbia (Novi Sad, Belgrade, Kraljevo). The structure of the sample, as well as its uniformity concerning the relevant variables, is shown in Table 1.

Table 1. The structure of the sample in relation to the domain of giftedness

<i>Domain of giftedness</i>	<i>Frequencies</i>	<i>Percentage</i>
Music	102	21.6
Arts	96	20.3
Sport	152	32.1
Mathematics	123	26.0
Total	473	100.0

Since the research included students of specialised secondary schools for the gifted, it could be said that the sample, although convenient, had a satisfactory degree of representativeness. The fact is that entrance exams for these schools include the application of tests of specific skills, where the prescribed minimum points required for enrolment actually mean that candidates must possess specific skills in comparison to the average population.

3. Results and discussion

Differences in the development of personality traits with respect to the domain of giftedness

In order to examine the level of development of personality traits, the multivariate analysis of variance was applied. In the first step, the process involved examination of the significance of differences among students gifted in the domain of music, arts, sports and mathematics, taking into account the basic personality dimensions and disposition towards originality. Verification results of significance of the test F are shown in Table 2.

Table 2. Multivariate tests of difference significance

<i>Multivariate tests</i>	<i>Value</i>	<i>F</i>	<i>p</i>
Pillai's Trace	0.518	7.376	0.000
Wilks' Lambda	0.535	8.166	0.000
Hotelling's Trace	0.772	9.018	0.000
Roy's Largest Root	0.627	22.139(b)	0.000

Reading the relevant values in the table above, it was concluded that there were statistically significant differences in the specified personality traits, depending on the type of giftedness. However, as this did not provide the information on individual aspects of personality in which the examined groups differed, subsequent comparisons among the groups were conducted.

Table 3. Significance of differences among the groups on individual dependent variables

<i>Dependent variable</i>	<i>Grouping variable</i>	<i>A.S.</i>	<i>S.D.</i>	<i>df</i>	<i>F</i>	<i>p</i>
Neuroticism	Music gifted	22.343	6.17323	3	2.957	0.032
	Arts gifted	22.219	6.00737			
	Sports gifted	20.388	5.44211			
	Mathematics gifted	21.366	6.17540			
Extraversion	Music gifted	29.853	5.70287	3	5.851	0.001
	Arts gifted	27.823	5.71792			
	Sports gifted	30.704	4.77832			
	Mathematics gifted	29.285	5.50636			
Openness to experience	Music gifted	42.304	4.55503	3	31.685	0.000
	Arts gifted	41.260	5.07677			
	Sports gifted	36.125	5.52096			
	Mathematics gifted	38.390	6.51182			
Agreeableness	Music gifted	35.412	5.33316	3	4.194	0.006
	Arts gifted	33.990	5.06691			
	Sports gifted	35.520	4.69884			
	Mathematics gifted	33.748	4.99113			
Conscientiousness	Music gifted	30.333	5.04183	3	5.306	0.001
	Arts gifted	29.635	6.33290			
	Sports gifted	32.408	5.27181			
	Mathematics gifted	31.724	5.56164			
Disposition toward originality	Music gifted	24.069	4.73299	3	5.468	0.000
	Arts gifted	23.313	4.80419			
	Sports gifted	18.507	4.52952			
	Mathematics gifted	20.276	5.24061			

By examining the differences in each dependent variable individually, it could be seen that students gifted in four specified domains (music, arts, sports, mathematics) significantly differed in all aspects of personality traits. Accordingly, it could be said that our hypothesis, which predicted the existence of statistically significant differences in the level of development of specified variables of personality traits in respondents, was confirmed, taking into account the domain of giftedness. From Table 3 it is evident that the group of students, gifted in sports and music, were ahead in terms of development of all the examined traits. However, in order to see exactly among which groups there were differences in the relevant dependent variables, the series of univariate analysis of variance was conducted, with tests for post-comparisons among the groups.

The first univariate analysis of variance, of which aim was to establish differences among the four groups of respondents concerning the development of *Neuroticism* (Table 4), clearly points to statistically significant difference between music gifted and sports gifted students in terms of expression of the mentioned trait, in favour of the musicians.

Table 4. Tukey's test of multiple comparisons among the groups (neuroticism)

(I) Giftedness domain	(J) Giftedness domain	Difference between the arithmetic means I–J	p
Music gifted	Arts gifted	0.1244	0.999
	Sports gifted	1.9550(*)	0.049
	Mathematics gifted	0.9773	0.606
Arts gifted	Music gifted	-0.1244	0.999
	Sports gifted	1.8306	0.083
	Mathematics gifted	0.8529	0.715
Sports gifted	Music gifted	-1.9550(*)	0.049
	Arts gifted	-1.8306	0.083
	Mathematics gifted	-0.9777	0.523
Mathematics gifted	Music gifted	-0.9773	0.606
	Arts gifted	-0.8529	0.715
	Sports gifted	0.9777	0.523

These findings indicate that music gifted students, compared to their sports gifted peers, express concern to a greater extent, react irrationally more often, have less capacity to overcome the stress and dispose direct impulses. On the other hand, it could be said that the sports gifted students are emotionally more stable, more relaxed, less

frightened that “things will go wrong”, and that they could better cope with daily life requirements without impairing their mental balance. Discussion on these findings could have a foothold in the fact that the musical talent most often implies an independent performance in public. Namely, frequent exposure of the music performers to the comments of both the critics and audience could involve more pronounced tendency to experiencing negative emotions, primarily anxiety, fear, and agitation, compared to the sports gifted individuals, for whom it has already been established that they have a good command of themselves and their emotions.

It is evident from Table 5 that the arts gifted students significantly differ from music and sports gifted students in terms of expression of *extraversion*, in the sense that this trait is less pronounced in them (it is the most prominent in the sports gifted, followed by the music gifted accordingly).

The findings of the research suggest that the sports gifted and the music gifted students are more talkative, active, sociable, cheerful, optimistic and self-confident. On the other hand, it could be said that the arts gifted students are quieter, more reserved, more closed, more independent and more moderate; the quality of their experience and behaviour is less exuberant and energized.

Table 5. Tukey’s test of multiple comparisons among the groups (extraversion)

(I) Giftedness domain	(J) Giftedness domain	Difference between the arithmetic means I-J	p
Music gifted	Arts gifted	2.0300(*)	0.041
	Sports gifted	-0.8510	0.603
	Mathematics gifted	0.5684	0.859
Arts gifted	Music gifted	-2.0300(*)	0.041
	Sports gifted	-2.8810(*)	0.000
	Mathematics gifted	-1.4616	0.190
Sports gifted	Music gifted	0.8510	0.603
	Arts gifted	2.8810(*)	0.000
	Mathematics gifted	1.4194	0.131
Mathematics gifted	Music gifted	-0.5684	0.859
	Arts gifted	1.4616	0.190
	Sports gifted	-1.4194	0.131

Discussion on established possibilities to describe sports and music gifted students in terms of more pronounced extraversion may have support in the fact that the sports and music talents necessarily imply the performance in public. High depend-

ence of sports and music gifted individuals on the social context contribute to their more emphasised sociability. On the other hand, successful mastering of the domain of arts does not require openness to the external environment, and therefore the reputation building in this field is imaginable in absence of the high social competence as well.

Tukey's test (Table 6) clearly indicates that, in terms of *openness to experience*, there are statistically significant differences among all groups, except between musicians and painters, who have the highest and about equal mean values of this dimension (followed by mathematicians, and sportsmen accordingly).

This finding supports the fact that music and arts gifted students show a higher level of curiosity and imaginativeness in relation to the other respondents. They are more open-minded towards inner experiences and prone to experimentation, new ideas and unconventional values. In addition, these individuals have deeper experience of both positive and negative emotions, and they are willing to challenge authorities and dogma.

Table 6. Tukey's test of multiple comparisons among the groups (openness to experience)

(I) Giftedness domain	(J) Giftedness domain	Difference between the arithmetic means I–J	p
Music gifted	Arts gifted	1.0435	0.545
	Sports gifted	6.1789(*)	0.000
	Mathematics gifted	3.9137(*)	0.000
Arts gifted	Music gifted	–1.0435	0.545
	Sports gifted	5.1354(*)	0.000
	Mathematics gifted	2.8702(*)	0.001
Sports gifted	Music gifted	–6.1789(*)	0.000
	Arts gifted	–5.1354(*)	0.000
	Mathematics gifted	–2.2652(*)	0.004
Mathematics gifted	Music gifted	–3.9137(*)	0.000
	Arts gifted	–2.8702(*)	0.001
	Sports gifted	2.2652(*)	0.004

Discussion of these results could be directed towards indicated previous research of the issue of music and arts, i.e. music and arts giftedness. The research of giftedness in artistic domains (Csikszentmihalyi & Getzels, 1973, Drevdahl & Cattell, 1958, Kemp, in 1981, all according to: Feist, 1999) pointed to the relevance of the

characteristics of non-conformity for achieving high performance in the field of arts. Taking into consideration that the personality traits with the sign of openness could be undoubtedly brought into relation to the non-conformity, it becomes quite clear why music and arts gifted students “stand out” in this characteristic from their mathematic and sports gifted peers.

When it comes to *agreeableness* (Table 7), Tukey’s test suggests that statistically significant differences exist only between sportsmen and mathematicians, in favour to the sportsmen. Since *agreeableness* is defined as a dimension of interpersonal relations, and since it refers to the preferences of the individual in interpersonal relations, in the continuum from agreeableness and compassion to antagonism, the greater distinction of this trait in the sports gifted students could be attributed to their team spirit, which is usually not present in mathematicians.

Table 7. Tukey’s test of multiple comparisons among the groups (agreeableness)

(I) Giftedness domain	(J) Giftedness domain	Difference between the arithmetic means I-J	p
Music gifted	Arts gifted	1.4222	0.188
	Sports gifted	-0.1080	0.998
	Mathematics gifted	1.6638	0.063
Arts gifted	Music gifted	-1.4222	0.188
	Sports gifted	-1.5302	0.088
	Mathematics gifted	0.2416	0.985
Sports gifted	Music gifted	0.1080	0.998
	Arts gifted	1.5302	0.088
	Mathematics gifted	1.7718(*)	0.019
Mathematics gifted	Music gifted	-1.6638	0.063
	Arts gifted	-0.2416	0.985
	Sports gifted	-1.7718(*)	0.019

The penultimate univariate analysis of variance (Table 8) indicates that students gifted in the domain of sports are significantly statistically different from their music and arts gifted peers in terms of *conscientiousness*, having this feature more pronounced.

Table 8. Tukey's test of multiple comparisons among the groups (conscientiousness)

(I) Giftedness domain	(J) Giftedness domain	Difference between the arithmetic means I–J	p
Music gifted	Arts gifted	0.6979	0.844
	Sports gifted	-2.0746(*)	0.034
	Mathematics gifted	-1.3902	0.304
Arts gifted	Music gifted	-0.6979	0.844
	Sports gifted	-2.7725(*)	0.002
	Mathematics gifted	-2.0882	0.051
Sports gifted	Music gifted	2.0746(*)	0.034
	Arts gifted	2.7725(*)	0.002
	Mathematics gifted	0.6843	0.780
Mathematics gifted	Music gifted	1.3902	0.304
	Arts gifted	2.0882	0.051
	Sports gifted	-0.6843	0.844

Sports gifted students are distinguished by stronger sense of duty, stronger achievement motive, greater persistence and better organisation in meeting commitments, confidence in their own skills, and tendency to carefully think through the potential “next steps”. Justification of these findings could be found in the fact that any sport, as a highly structured domain of giftedness, requires an elaborated exercise that is performed on daily basis (Bastian, 1994, according to: Winner & Martino, 2000), what certainly requires essential characteristics of which common denominator is conscientiousness.

Last univariate analysis of variance in this segment, aiming to establish the differences among the groups with respect to the *disposition toward originality* (Table 9), indicates that there are statistically significant differences among all of the groups, except between students gifted in the field of music and arts; music and arts gifted students have the most and very similar mean scores on the SPA scale, and they are followed by mathematicians, and eventually sportsmen. Taking into account the findings of the greater propensity of music and arts gifted respondents who use subconscious processes, which imply the acceptance of daydreaming and irrationality as a source of ideas, as well as the tendency towards expressiveness and creativity, independence of thinking, and tolerance for vague and ambiguous contents, it could be said that the research confirmed earlier findings applying to emphasising creativity as an important determinant of giftedness in the arts domains, i.e. qualifying this phenomenon as a “different view of the world”, which is a general characteristic of these domains.

Table 9. Tukey's test of multiple comparisons among the groups (disposition towards originality)

<i>(I)</i> Giftedness domain	<i>(J)</i> Giftedness domain	<i>Difference between the arithmetic means I-J</i>	<i>p</i>
Music gifted	Arts gifted	0.7561	0.688
	Sports gifted	5.5620(*)	0.000
	Mathematics gifted	3.7922(*)	0.000
Arts gifted	Music gifted	-0.7561	0.688
	Sports gifted	4.8059(*)	0.000
	Mathematics gifted	3.0361(*)	0.000
Sports gifted	Music gifted	-5.5620(*)	0.000
	Arts gifted	-4.8059(*)	0.000
	Mathematics gifted	-1.7698(*)	0.014
Mathematics gifted	Music gifted	-3.7922(*)	0.000
	Arts gifted	-3.0361(*)	0.000
	Sports gifted	1.7698(*)	0.014

4. Conclusion

The research results point to the importance of personality traits for the creation of a specific quality of giftedness, manifested in a particular domain. Namely, besides bringing it into the relation with a specific profile of skills, the type of the domain establishes the relation to the personality profile that participates in its mastery. When it comes to the domains of sports and music, which are considered in comparison to the domain of mathematics and arts, specific constellations of the personality traits are evident in the aspect of highlighting the traits related to the public performance as an important segment of these domains. Introspectiveness and dependence on intrapsychological plan are, however, important determinants of the mathematics and arts domains. Also, it could be said that the domains of music and arts, in comparison to the domains of sports and mathematics, require greater development of personality traits with the sign of interest in novelty and diversity, while the domains of sports and mathematics extremely appreciate "playing according to the established rules."

All of this, necessarily, does not mean that the domain forms a gifted person. It is important to note that the link between personality traits and domains in which giftedness is manifested could be two-way. The fact is that the literature (Altaras, 2006) pointed out that as it is possible to have certain behaviours occurred in response to the requirements of the domain, it is also possible that talented people, in addition

to outstanding skills, have other dispositions as well, which direct them towards a particular domain.

Findings that giftedness means different constellations of personal traits depending on the type of the domain which the individual interacts with, point to the conclusion that the phenomenon of giftedness could be precisely perceived only if it is located within the frameworks of the individual domains. Therefore, it seems reasonable to conclude that in addition to the multi-dimensionality, as the crucial modern characteristics of a construct of giftedness, a frame of reference of the research on this issue has to be defined in terms of the specific domain of manifesting excellence. Sternberg's conclusions (Sternberg, 1990, according to Heller & Schofield, 2000, p. 123), who points out that "giftedness must be considered not only in terms of multiple components, but also in terms of its different types" is significant support to the stated viewpoint.

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Osebnostne lastnosti in domensko specifična kakovost nadarjenosti

Izhajajoč iz sodobnega razumevanja nadarjenosti kot domensko specifične kakovosti, ki se ne odraža zgolj skozi razvitost določenih vrst sposobnosti, ampak tudi v različnih kombinacijah osebnostnih lastnosti, smo izvedli empirično študijo v prizadevanju izpopolniti znanje o izven-intelektualni sferi nadarjenih. Cilj raziskovanja je bil ugotoviti značilne osebnostne lastnosti dijakov, nadarjenih na različnih področjih, pri čemer smo pričakovali, da bo raziskava pokazala na osebnostne spremenljivke, ki pojasnjujejo nastanek specifične kakovosti nadarjenosti po področjih. V prizadevanju, da bi našli odgovor na postavljeno vprašanje, so v središču raziskave štiri področja nadarjenosti: glasba, likovna umetnost, šport in matematika. Kot odvisne spremenljivke se pojavljajo: bazične dimenzije osebnosti – "velikih pet" in nagnjenost k originalnosti. Za oceno osnovnih dimenzij osebnosti je bil uporabljen srbski prevod Vprašalnika velikih pet (Big Five Inventory – BFI), medtem ko je dimenzija nagnjenost k originalnosti bila pridobljena s pomočjo rezultata na lestvici podzavestne aktivnosti (SPA). Raziskava je bila opravljena v Srbiji na vzorcu 473 dijakov, ki obiskujejo specializirane srednje šole za nadarjene v Novem Sadu, Beogradu in Kraljevu.

Rezultati raziskave so pokazali pomen osebnostnih lastnosti za nastanek specifične kakovosti nadarjenosti, ki se izraža na določenem področju. Za preverjanje stopnje razvitosti osebnostnih lastnosti smo uporabili postopek multivariantne analize variance. Ugotovili smo, da obstajajo statistično pomembne razlike v stopnji razvitosti posameznih spremenljivk osebnostnih lastnosti anketirancev glede na tip nadarjenosti. Da bi ugotovili med katerimi skupinami obstaja razlika pri relevantnih odvisnih spremenljivkah, smo napravili serijo univariantnih analiz variance s testi za naknadno primerjavo med skupinami.

Prva univariantna analiza variance, ki je imela za cilj ugotavljanje razlik med štiri skupinami anketirancev glede na razvitost nevroticizma, jasno kaže na statistično pomembno razliko med glasbeno in športno nadarjenimi dijaki glede na izraženost omenjene lastnosti v korist glasbenikov. Diskusija takih ugotovitev bi lahko temeljila na dejstvu, da glasbeni talent najpogosteje pomeni tudi samostojno nastopanje v javnosti. Nadalje se je pokazalo, da se likovno nadarjeni dijaki statistično pomembno razlikujejo od glasbeno in športno nadarjenih dijakov glede na izraženo ekstravertnost v smislu, da je pri njih ta lastnost slabše izražena (najbolj izražena je pri športnikih, sledijo glasbeniki). Diskusija, da lahko športno in glasbeno nadarjene dijake obravnavamo kot bolj ekstravertne, lahko temelji na dejstvu, da športni in glasbeni talent neizogibno pomeni nastopanje v javnosti. Večja odvisnost športno in glasbeno nadarjenih posameznikov od družbenega konteksta daje doprinos njihovi izrazitejši družabnosti. V smislu odprtosti so se pokazale statistično pomembne razlike med vsemi preučevanimi skupinami, razen med glasbeniki in likovniki, ki imajo največ in približno enake srednje vrednosti na tej dimenziji (sledijo matematiki, nato športniki). Glede na to, da je mogoče osebnostno lastnost odprtosti nedvomno povezati z nekonformizmom kot lastnostjo, ki se nanaša na doseganje visoke učinkovitosti na področju umetnosti, postane povsem jasno, zakaj glasbeno in likovno nadarjeni učenci v tej lastnosti "odstopajo" od svojih matematično in športno nadarjenih vrstnikov. Ko gre za medsebojno sodelovanje, se pokažejo statistično pomembne razlike zgolj med športniki in matematiki v korist športnikov. Večja izraženost te lastnosti pri športno nadarjenih učencev bi se lahko pripisala njihovemu timskemu duhu, ki običajno pri matematikih ni prisoten. Pokazalo se je, da se nadarjeni učenci na področju športa statistično pomembno razlikujejo od svojih glasbeno in likovno nadarjenih vrstnikov v pogledu vestnosti ter da imajo to lastnost bolj izraženo. Razlago teh ugotovitev bi lahko podkrepili z dejstvom, da šport zahteva razdelano vsakodnevno vadbo, ki zahteva osebnostne lastnosti, katerih skupni imenovalac je vestnost.

Zadnja univariantna analiza variance v tem delu, katere cilj je bil ugotoviti razlike med preučevanimi skupinami glede na nagnjenost k originalnosti, kaže na to, da obstajajo statistično pomembne razlike med vsemi preučevanimi skupinami, razen med dijaki, nadarjenimi na področju glasbe in likovne umetnosti. Vrstni red je naslednji: glasbeni in likovno nadarjeni učenci imajo največ in zelo podobne srednje vrednosti na lestvici SPA, sledijo matematiki in na koncu športniki. Glede na ugotovitev, da glasbeno in likovno nadarjeni dijaki bolj uporabljajo podzavestne procese, lahko rečemo, da je raziskava potrdila zgodnejša opazovanja, ki se nanašajo na poudarjanje kreativnosti kot pomembne determinante umetniških področij nadarjenosti.

Rezultati raziskave so pokazali, da so osebnostne lastnosti pomembne za nastanek specifične kakovosti nadarjenosti, ki se izraža na določenem področju. Razen tega, da lahko posamezno področje povežemo s specifičnim profilom sposobnosti, vrsta področja ustvarja tudi relacijo s profilom osebnosti, ki sodeluje pri njegovem obvladovanju. Zaključimo lahko, da pojav nadarjenost natančno zaznamo le, če se nahaja v okvirih posameznih področij, in da mora biti referenčni okvir raziskovanja problema definiran ne le z multidimenzionalnega vidika, temveč tudi na podlagi konkretnega področja, kjer se izvrstnost pojavlja.

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