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## INTERNATIONAL & COMPARATIVE EDUCATION | REVIEW ARTICLE

# Gifted education in Russia: Developing, threshold, or developed

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**Abstract:** Multiple recent reviews have compared and contrasted the Russian (post-Soviet) system of identifying and educating gifted and talented students with other systems in the world. Correspondingly, this essay only briefly outlines the main features of this system in Russia and focuses primarily on the questions identified as key by the editors of this special issue. It provides a demographic-economic, educational, and historical consideration of the system, presents its essential features, comments on the system's contribution to international science and the practice of identifying and nurturing gifted and talented students, and outlines the system's points of future possible growth.

**Subjects:** Gifted & Talented; International & Comparative Education; Inclusion and Special Educational Needs

**Keywords:** gifted and talented children and youth; academic olympiads; Russian education; Russian psychology

### 1. Introduction: The context

Nothing exists without a context. Therefore, before proceeding with the assignment for this article as formulated by the editors, we review four considerations to establish the context for the discussion that follows. These considerations are demographic-economic, educational, and historical.

The Russian Federation is the largest and ninth most populous country in the world, inhabited, in 2015, by 144.1 mln people with a GDP per capita estimated at US\$ 9,057 and a poverty rate (\$5/day)

### ABOUT THE AUTHORS

Elena L. Grigorenko received her PhD in general psychology from Moscow State University, Russia and her PhD in developmental psychology and genetics from Yale University, USA. Currently, Grigorenko is affiliated with five universities: Baylor College of Medicine, University of Houston and Yale University in the USA, and Moscow State University for Psychology and Education and St. Petersburg State University in Russia. Grigorenko has published more than 500 peer-reviewed articles, book chapters, and books. She has received multiple professional awards for her work and received funding for her research from numerous federal and private sponsoring organizations in the USA and Russia and other countries. Grigorenko has worked with children and their families in the USA as well as in Africa (Kenya, Tanzania and Zanzibar, Ghana, the Gambia, and Zambia), India, Saudi Arabia, and Russia.

### PUBLIC INTEREST STATEMENT

This essay outlines the system of identification and education of gifted and talented children and youth in Russia. It provides the reader with an opportunity to appreciate the historical roots, current state, and future goals of the system. The essay is conceived to be of interest to policy-makers, educators, and parents of gifted and talented children and youth.

of about 8.2% (this rate is comparable to that of 2007, emphasizing the effects of the recent recession, which severely negatively impacted the growth experienced by the country in the early 2000s). The Russian economy is deemed a growing upper middle-income (UM) economy; since the 1998–1999 crisis up to 2011, Russia experienced a period of almost uninterrupted growth marked by an admirable track-record in reducing poverty and boosting shared prosperity. It was classified by the World Bank as a high-income country in 2012–2014, but oil prices and EU and USA Crimea-related sanctions impacted the Russian economy to such an extent that it was reclassified as a UM in 2015. The country does not have a systematic program for its gifted and talented (GAT) children; rather, it has an array, some historical and some innovative, of approaches. Although not in place now, regular investment in the education of GAT students in the Russian Federation has been estimated to potentially result in a 7–9% increase in the Gross National Product, GNP (Рубцов, Журавлев, Марголис, & Ушаков, 2009).

According to UNESCO indicators, covering the period from 2000 to 2012, the average value of Russia's public spending on education during that period was 3.67% of its gross domestic product (GDP) with a minimum of 2.94% in 2000 and a maximum of 4.15% in 2012. Also from UNESCO (data from 1989 to 2010), the average literacy rate for that period was 99.04% with a minimum of 97.99% in 1989 and a maximum of 99.68% in 2010. Russia's TIMSS 2015 results in mathematics placed its fourth graders in seventh place (after only Northern Ireland among European countries) and its eighth graders also in seventh place, but first amongst its European peers. In science, Russian fourth graders were fourth (after Singapore, Korea, and Japan) and its eighth graders—seventh (behind the only one other European country, Slovenia). Russia's PISA 2015 results placed Russian 15-year olds either at (for mathematics and reading) or just a notch below (for science) the OECD average.

Finally, the current system of education in Russia is rooted both in the educational traditions of Imperial Russia and the post-Revolutionary traditions of the Soviet Union. Both educational systems acknowledged, identified, and educated children with gifts and talents; therefore the system as it exists today bears different residues of both historical systems. Neither system will be described here in detail as other excellent sources of such descriptions are available (Alexander, 2001; Bronfenbrenner, 1970). Today, the process of identification, selection, education, and placement is guided by statutory federal laws (Правительство Российской Федерации, 2015), executive presidential decrees (Президент Российской Федерации, 2012), and administrative regulations (Министерство образования и науки Российской Федерации, 2010). Here is a brief summary of the system, as it exists today. First, in general, it continues and extends the Soviet tradition in its identification and education of gifted and talented students (Grigorenko, 2000; Grigorenko & Clinkenbeard, 1994; Jeltova & Grigorenko, 2005; Jeltova, Lukin, & Grigorenko, 2009). This means that the identification of GAT students is carried out primarily through various knowledge- or performance-based competitions. Second, when identified, the children are placed (or admitted) into specialized schools that serve as their primary (i.e. academic, with a focus on a particular academic domain, such as mathematics or physics) placements, where they spend their regular school day; or they are given a secondary (i.e. programs focusing on music, arts, dance, or sports) placement, where they go after their regular school day. Third, the identification and education of GAT children unfolds in three general domains: academic subjects, sports, and fine arts.

Multiple recent reviews have compared and contrasted the Russian (post-Soviet) system of identifying and educating GAT students with other systems in the world (Mandelman, Tan, Aljughaiman, & Grigorenko, 2010; Марголис & Рубцов, 2011). There have also been earlier reviews of GAT programs in Russia (Grigorenko, 2000; Grigorenko & Clinkenbeard, 1994; Jeltova & Grigorenko, 2005; Jeltova et al., 2009). Therefore, this essay only briefly outlines the main features of the GAT system in Russia, as recent comprehensive reviews are readily available, and focuses primarily on the questions identified as key by the editors of this special issue. It presents the essential features of the GAT system in Russia, comments on the system's contribution to international GAT science and practice, and outlines the system's points of future possible growth.

## 2. Essential features of the GAT system in the Russian Federation

The precursors of the modern version of the GAT system in Russia can be traced to the nineteenth century, when the Astronomic Society of the Russian Empire held the first “Students’ Olympics of the Mind” (Ushakov, 2010), hereafter, Academic Olympiads or simply Olympiads. When they re-emerged in the 1930s, these Academic Olympiads became very popular and one of the best-known characteristics of the Soviet educational system. A critical role in re-introducing these Olympiads to Russian/Soviet education was played by Boris Delone, a well-known mathematician and academician, who organized the first Olympiad in mathematics in St. Petersburg (then Leningrad) in 1934. Math Olympiads were joined by Physics and Chemistry Olympiads in 1938, when the system had gained momentum, but it was interrupted by World War II and resurrected only in the late 1950s. The spirit of that time was different, though, charged by ongoing competition in technological developments with the West. The country needed a steady influx of qualified scientists and engineers, so to maintain that influx, on top of the Olympiads, four specialized boarding schools for children and adolescents with gifts in math and science were established in Moscow, Leningrad, Kiev, and Novosibirsk in 1963. These schools were “satellites” of the major federal universities in these cities and, therefore, students at those schools were taught by university personnel. These schools recruited students by means of the Olympiads, but also by means of distance education (i.e. children corresponded with these schools by receiving and submitting assignments) and summer schools held at these schools and other locations throughout the country. This distance education model was enhanced by the establishment, in 1970, of the journal *Квант* (Quantum) for school children, which published educational materials, interpreted scientific discoveries for children, and disseminated complex problems for children to solve and submit back to the journal.

A special remark has to be made with regard to the utilization of psychological tests in the Russian educational system. Importantly, the usage of psychological tests in the context of education was explicitly prohibited in 1936 (ЦК ВКП(б), 1936). This administrative order challenged and delayed the development of the testing industry in Russia. Although the order has even now not been officially canceled or dismissed, the situation has changed, and there is a growing appreciation both of the need and the void of appropriate instruments. Clearly, this void impacts all arenas of child services, including the identification and education of gifted and talented students; there are simply no adequately functioning psychological tests of intelligence and other cognitive abilities that can be used in working with intellectually gifted children in Russia on a large scale. Yet, there are relevant examples of research studies utilizing testing approaches developed in the West (Обухова & Чурбанова, 1995) and in Russia (Богоявленская, 2002). Correspondingly, the usage of standardized tests in Russia in the context of GAT programs is very limited. According to Druzhinin (Дружинин, 1995), high test results do indicate the presence of intellectual gifts. Yet, low test results exclude neither the presence of intellectual gifts nor the possibility of these gifts developing in the future. Therefore, it is recommended that these tests be used for inclusion, but not exclusion purposes; this recommendation is referred to as the “positive criteria” usage of tests.

### 2.1. The range of gifts and talents and their development

To re-iterate what was stated above, the education of GAT children in Russia is tightly linked to their initial identification and their recurrent demonstration of high performance, i.e. repeated justification of their GAT status. To illustrate this general thesis, a number of prototypical examples, collected by the first author through 30 years of service as a practicing psychologist who has advised many families and trained many junior colleagues throughout the country, are presented below; then some general commentaries are offered.

Denis and his family live in Moscow; both parents have high paying jobs in the private sector. They are quite busy, so Denis, as a child, spent a lot of time with a nanny, who took him to a variety of different developmental activities as a young child. One of these settings included a program for early math (e.g. Клуб Юных Эрудитов, The Club for Erudite Children). Denis demonstrated a high level of performance in math and the parents were advised to retain a private teacher, who, in addition to the time Denis spent in the program, offered additional hours of math. When Denis turned 6,

the parents started looking at schools for Denis. As any child in Moscow, Denis had the right to go to his neighborhood school or to compete for entry into a specialized school. These specialized schools are numerous and explicitly state their admission requirements ([https://dogm.mos.ru/rating/r2014\\_2015.php](https://dogm.mos.ru/rating/r2014_2015.php)). Denis's parents considered multiple options and, in consultation with Denis's math tutor, selected two schools to which Denis applied. Both schools required a set of exams, to prepare for which Denis's parents retained additional tutors. Moreover, the schools collected tuition and were not close to the family's home (i.e. required a separate driver to take Denis to and from school every school day). Yet, the family was ready to accrue these additional expenses. Denis was admitted to one, but not the other, school. At the entry interview, the school delineated its expectation, among which was that every student participate in mathematics Olympiads at a number of levels (school, district, region, and others, <https://olimpiada.ru/>), including the all-Russia competition (<https://www.rosolymp.ru/>); there are many costs associated with this participation, such as preparation, participation fees, travel costs, and so forth. The school reserved the right to re-evaluate Denis's "fit" based on his math performance on a regular basis, with the possibility of being expelled if Denis ceased to perform to the demands of the curriculum.

Marina and her family live in Tver', a historic city located in between Moscow and St. Petersburg. Marina's mother loves ballet and had always wanted to be a ballerina, but this did not quite work out. So, she teaches ballet to little kids. When Marina turned two, she started coming to her mother's classes and quickly caught up with the other older kids in the class. Her mother started working with Marina both at home and in her classes. She then contacted ballet tutors, who could be hired to prepare a child for admission to specialized ballet schools. When Marina started school, she already had an explicit goal of applying to the Vaganov Ballet Academy (<https://vaganovacademy.ru/index.php?id=701>). The Academy starts at grade 5. Marina had worked very hard for 5 years, practicing, participating in recitals, and going with her mother to St. Petersburg to receive paid tutorials from the Academy's faculty members. Although the competition was grueling, Marina did pass the entrance exam and was one of only 12 children admitted that year. She moved to St. Petersburg into the Academy's dorm and continues to work very hard on both acquiring new skills and demonstrating her skills in various performances.

Maxim and his family live in Siberia, in the city of Irkutsk. As long as Maxim remembers, he has always been skating. He initially just skated with his parents and cousins, then he started playing ice-hockey. He initially played with his Dad, as they lived near a small lake, which is typically covered with ice from October to May. Then, at 6, he joined a hockey club nearby (Рекорд), where he practiced initially one, then three, then five times per week, continuing to play with his Dad and his friends on the little lake pretty much every weekend. Maxim started playing competitively for his team as a forward when he was 10 and played at all levels of team competition (city, regional, all-Russia, international) until, at the age of 18, he was admitted by The Russian State University for Physical Education, Sports, Youth and Tourism in Moscow and started training with one of Moscow's ice-hockey clubs.

Oxana and her mother live in the city of Lipetsk, a smallish city in middle Russia. Her mother needs to work a lot to support the family, so Oxana spends much time with her grandmother, who is an elementary school teacher at a nearby small private school, which has all grades (from grade 1 to grade 11), although there are only about 50 kids in each grade. The school offers after-school programs, where children can attend various subject-specific academic clubs. Oxana's grandmother, who noticed rather unusual math abilities in Oxana early on, made an arrangement for Oxana to first simply sit in on and then participate in the school's math club. Although most of the kids in the club were in grades 5+, Oxana was able to deal with the majority of the problems and started to participate in math competitions (so-called academic Olympiads, <https://info.olimpiada.ru/article/604>) early on. The teacher who led the school's math club was well versed in the system of such Olympiads and, in consultation with the school and following the federal administrative directives for meeting the needs of gifted and talented students (Правительство Российской Федерации, 2015), kept working with Oxana as she victoriously moved from one Olympiad to another. As she

continued demonstrating performance in math over and above her age level, the teacher recommended that Oxana's mother consider sending Oxana to study in Moscow, at the specialized math and science boarding school affiliated with the best university in the country, Moscow State University; entry exams to the school were carried out throughout the country. Oxana applied and was admitted and went to study at the Kolmogorov University School (<https://internat.msu.ru/>) as a grade 9 student.

Ramazan lives in Makhachkala, the capital of Dagestan. His parents both noticed and were told by the school that Ramazan has high verbal abilities and is very interested in literature and history. The school, mandated by federal administrative laws, supported Ramazan's development by nominating him for participation in different competitions and Olympiads in literature and history (<https://xn-80abucjiibhv9a.xn-p1ai/%D0%BE%D0%BB%D0%B8%D0%BC%D0%BF%D0%B8%D0%B0%D0%B4%D0%B0>); he was also sent to attend a session on creative writing at the Sirius Center for gifted and talented youth in Sochi (<https://sochisirius.ru/>). The parents also tried to promote Ramazan's interest by providing him with chances to both develop and demonstrate his talent. Specifically, they supported Ivan's interest in and helped him to prepare to participate in the popular TV program «Умники и умницы» (Brilliant Boys and Girls, <https://www.1tv.ru/shows/umnicy-i-umniki>). This program caters to high-school students and, as a prize, awards admission to one of the most prestigious specialized colleges in the country, Московский Государственный институт международных отношений (Moscow State Institute for Diplomacy), which trains future diplomats for the country.

Matrena lives in Magadan, a large north-eastern Russian city. She has an interesting and powerful singing voice and perfect pitch. Her parents noticed it early on and, after consulting a neighborhood school of music, set up vocal lessons with one of the school's teachers when Matrena was four. The goal was to prepare Matrena to participate in the TV show «Синяя Птица» (The Blue Bird, <https://ptica.tv/>). Matrena succeeded and, at six, performed at the show as a folk singer and was admitted to the school of music by one of the show's organizers. The class is long-distance and involves Matrena, her Moscow mentor, and her local voice teacher.

Four observations can be drawn from these illustrations. First, the system for addressing the needs of GAT children in Russia is domain-specific. As mentioned above, the three dominant areas of children's performance where gifts and talents are sought out are academics, performing arts, and sports. Second, there are various administrative provisions that substantiate the identification of gifted and talented children predominantly and perhaps, exclusively, through various performance-oriented competitions. When a pattern of high performance is established, there are possibilities for further growth and development of gifted and talents; these possibilities are highly competitive. Third, the emergence and substantiation of gifts and talents are driven primarily by parents and families, but the participation of educators of different types is essential for both entry to and success in these competitions. Fourth, although "mass and systematic" identification of gifts and talents in children is mandated (Президент Российской Федерации, 2012), in fact, the federal system of education has neither an established system nor the financial resources for such identification, so it is largely circumstantial, driven by a coalescence of factors involving the emergence of abilities (again, demonstrated through performance and competence, not predisposition), family factors (mostly the resources needed to support and develop these emergent abilities), and a supportive educational context (the availability of a helper and a chaperone who knows the system well enough to help the child advance through it).

## **2.2. The primary conception of giftedness**

Multiple theoretical influences define the field of studies of student talents and gifts in Russia today. These influences are both historical and contemporary. Historically, the domain of Soviet psychology most influential for this field is the study of abilities. Boris Теплов (Теплов, 1961) developed a theory of abilities and giftedness; and Boris Анан'ев (Ананьев, 1977) investigated age-dependent changes in the structure of cognitive functions from a systemic point of view. Yakov Пономарев (Пономарев, 1976) worked out a hierarchical model of creativity, differentiating logical, discursive, and intuitive



thinking, placing creativity in between these levels as an indicator of the transactional process required for a creative act to emerge.

Currently, there are also multiple theoretical approaches influencing theories of giftedness, first and foremost being the Russian theories of intelligence. Specifically, Marina Kholodnaya's (Холодная, 1997, 2002) ontological theory of intelligence stresses the importance of considering the complex structure of intelligence and its transformation throughout its development, as captured by a person's cognitive, metacognitive, and motivational experiences. Vladimir Shadrikov (Шадриков, 1994) offered a definition of abilities as characteristics of a mental functional system, whose functioning (mental processes) is essential for any kind of activity. Vladimir Druzhinin (Дружинин, 1995, 2001) developed the model of an intellectual spectrum by merging intellectual theories with theories of mental resources, then defined abilities in the context of this model. Dmitrii Ushakov (Ушаков, 1999, 2003), in his structural-dynamic theory of intelligence, views intellect as a developing entity whose lifespan functioning and transformation is driven by general principles of development.

Although numerous Russian psychologists have written on giftedness, these writings have not converged in any comprehensive theories of giftedness. One of the most developed theories of giftedness (yet, not empirically validated) is that of Marina Kholodnaya (Холодная, 2011). She differentiated two key interpretations of giftedness. The first is *humanistic* and egalitarian, embedded in the more general interpretation of developmental trajectories, assuming that each child (whether gifted or not) is entitled to receive adequate education and, therefore, the education of gifted children should be different from that of other children, as their needs are different. The second interpretation is deemed to be *pragmatic* and assumes that an investment in the development of a gifted child is expected to generate dividends, as this child will become an adult who may contribute substantially to the economy of the society that invested in the child.

In her theory, Kholodnaya is particularly interested in the question of why not all gifted and talented children grow up to become gifted and talented adults, and why there are many gifted and talented adults that never demonstrated any specific gifts or talents as kids (e.g. the Soviet-American poet Josif Brodsky who repeated second grade and dropped out of school in seventh grade; Юркевич, 2011). In addressing the former conundrum, she differentiates five types of intellectually gifted children. The first type describes children who demonstrate an accelerated rate of intellectual development, but a typical or even delayed rate of other psychological processes. The second refers to children who demonstrate an early academic specialization (e.g. mathematics); these children can demonstrate a range of intellectual functioning (typically, from average to high), but have difficulties with self-regulation and communication skills. The third group captures children who have splinter skills demonstrating unique arithmetic or verbal performance. The fourth group captures children with high levels of IQ and explicit difficulties in their academic functioning. Finally, the fifth group describes children who demonstrate very high performance in a given domain (or domains) and no difficulties or excelling in social-emotional functioning. These five groups, according to Kholodnaya, can be clustered into two mega-groups—(1) children with harmonic (i.e. type 5 of gifted and talented children) and (2) disharmonic (i.e. types 1–4 of gifted and talented children) constellations of gifts.

Kholodnaya hypothesizes, but does not provide any evidence to support this hypothesis, that these two groups are associated with different probabilities for the successful conversion of giftedness from childhood into adulthood. She differentiates two types of conversion: progressive, when childhood giftedness continues into adulthood and results in extraordinary achievement; and regressive, when childhood giftedness does not continue into adulthood and does not result in any noticeable achievement. In addition, Kholodnaya stresses the dynamic nature of giftedness by classifying its types into five different categories. The first category is age-based giftedness (i.e. giftedness that can manifest itself through age-related peaks and dips)—this conceptualization of giftedness is always anchored against age norms and, therefore, can vary for different age groups. The second category refers to hidden giftedness (i.e. gifts and talents that are possessed by a child, but are not readily obvious and may only be discovered accidentally). The dynamic nature of this type of giftedness is

that it can turn from covert to overt. The third category of giftedness is referred to as potential giftedness (i.e. giftedness that can emerge based on some predisposition, such as, for example, perfect pitch for musical talent, although when only predisposition is available it cannot be referred to as giftedness). The fourth category is referred to as maturing giftedness (i.e. giftedness that develops with skill, practice, and the acquisition of an individual style). Finally, the fifth type of giftedness stresses the importance of considering alternative giftedness (i.e. the demonstration of extraordinary abilities that might not be socially acceptable, such as negative leadership skills). Progressive transformations of giftedness result in adults who, in turn, can be classified into three categories—competent (i.e. high performers across multiple domains, but especially in their chosen profession), talented (i.e. high achievers in a single circumscribed domain), and wise (i.e. social authorities committed to the improvement of lives of ordinary people). Regressive transformations of giftedness lead to the manifestation of different categories of adults—typical (i.e. without signs of childhood giftedness); able (i.e. demonstrating a capacity to perform in low-stake situation, i.e. singing beautifully around the table with friends and families, but not leveraging childhood potential into adult accomplishments); strange (i.e. demonstrating inadequate realization in the context of high levels of self-esteem and self-worth); and destructive (i.e. antisocial manifestation of childhood gifts and talents). Kholodnaya observes that psychological indicators that are typically registered to identify childhood giftedness (i.e. IQ and specific personality characteristics) are not highly predictive of childhood achievement and argues that IQ is too narrow (i.e. constraining) and personality characteristics are too broad (i.e. not specific enough) to differentiate the progressive and regressive groups.

Concluding her analysis, Kholodnaya makes reference to the growing tendency in the Western literature to consider childhood giftedness as a predisposition to the manifestation of adulthood competence and expertise (Raven, 1991; Sternberg, 1998). In this context, Kholodnaya stresses, the issue is not how to identify and educate giftedness, but how to ensure that as many children as possible, whether demonstrating gifts and talents in childhood or not, are able to become competent adults demonstrating high levels of expertise in their chosen domains.

This concern about what happens to gifted children as they become adults has been echoed in the latest federal documents outlining the rules for the identification, support and monitoring of the development of children with gifts and talents (Правительство Российской Федерации, 2015). This document stipulates the creation of a national database of children who are the winners of various competitions in fine arts, sports, and Academic Olympiads. Moreover, it requires the generation for such children of so-called portfolios that are envisioned to document the progress of these children throughout the system of school education, their transition to higher learning institutions, and their transformation into professionals. This is an unprecedented attempt to register and track a substantial portion of GAT programs participants into their adulthood.

### **2.3. Contributions to the science and practice of giftedness**

In their analysis of the different systems of identification and education of children with gifts and talents around the world, Margolis and Rubtsov (Марголис & Рубцов, 2011) identified features of the Russian system that are common and those that are Russia-specific. Thus, among common features are (1) after-school activities for gifted and talented children that are localized in specific settings (clubs, museums, centers) other than schools and delivered by trained professionals; (2) various competitions for specific gifts and talents that are used to both identify and stimulate high performance; (3) a network of specialized schools (which, the authors argue, is the largest compared to the rest of the world); and (4) various partnerships between higher learning institutions and other sources of expert knowledge and skills (e.g. museums, theaters, sport clubs). Among the Russia-specific features are (1) the concentration of further support for children who have already demonstrated high performance rather than on children who might demonstrate high performance if placed in the “right” educational environment; and (2) the minimal (if any) utilization of psychological and educational tests.

Thinking about the contributions to international GAT science and practice by Soviet/Russian psychology, a number of considerations seem important. First, one needs to consider the indicators of performance that have been valued by the country since the emergence of the importance of educating gifted and talented individuals. Such performance achievements are quite obvious in academic, fine arts, and sports arenas.

Second, in the education of gifted and talented students, there is much to say about learning, training, and working within a school, and working within a particular approach to educating gifted and talented children that is known for the achievement of its students. In Russia, such training schools are multiple and well known. To sample just a few, the reputation of the Kolmogorov School of Math and Science is internationally recognized, and its diploma is considered with enthusiasm by first-rank world universities. Similarly, the school of figure skating of Tatiana Tarasova<sup>1</sup> has generated numerous Olympic and other high-profile-competition champions. And to study violin with Elena Adzhemova<sup>2</sup> is both highly competitive and highly prestigious.

Third, there is much to say for the ongoing promotion of excellence and uniqueness in the Russian mass media, on TV, radio, and in the press. Popular and diverse shows stress both the unique nature of gifts and talents, and the crucial importance of the match between “raw” predisposition (i.e. gift or talent) and schooling (i.e. working with a coach, a teacher, an instructor and nurturing the predisposition into sustainable and productive performance of a highly accomplished adult). In these programs, the mass media often acts as a “match maker,” providing the chance for a child to be identified and matched with a mentor who can oversee the transformation from promise to performance.

Yet, although there are distinct accomplishments discussed above, there are areas of weaknesses in the field of giftedness in Russia. Specifically, it is fair to say that the scope of empirical research in the field of gifted and talented is limited. In fact, the corresponding theoretical literature is more impressive in quality and quantity. The empirical works that are published outline the questions that still need to be asked rather than comprehensively answering these questions. Thus, the system is marked by an unquestioned assumption that the existing system of Olympiads reliably identifies intellectual gifts. Yet, this assumption has not been systematically validated. In fact, a single study that did look at psychometric properties of collections of questions used in a variety of Academic Olympiads reported poor psychometric properties of these collections (Ushakov, 2010).

### 3. Looking forward: Big and small challenges

In their analyses of the current state of GAT programs in Russia, Rubtsov and colleagues (Рубцов et al., 2009) outlined the main characteristics and directions for the development of these programs in Russia. The authors first acknowledged the growing interest in these programs from the government, which announced its intentions to strengthen them. They expressed their support of such federal involvement, both financial and strategic, and substantiated their support with three different arguments—economic, social, and humanistic. From the economic point of view, they argued, reasonable expenditures on the GAT programs would provide a return with a substantial coefficient. From the social point of view, they argue that GAT programs can and often do act as systems of “social elevation,” so that children from low SES might gain exposure to and benefit from GAT programs. Finally, from the humanistic point of view, GAT programs should provide Russian youngsters with an additional opportunity for self-realization and preparation for entry into profession life.

Yet, while expressing cautious optimism, they observed that the GAT system, as it exists in Russia now, is still of the old style, driven by two key elements—the system of Olympiads for gifted and talented, and the system of elite, highly specialized schools. As a consequence, the population coverage provided by these elements is very low, with the total annual n of about 1,000 children. Given that the annual n for high-school graduates wavers at around 1,000,000, this GAT system’s population coverage is about .1%, which is remarkably lower than the coverage for most of the countries with established GAT systems that are oriented on the usage of standardized tests of intelligence



and consider “giftedness” when the IQ value exceeds 1.5–2 standard deviations from the population mean of 100 (i.e. 122–130, which amounts to 2–10% of the general population, assuming that IQ is normally distributed). Moreover, it is not only the size of the system that requires enhancement, it is the system itself. It is argued that (Рубцов et al., 2009), while the system has elements that are worth keeping, it also has missing elements that need to be introduced, so that a revised and enhanced system can emerge. One such missing element pertains to the absence of a systematic scientific way to identify giftedness in children who, for whatever reason, including an inadequate educational environment for their talents, have not been able to demonstrate their gifts in performance just yet. This so-called “hidden giftedness” cannot be identified through the existing system of Olympiads and, therefore, many gifted and talented students not exposed to strong education fell through the cracks. A truly effective GAT system should not only focus on gifts and talents that are already ready to be harvested (e.g. through Olympiads); it should be able to nurture gifts and talents before they manifest in performance. Yet another issue of concern is the disconnect between educational programs in high-demand specialized schools for gifted and talented and in the higher learning institutions that these schools’ graduates attend after receiving their high-school diplomas. As these schools often offer advanced courses that match college-level courses in difficulty and variety, when such a student gets admitted to college there is often a problem with engagement, interest, and motivation, as the courses are either too easy or too superficial. The third problem is in the discontinuity between graduating from college and finding first employment, as often there is a need for a targeted match between what is often a highly specialized talent and the labor market placement that can use this talent.

In terms of recommendations, the following are proposed: (1) the development of a comprehensive diagnostic and identification system; (2) the creation of a so-called “alternative educational reality,” which would create a flexible system of educational pathways individualized for each child and going beyond high-school years into higher education (it is argued that this pathway should end only when a grown up establishes the level of performance that satisfies the expectations of the society; and (3) the establishment of well-supported counseling services for students engaged in GAT programs. These three considerations, in turn, may be subdivided into more detail-oriented, specific practical activities. Specifically, there should be more well-equipped schools that can address the needs of gifted and talented students. These schools need to be diverse in terms of their academic profiles, their geographic location and their hierarchical structure, so that various types of programs are available. There should be a digital network between providers of GAT education that allows them to communicate with each other, to model and disseminate effective educational technologies, and to monitor the effectiveness of their own work. This network could and should extend itself to include “typical” schools so that they can use these educational technologies in their buildings and, as much as possible, support their gifted and talented students by diversifying and individualizing their educational programs. To support such a system, a cadre of educational providers trained to work with gifted and talented students would be needed. This, in turn, would necessitate the development of corresponding didactic and practical courses and programs. Finally, and most importantly, the system should be based on the principles of evidence-based practice with an implicit and explicit assumption of the need to build and deliver this program while being driven by these principles. The immediate scientific objectives that such a system demands are: (1) the development of a Russian national model for the identification and education of gifted and talented children; (2) a system for the monitoring of intellectual gifts that permits creating a representative sample of gifted and talent children for research; and (3) the development of regional models for GAT programs.

Discussing the science and practice of the identification and education of children with gifts and talents in Russia, Viktoria Yurkevich (Юркевич, 2011) identifies the following as the main focus for future directions in Russia. First, there is a strengthening tendency to view the identification, development, and support of children with gifts and talents as one of the priority tasks both for governing structures and society. Yet, although strengthening, as reflected in the growing number of relevant administrative documents, it is not strong enough to generate a committed budget line, and funding

for the relevant programs remains a serious issue. Second, there is a convergence of various theoretical and practical interpretations of giftedness as advancing a product (i.e. intellectual, artistic, or sport achievement) as a true indicator of giftedness. Thus, longitudinal studies are necessary to connect early indications of gifts and talents to achievements recognized as such by society. Third, there appears to be a broadening of the concept of gifts that dominated in Russia since 1930, i.e. focus on math and hard sciences. There is growing appreciation of “other” types of giftedness, including social-emotional giftedness and leadership, and such appreciation should keep growing. Fourth, although already somewhat in place, there is a strong need to globalize both the experiences and exposure of gifted children to diverse high-quality programs, both nationally and internationally.

Still, a number of developing tendencies seem worrisome. Specifically, there is a strengthening accent on human gifts and talents as economic capital and investments of a particular, in this case, Russian, society (Духанина, 2009; Левашов, 2009). Correspondingly, there is growing pressure on educators and psychologists to develop programs for the identification and education of gifts and talents that are evidence-based and effective; yet, such pressure is perceived as technocratic (Юркевич, 2011). Finally, there is a concern that children with gifts and talents are often immersed in an educational environment that is too homogeneous. As determined by their gifts and talents, the overwhelming majority of their educational activities (from in-class to homework) are often focused on one domain, which may be counter-productive for their transformation into productive adults.

Concluding her essay, Yurkevich (Юркевич, 2011) puts forward five specific objectives as key elements of the transformation of the current system of the field of gifts and talents in Russian into a new “reality.” Specifically, first, she proposes to radically change the main approach to giftedness, refocusing from domain to personality development and establishing (or strengthening) the role for fine arts and literature in the education of any and all gifts and talents. Second, Yurkevich (Юркевич, 2011) advances the idea of changing the pattern of education from imposing on a child a particular curriculum to giving them a chance to select or even build their own curriculum. Correspondingly, third, their education should primarily take the form of individualized coaching and mentoring. Yet, fourth, collective (not individualized) education should be embedded in and contextualized by international and Russian intellectual and cultural values, aimed at the development of a sense of mission and contribution. Relatedly, finally, the fifth objective pertains to the development of leadership qualities and skills.

#### 4. Conclusion

This essay is intended to provide a brief overview of the state-of-affairs pertaining to GAT programs in today’s Russia. The current GAT system has long historical roots going back to the nineteenth century. It is also characterized by unique features, such as the minimal (if any) usage of standardized psychological tests. It is also characterized by both its unique systemic tendencies, such as the tradition of Academic Olympiads, (<https://xn--80abucjiibhv9a.xn--p1ai/%D0%BE%D0%BB%D0%B8%D0%BC%D0%BF%D0%B8%D0%B0%D0%B4%D0%B0>) and unexpected administrative innovations, such as the creation of camps for gifted children <https://sochisirius.ru/>, which is seemingly orthogonal to the theoretical and empirical data on GAT programs that has been accumulating in the professional literature.

As the author understood from the invitation letter to contribute this essay, the idea behind this issue is to sample GAT systems from around the world from developing or threshold countries. As mentioned above, recently Russia has lost its HIC status and was re-labeled as MIC. This, technically, brought the country back into the coalition of developing and threshold countries. But what about its system of GAT education? Is it developing, threshold, or developed? To answer this question, we will need to agree on the indicators that qualify a GAT system as a member of one of these groups. If the indicator of “students served” is considered, then the system is clearly, developing, as it serves a substantially smaller subgroup of Russian children than would be expected based on the utilization of conventional IQ-based criteria. However, these criteria are not applicable in Russia, as it has no

tests of IQ or a tradition of using these tests in its GAT system. If the indicators of the “theory of GAT” are considered, then it is, probably, threshold, because there are many relevant theoretical approaches and considerations that should merge into a comprehensive theory of giftedness, to be synthesized by even, perhaps, one of the academicians whose work is discussed in this essay. However, if one considers the successes of the graduates of the Russian GAT system, as captured by their achievement across multiple dimensions of human endeavor, it is obviously well developed, as few countries in the world can attest to comparable achievements of the graduates of their GAT education systems.

Whether due to specific economic considerations of the recession or to the realization that natural resources in Russia are not endless, recently there has been much public attention to and legal activity (i.e. the publication of various federal and local governmental documents) focused on the human capital of Russia; it all generates a feeling in the air that changes are coming to the system of GAT education in the Russian Federation. We can only hope that the GAT system, whether revised, updated, or brand new, takes into the account, first and foremost, the interests of its clients, i.e. the gifted children of Russia. It should and, I believe, it will.

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#### Notes

1. Tatiana Anatolyevna Tarasova is a Russian figure skating coach and national figure skating team adviser.
2. Elena Konstantinova Adzhemova is a Russian violin player and a professor of one of the most prestigious academies, the Academy named after the Gnesin Family.

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