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A graduate of philosophy from the Jagiellonian University. For 30 years, she has been associated with the Polish Association for Gifted Youth (formerly the Polish Children's Fund), an organization dedicated to supporting the development of exceptionally talented students. The association organises free workshops, research camps, seminars, and research internships for gifted youth. For many years, she has been committed to education reform in Poland, conducting workshops for both students and teachers and promoting the idea of community-based support for gifted youth and free sharing of knowledge. She is the initiator of Inspiratorium, a program aimed at supporting teachers, and co-author of the guide for parents and teachers *Gifted Child. First Aid [Zdolne dziecko. Pierwsza pomoc]*. Since 2011, she has served as a member of the Program Council of the Copernicus Science Center.

SUPPORTING EXCEPTIONALLY TALENTED YOUTH

The key to the program's success is not financial scholarships, but the opportunity for students to work with top-class scientists and artists. This distinctive feature has, for years, opened doors for thousands of outstanding young Poles.

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One of the most important factors influencing human development is the ability to face challenges of an appropriate level of difficulty. We usually consider this in the context of overly difficult challenges, but for individuals with high intellectual potential and exceptional talents, the situation is somewhat different.

This is especially important for young people. During the period of most intensive development, they should encounter problems that require effort to solve, stimulate them to discover new tools and approaches, and ultimately provide genuine satisfaction. The challenge lies in the fact that creating such conditions within the education system is not straightforward. By definition, schools focus on presenting conventional problems along with established solutions.

Not Everything Can Be Purchased

From the very beginning, this awareness has guided the founders of the Polish Association for Gifted

Youth, known until 2024 as the Polish Children's Fund. Established through the initiative of doctors and social workers, the association initially focused on addressing deficiencies in equipment and modern knowledge in Polish children's hospitals. At the beginning of the 1980s, the infant mortality rate in Poland was one of the highest in Europe. Thanks to funds from highly developed countries, a large tranche of specialized equipment could be purchased, and many Polish doctors were trained at leading centers in the USA and Europe.

However, the medical aspect of these activities proved not to be the most significant. Just two years after the fund was established, in 1983, the founders realized that the country's development depended not only on how many newborns could be saved from premature death but also on the conditions created for their future growth. The idea was simple: support the most talented individuals so that they could later initiate the civilizational changes most needed by society.

Fifty-six first-year scholarship holders, selected from 100 students nominated by schools across the country, were able to enjoy modest but helpful financial support. However, from the very beginning, the program's creators also focused on something that cannot be purchased, no matter the size of the scholarship: challenges. This idea gave rise to a bridge between school education and the academic world, beginning with a meeting between a group of students and scientists from the Faculty of Physics at the University of Warsaw.



POLISH ASSOCIATION FOR GIFTED YOUTH

Today, scholarship candidates apply on their own, with about 1,600 applicants each year. We seek students who have already maximized all opportunities in their immediate environment – those for whom standard school or extra curricular tasks no longer pose a challenge. Nearly 600 of these students are invited each year to a world that is demanding, yet incredibly interesting. While we no longer provide financial scholarships *per se*, all collected funds – through grants, donations, 1.5% tax allocation – are used to cover each student’s free participation in classes. We provide accommodation, meals, and transportation, ensuring that economic differences do not limit access to the program. This is made possible in part by the fact that everyone involved – outstanding scientists and artists, young researchers, doctoral students, and university students (over 200 people annually) – volunteers their time.

Practice, Practice, Practice

Our approach to working with gifted students is somewhat like training cartographers. We begin by reading the map together – helping students orient themselves within the current state of the field they wish to explore. Applicants usually possess significant knowledge in the areas of interest. Qualifying tasks for workshops, online tutor support, and curated reading lists allow them to deepen their understanding. Next, we give them access to research institutions – often institutes of the Polish Academy of Sciences – where they see firsthand the reality

depicted on the map. Working alone or in pairs, they join research teams not merely to observe equipment or follow prepared exercises. During the five-day workshops, they become part of a group, a project, or a grant. They learn by participating in normal, everyday research. At first, they often handle the simplest tasks themselves, but the true fascination lies not in operating expensive or advanced equipment. What leaves a lasting impression – and sometimes reshapes a student’s future – is the opportunity to witness how science truly comes into being: how to identify new and interesting problems, how to formulate questions, and how to explore them. Students also discover that laboratory or library work can be tedious, and they are often surprised at how frequently efforts lead nowhere. They learn that error, mistakes, and failure – so often stigmatized at school – are, in fact, an integral part of the process that leads to new discoveries.

If these initial meetings prove valuable for both parties, scholarship holders may establish a longer-term cooperation and spend up to two or three weeks in the laboratory. These research internships – what we call these extended stays – offer the opportunity to work on a larger scale. Sometimes this involves significant participation in an ongoing project; on occasion, the contribution of a high school student is substantial enough to merit inclusion as a co-author on a publication. In other cases, their own research results lead, for example, to participation in the prestigious European Union Contest for Young Scientists (EUCYS). This hands-on exploration of real research environments

Human beings do not live by science alone; it is equally embedded in culture and possessing skills in the fine arts are equally important. The photograph shows two humanists working on a copy of a medieval miniature during the Chamber Music Workshop in Lusławice



POLISH ASSOCIATION FOR GIFTED YOUTH

The diversity of experiences is extremely important. For a young scientist, it is worth listening to perspectives unrelated to one's primary field of interest, as they may become unexpected sources of inspiration and discovery. The photograph shows a group of cognitive scientists, humanists, and artists captured during a meeting with Prof. Krystyna Borucińska, discussing music

and the methods used to investigate them makes scientific work both comprehensible and engaging for students.

Artists

This is how we work with scientists. Working with artists, however, looks a little different. Contrary to appearances, musical or visual art creation can also be described in terms of problem-solving. Some tasks are workshop-based, while others focus on interpretation and the ability to express personal experiences through the language of art. For these activities, we engage the top performers and educators to work with young people. Although these experts are numerous and their contact during the workshops is often brief, this brevity paradoxically helps students put advice and guidance into perspective. Instead of working with a single dominant instructor – often the same face throughout years of training – students receive multiple tips from different perspectives, offering a variety of solutions. Young artists learn to take advice rather than simply follow instructions, which fosters artistic maturity. An additional advantage, especially for musicians, is the heightened emphasis on collaboration compared to typical school settings. We aim to move beyond the model of the talented soloist and encourage joint projects, such as chamber music ensembles.

However, for highly talented scholarship holders, all these tasks are relatively easy; the real barrier to development is often an excessive focus on perfecting their craft. The world beyond the rehearsal room and studio may seem uninteresting, and exploring it can feel like “a waste of time.” For this reason, the workshops dedicate significant time to activities far removed from everyday school life: lectures on art

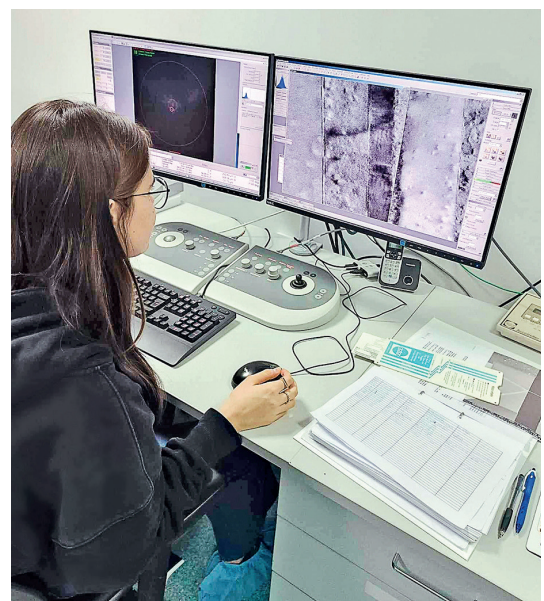
history, theater and ethnographic workshops, calligraphy, collective movie screenings followed by discussion. We also invite well-known artists who share how knowledge and the ability to understand one's own experiences are essential for creative development.

One Big Whole

The idea that the world is a complex whole, which we discover and transform in many different ways, has always guided the creators of the program. For this reason, the most important events in our calendar are multidisciplinary scientific and combined scientific-artistic camps. Over the course of more than a dozen days, groups of 50–80 participants and 20–40 scientists and artists engage in a wide range of intellectually stimulating activities. Every day is filled with lectures, workshops, general development activities, discussions and, meetings with invited guests.

Importantly, each participant chooses their own activities. This an out-of-school opportunity to explore what they personally find interesting and challenging results in a markedly higher level of engagement. Classes conducted in diverse groups – including participants from different regions of Poland, from various types of schools, different age groups, and varied backgrounds – make it possible to experience the true value of cooperation. The problems addressed during workshops and lectures offer a chance to observe science *in statu nascendi*, as the primary criterion for selecting topics is their current relevance. The subjects tackled by young participants are often very specialized, which requires substantial effort to situate them within an appropriate broader context. This, in turn, encourages independent and systematic work. Finally, there is genuine enjoyment

Who said that admission to the Institute of Physics of the Polish Academy of Sciences is possible only after graduation? A scholarship holder analyzes the photos received, focused and attentive; under the watchful eye of the professor-supervisor, who is ready to offer assistance if needed. Workshops at the Institute of Physics of the Polish Academy of Sciences



POLISH ASSOCIATION FOR GIFTED YOUTH



A brief introduction to mass spectrometry during workshops at the Faculty of Chemistry, University of Warsaw

shared by everyone – both learners and scholars – creating an extraordinary atmosphere that alumni often miss and to which they later return as lecturers and scientific supervisors.

Alumni

Does this idea work? The best answer lies in the careers of the program's alumni. There are now over 11,000 of them, forming a diverse and remarkable group. A large proportion are associated with science, many of whom operate at a world-class level. Examples include Prof. Ewelina Knapska and Prof. Daniel Wójcik from the Institute of Experimental Biology at the Polish Academy of Sciences, Prof. Konrad Banaszek of the Centre for New Technologies at the University of Warsaw, Prof. Justyna Olko from the Faculty of *Artes Liberales* at the University of Warsaw, and Prof. Łukasz Wyrzykowski, an astronomer at the Astronomical Observatory of the University of Warsaw and the National Centre for Nuclear Research (NCBJ) (one of the authors of this issue of *Academia* – editor's note).

These are just a few names from a much broader group that includes specialists, leaders of large research projects, recipients of European Research Council (ERC) grants, and laureates of the Foundation for Polish Science. There is also no shortage of distinguished alumni in the field of new technologies, the most widely recognized being Wojciech Zaremba, one of the creators of ChatGPT. Artists are equally well represented, including pianist Piotr Anderszewski, violinist Agata Szymczewska, and cellist Marcin Zdunik. Suffice it to say that for 30 years the top Polish performers in the International Chopin Piano Competition have been almost exclusively alumni of the fund.

Numerous answers can be given to the question of why the program works. One of them is certainly the fact that, from the very beginning, the fund has functioned as a self-learning institution. The creators of the program were motivated to act not so much by pedagogical and psychological theories as by careful observation and attentive listening to the voices of young people. We learn what they need and how our actions affect their lives directly from them.

After each workshop or camp, scholarship holders are asked to describe their impressions and observations. A similar letter, summarizing a given year of participation in the program, forms the basis for applying for the following year. As a result, we read, keep reading – constantly and extensively. In the office, within the circle of tutors, and together with colleagues, we read and reflect. We discuss what we can do better, what our mentees truly need and how we must change in order to continue supporting them effectively.

Over the course of 40 years, we have accumulated a vast body of material in this way. Thanks to this archive, it is possible to trace how the Polish education system has evolved, particularly in its approach to educating gifted students. It also allows one to observe how our working methods have changed – methods that are proprietary and distinctive, yet adaptable to diverse contexts. Finally, it offers insight into the history of a civic organization – an unusual one, given its longevity and its sustained operation through social effort. In this sense it also constitutes a contribution to the history of the social engagement of scientists and artists, a topic that is rarely discussed. In short, our extensive and largely digital archives await researchers. There is much to be discovered here, and it is certainly a demanding challenge. ■

Further reading:

<https://fundusz.org/>