



## Nurturing Teachers Excellence in Gifted Education - Results, Experiences, and Challenges

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### Abstract

*Ensuring the realization of the full potential of every student in alignment with their individual abilities is imperative for the sustainable development of any society. As per the education policy framework of the European Union (ET 2020), a paramount objective is to establish effective educational methodologies to enhance productivity and foster ongoing innovation. The education of gifted and talented students is particularly vital, as they have the potential to emerge as groundbreaking innovators in the future (Subotnik & Rickoff, 2009). Various factors contribute to potential underachievement and the presence of psychological, social, or not diagnosed learning difficulties. In response to these challenges and issues observed in 2021, the project "GATE: Teachers Training Programme to Support Gifted and Talented Students" was initiated under Erasmus+ programme. This initiative brought together partners and experts focused on the education of gifted pupils, STEAM education for advanced students, and special needs education as gifted pupils education in classroom should be supported by additional experts and assistance.*

*This article presents the results, experience and challenges in GATE project, underlying cultural particularities while adapting gifted pupils testing, education and good practices gained from Israel partners. For two years now, there has been an intensive international exchange of information and methodologies, training, practical adaptation and dissemination of good practice in all four countries. A teacher training programme for gifted education is being finalized, as well as extensive methodological material for gifted pupils teachers that will be translated into four languages. The article presents how the project has helped to broaden and deepen the debate on gifted education from family, school and education system level.*

**Keywords:** Gifted children, talented, education, teachers training, training programme for gifted

### 1. Introduction

The significance of human capital in national development is increasingly recognized, yet many countries still prioritize natural resources such as oil reserves, extracted gas or precious stones in measuring wealth. However, it is argued that the human intellect should be considered the most valuable resource, given its potential to drive technological advancements, medical breakthroughs, and innovative problem-solving [1], [2]. Educational investment in nurturing intellectual talents is posited as pivotal for national development, enabling even resource-poor nations to excel across various domains [3], [4], [5]. Future professionals need to acquire skills and knowledge as effectively and efficiently as possible in the current education system so that the world continues to evolve and expand advancements. Educating gifted and talented pupils is crucial as they could potentially be the future eminent path breakers and innovators [6].

In a survey that took place in the UK by Ofsted (2013) [7] it was found that the most able pupils were not achieving their potential in over 40% of the participating schools. According to the National Association for Gifted Children (NAGC), underachievement (a discrepancy between ability and achievement) of gifted and talented pupils is a common phenomenon at a global scale that needs to be addressed. The main potential causes are: (1) lack of interest in curriculum due to lack of challenging and engaging material; (2) low teacher expectations; (3) lack of opportunity to be recognized due to disadvantaged background; (4) psychological/social issues as well as undiagnosed learning disabilities.

In response to these challenges and issues observed in the last half of decade, the project "GATE: Teachers Training Programme to Support Gifted and Talented Students" (further - GATE) was initiated



in January, 2022, under Erasmus+ programme. This initiative brought together partners and experts focused on the education of gifted pupils, STEAM education for advanced students, and special needs education as gifted pupils' education in classroom should be supported by additional experts and assistance.

## **2. The GATE Project: A Framework for Nurturing Intellectual Talents**

The GATE project emerges as an important initiative aimed at fostering intellectual talents and addressing educational disparities. It underscores the importance of identifying gifted pupils, training educators to educated gifted pupils, and structuring educational interventions tailored to the needs of gifted learners. Through a comprehensive approach, the project endeavours to enhance educational equity by paying attention to the diverse learning requirements of all students.

The collaborative nature of the GATE project is underscored by the participation of countries not only from Europe (Lithuania, Latvia, Bulgaria), but also Israel. Drawing upon Israel's expertise in gifted education, the project seeks to enhance the competencies and skills of primary education teachers and mentors to help gifted and talented pupils (age 8-11 y.o) develop their potential. The results were implemented amalgamating international insights into a cohesive framework for nurturing gifted learners. Israeli initiatives, renowned for their efficacy in identifying and educating gifted children, served as a benchmark for project development and implementation.

### **2.1. Challenges and Situation in European Countries**

Over the past few decades, extensive analyses have been conducted on the educational systems of nations that consistently achieve high academic performance. However, these analyses often focus on individualized assessments of each student and the exploration of their latent potential [8], [9], [10]. While considerable attention is rightly directed towards students with special educational needs, our attention has been drawn to a critical oversight: the neglect of gifted and talented students, as these children also have special needs and higher focus should be put on them in the classroom. In most of European countries, there are established a range of specialists, including speech therapists, social workers, special educators, and psychologists, to support students with diverse learning requirements. Despite these efforts, the unique needs of the gifted remain largely unaddressed in educational settings.

This oversight is quite significant because it not only deprives gifted children of the necessary support to flourish but also disregards the substantial societal benefits that their untapped potential could yield. Neglecting the intellectual excellence development of gifted students, not putting significant efforts into developing the intellectual potential of gifted pupils not only undermines the country's potential pride, but also fails to create the conditions for the even more rapid realisation of important advances in science and technology that could enrich the society, the nation and even the global community.

Another challenge is the underachievement of gifted and talented is a common phenomena that needs to be addressed. Gifted student population has specific needs, requiring specific teaching methods and a tailored challenging learning environment. According to the various sources which talks about gifted children and their education [6], [11], [12] gifted pupils seem to score less in self-reported level of motivation and relevant indicators of motivation such as achievement ambition, cognitive motion and joy for thinking. Regarding the emotion sphere, gifted students seem to be feeling higher levels of anxiety to academic results and low emotional engagement.

Therefore, it is imperative to recognize and address the educational needs of gifted children as an essential component of comprehensive educational strategies aimed at fostering human capital and societal progress.

### **2.2. Guiding Principles for Identifying Gifted Children**

Central focus to the GATE project is the development of guidelines for identifying/recognising gifted children and training teachers as well suggesting material for them how to educate gifted pupils.



Leveraging insights from international best practices, the project introduces international practices for identifying gifted individuals, including IQ thresholds, advanced performance indicators, and measures of creativity, especially taking in consideration over than 30 years working practice in Israel.

Since the beginning of the project, it was agreed that we would consider gifted students:

- 1) Students with an IQ of at least two standard deviations from the average (at least 130 IQ).
- 2) Students who perform or have the opportunity to perform tasks and activities at a higher level compared to their peers (according to Subotnik [6], [9] and other authors).
- 3) Students who can effectively acquire knowledge and skills, apply them to solve new problems, learn quickly from experience and have a high level of creativity.

Agreement on common concepts on gifted education was an important stage of the project, because scientists still did not finalised the definition of giftedness and a gifted pupil, and in order to achieve the set goals and move everyone in the same direction, a common vision and common agreements are also important. Therefore, the methodological material of the project presents a summarized material about talents by scientists: H. Gardner, R.J. Sternberg, J.S. Renzulli, A.J. Tannenbaum and others, all definitions and insights arising from it.

Analyzed scientific sources and researches has shown that the true development of a child I.Q. level is constructed from 3 main elements:

**I.Q. = Heritage (40%) + Environment (40%) + Heritage/environment (20%)**

Therefore that means a great deal of developing student intelligence its on the teachers as they are the ones who are in charge of emotional development and cognitive skills of the pupils. The environment of the child is very relevant aspect in self growth, skills development and child motivation.

The formula to success in teaching gifted pupils is:

**Success = adequate teacher + good teaching skills + good relationship.**

Finally, the definitions of gifted children and giftedness most appropriate to all partners and based on these were:

- a teaching methodology is being developed to educate gifted children,
- training program for primary education teachers
- communication messages are addressed to the country's teachers, school staff, authorities and education experts about gifted and talented students in order to increase their knowledge and understanding on this topic.

Detailed training programme and almost 150 pages of methodological material were prepared, which is translated into 4 languages. Partnership believes that it will serve not only teachers working with classes of gifted children, but also teachers working in ordinary schools, parents of gifted children, and psychologists. The methodical material as well as training programme for teachers consistently presents information about what talents are, what children we consider gifted, what tools are created and used to identify gifted children, a psychological portrait of a gifted child is put together, a lot of material is presented about the organization and methodologies of the education of gifted children. A lot of attention in the methodological materials is also devoted to the portrait of the teacher of gifted children: his characteristics, competences, challenges he faces when working with gifted children, as well as a number of practical tips that will facilitate the teacher's work.

### **2.3. Brief Overview of the Project Implementation**

Representatives of 4 countries participated in GATE project's result development: project coordinating institution VŠĮ "eMundus" and partner Vytautas Magnus University from Lithuania, as well ISMA



University from Latvia, Zinev Art Technologies from Bulgaria and Ron Vardi Center from Israel. In addition to the main project partners, 23 associate partners from 4 countries participated in the project (10 associate partners were from Lithuania).

Project participants took part in two (10-days in total) trainings over the course of two years. After the trainings, conducted by experts in the education of gifted children in Israel, the project partners organized trainings for associated partners: school's teachers, psychologists, and student support specialists. In this way, the dissemination of knowledge and acquired experience reached not only schools, but also pupils. In Lithuanian case, results (gained teachers knowledge and suggested practical activities for gifted pupils education) were tested not only by involved associated schools' teachers, but also in „Gifted“ – gifted children education center, which is a part of Vytautas Magnus University. Teachers not only accumulated knowledge about the education of gifted children, but also in parallel created modules for gifted children and worked directly with gifted students already selected for the program.

GATE's innovative teaching methodology, targeted interventions, and comprehensive teacher training programme which was created in 2 years period aim to significantly improve the academic performance and achievement of gifted and talented students. By addressing the root causes of underachievement and providing tailored support, the programme aims to help gifted students reach their full potential, resulting in improved grades, motivation and increased interest and overall academic outcomes.

#### **2.4. Empirical Investigations and Needs Assessment**

One of the aspects of the GATE project involved empirical inquiries to discern the educational landscape and ascertain the needs of gifted learners. A comprehensive study, "The image of the 21st-century teacher in educating gifted students," conducted in all partners' countries, provided insights into educators' perspectives and requirements. The aim was to understand the opinions, insights and needs of one of the main target groups of the project: primary school teachers, mentors and educators, when it comes to gifted children and their education.

Analysing the results we got after collecting answers from more than 150 target respondents, we got the finding that most teachers are still lacking skills and competence necessary to provide gifted and talented students with the adequate support to express their abilities, feel motivated, learn and grown in surroundings that know how to stimulate them.

Analysis of respondents answers also showed that here are two critical areas that emerge: Inclusive Education Practices and 21st-Century Skills Enhancement: (1) Teachers are in need of enhanced skills to embrace diverse student abilities. They exhibit deficiencies, particularly in “digital skills”, as well as in soft skills; (2) The training course should bolster these competencies, the project's success hinges on empowering experienced and less experienced teachers with targeted training, fostering inclusive classrooms, and equipping them with essential 21st-century skills.

In order to improve teachers' educational program, it is required to do prior identification of their professional competences. The proper research is needed in order to emphasize the way of tracing and selecting those teachers and the gap needed to be closed in order to bringing them to full effective performances in the classroom. The National and International Report of Surveys are available in GATE project website ([gate2gifted.eu](http://gate2gifted.eu)).

Considering the GATE project and its subsequent activities, it's essential to recognize that the target audience isn't entirely formed of novice teachers therefore the project partners should focus on training teachers who already possess awareness of the relevant topics. After analyzing the obtained data, the aim was to improve the competences of primary education teachers and mentors, to provide teachers with the missing theoretical knowledge and to strengthen their competences in educating gifted students.

Such empirical endeavours serve to tailor project interventions to the specific contexts and challenges encountered within educational settings.



## **2.5. Training and Capacity Building of Teaching staff**

Effective pedagogy plays a crucial role in nurturing the talents of gifted children. This section explores the training programs developed by the GATE project to enhance teacher competencies in gifted education. Drawing on best practices from Israel and other participating countries, the chapter highlights the topics and importance of specialized training for educators working with gifted students.

Central to the GATE Project's objectives is the provision of training and capacity building for educators and stakeholders. Drawing upon international expertise, training sessions encompass theoretical foundations, practical methodologies, and assessment strategies tailored to the needs of gifted learners. By enhancing educators' competencies, the project endeavors to optimize educational outcomes for gifted students.

The results of the study mentioned in 2.3. part of this article were also taken into account when organizing trainings for project partners and associate partners. The first trainings were organized on October, 2022 in Lithuania. During the 5 days, the greatest attention was paid to the recognition of gifted pupils. All the theoretical and practical material presented during the training (which is also available in GATE project website [gate2gifted.eu](http://gate2gifted.eu)) helped to refine the portrait of a gifted child as clear as possible and the tools to recognize him.

The training participants got acquainted with intellectual tests, questionnaires, and creativity tests for identifying gifted students. The ability to choose and apply recognition tools is very important, because if gifted students are not recognized and educated in the same way as others, the gifted often do not realize their abilities. It is estimated that there are 30-40 percent of such talented students who do not realize their potential. This means that every third gifted student, who could easily pass the educational program with the highest grades due to his intellectual abilities, is studying averagely or even worse. There are many reasons for non-realization and it is not always easy to identify them. However, there is no doubt that students who do not realize their potential face various challenges: boredom, lack of motivation, social problems, etc. It would be much easier to solve all problems if we knew that the student is indeed gifted and needs a program for the education of gifted children. As a result, recognition was given special attention in the project.

The second part of the training was organized in Israel in March, 2023. The participants of the project could get acquainted not only with the theoretical material, but also see lively how the education of gifted children is organized at different levels of the education system.

In Israel there are separate education departments dedicated to the education of gifted children, which supervise only this area. There are teacher training programs for gifted children in universities.

If we review Lithuanian case, we see that country's programs are more focused only on students with learning difficulties and their educational needs, rather than on gifted students and in the last years theories and supplemented material in the modules for students in pedagogy studies are suggested in some of teaching programmes.

Discussing with other partners countries (Latvia, Bulgaria) it is still one part of the students with special educational needs is covered, when there are two of them, including gifted pupils.

The training of special pedagogues should be expanded to include the subject of gifted students: their psychological and educational needs. The training programs for pre-school and primary education pedagogues should also be expanded on talents and the education of gifted children. In addition to university programs, there are over 50 gifted education centers in Israel. Gifted teachers work exclusively with gifted children. However, even in ordinary schools, work with gifted children is additionally organized, classes of gifted children are selected and educated. Talented students in Israel have the opportunity to have mentors in technology, chemistry, and engineering companies, where they do internships and can test theoretical knowledge in practice.

In Israel during the training, the greatest attention was paid to the process of educating a gifted child: its planning and implementation. The microclimate of the classrooms of gifted children was observed



and studied, the development of creativity and emotional resilience was explored, the assessment strategies of gifted children were analyzed, integrated modules, methodologies for the development of thinking. The representatives of each country, project partners, were able to evaluate what steps they have already taken in the education of gifted children in their country, and what steps they are still planning to take. Although Lithuania is still far from Israel, it is making great efforts to solve the issues of educating gifted children. After each international training, the teachers and staff of participating institutions organized events for the dissemination of good practice, training for associated partners, who could share the material and knowledge gained with their communities.

In two years, the competence of teachers of gifted children and the number of teachers themselves have grown significantly, as the need for teachers of gifted children is increasing. They raised their qualifications mainly through program internships, trainings, and seminars. The pedagogues with the most experience trained the teachers who had newly joined the activities and in Lithuanian case practices were shared not only with associated partners teachers who were concerned with the topic of educating gifted children.

## **2.6. Methodical Material for Teachers of Gifted Pupils**

Understanding teaching gifted children chapter or as we call the field - the Gifted Arena - focuses on a scholarly exploration into the intriguing realm of gifted children, those extraordinary individuals whose exceptional intellectual capabilities and unique abilities distinguish them within society.

The developed methodical material seeks to elucidate the intricate facets that define the gifted child, from the foundational understanding of giftedness to the complexities of identification and social dynamics.

the GATE project presents within the pages of the Methodological Material, one of its main intellectual outputs. A book that serves as a comprehensive guide for a diverse audience including teachers, principals, policymakers, parents, and the broader community.

This book is structured into four distinct parts, each addressing a unique aspect of the project.

The first part serves as an introduction, a window into the world of the Gifted project. It elucidates the background, context, objectives, main components, and results of the project, thereby setting the foundation for the subsequent sections. It also outlines the core values of the programme and the anticipated impact it is expected to have.

The second part takes the reader into the gifted arena, exploring the world of the gifted child. It provides a nuanced understanding of giftedness, discussing definitions, characteristics, types, and how to identify a gifted child. It further explores the social infrastructure surrounding the gifted child and delineates what can be expected from a gifted child in terms of academic abilities, learning pace, and individual and social behaviours.

The third part paints a picture of the gifted children's teacher. It discusses their characteristics, background, education, professional and didactic abilities. It also covers the evolution from a traditional teacher to one equipped to address the unique needs of gifted children and presents models for identifying effective teachers.

The final part of the book presents teaching techniques and learning strategies. It discusses foundational mechanisms and approaches in gifted teaching and learning, including the holistic-cognitive approach, the socio-emotional approach, and the balance between class orientation and individual pupil orientation, and more. It also discusses the structure of a curriculum tailored (adequate) for gifted children.

The significance of bringing attention to the special requirements, difficulties, and potential of gifted and talented students is emphasised in this book. It seeks to augment (enhance) the competencies and skills of primary education teachers and mentors, enabling them to help gifted and talented pupils realize their full potential and thrive. It addresses the issue of underachievement among talented and gifted pupils by tackling each of the risk factors and equips teachers with effective teaching strategies.



This book is a documentation of the project's dedication to providing gifted and talented students with an inclusive and supportive learning environment.

### **3. Impact and Future Directions**

GATE project leaves a lasting impact on the education landscape of participating countries. From the expansion of teacher training programs to the integration of gifted education into national policies, the GATE project paves the way for a more inclusive and equitable education system.

During the implementation of the project, changes were also achieved at the higher levels of the education system. Countries are going forward in this area, some of them slower, some faster, but in the last years it is visible that more informative publications on the topic of gifted students were prepared and publicly shared, in Lithuania the topic of gifted children was included in the national education program "Millennium School" under inclusive education.

By addressing the underachievement of gifted students, particularly those from disadvantaged backgrounds, GATE seeks to reduce disparities in access to educational opportunities and support.

By integrating STEM and socio-emotional learning (SEL) components, the programme seeks to cultivate emotional intelligence, resilience, and well-being among gifted learners. Enhanced socio-emotional competencies can lead to improved self-awareness, self-regulation, and interpersonal skills, contributing to positive mental health outcomes and overall student well-being.

By increasing awareness about gifted underachievement, the relevance of personalized teaching, and the benefits of supporting gifted learners, the programme aims for a culture of understanding, empathy, and advocacy for gifted education.

The partners of the project not only ensured the strengthening of the competences and skills of the participants, but also created freely available communication resources for the entire society. All participated pedagogues, parents or other persons interested in the topic of gifted children can get useful information on the project's website and Facebook pages in English, Lithuanian, Bulgarian, Latvian and Hebrew. They not only present the program itself and its news, but also share the current affairs of raising and educating gifted children, a list of literature and films. The aim which was not only to share theoretical knowledge, but also to gather the community of parents and teachers for discussion and sharing of experiences was achieved successfully.

Beyond its immediate impact, GATE aims to promote long-term sustainability and evolution in the field of gifted education. The GATE programme's goal is to create a long-lasting structure that can meet the needs of gifted and talented students by disseminating best practices, building capacity among teachers and educators, and fostering collaborative networks. GATE's emphasis on empowerment, collaboration, and evidence-based practice aims to lay the groundwork for a more inclusive, equitable, and innovative educational landscape.

### **4. Conclusion**

In conclusion, the GATE project represents a milestone in the quest to unlock human potential and foster talent development. By prioritizing the needs of gifted children and investing in teacher training and educational resources, the project lays the foundation for a brighter future. As we continue to strive for excellence in education, let us remember that the true wealth of nations lies not in their natural resources, but in the minds of their people.

GATE project represents a pioneering endeavor to nurture intellectual talents and foster educational equity. By integrating international expertise, methodological rigor, and stakeholder engagement, the project aims to optimize educational outcomes for gifted learners and contribute to broader societal development agendas. All the results and more information about the project could be found in project social network facebook (@Gate2gifted) and website (gate2gifted.eu).



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