Book of Abstracts

4th thematic ECHA conference on inclusion and sustainability

16 – 18 June 2025

We hope you enjoy reading this collated book of ECHA abstracts for the 4th thematic conference, held in Karlstad, Sweden. The collation is evidence of a rich knowledge-sharing forum and growing evidence-base.

The book of abstracts is not edited, it is a print-out from the digital submission system. The abstracts are based on what each authors themselves have entered into the digital submission system. If authors have reached out to the conference organisers about changes after submission, these changes are maybe not included in the book of abstract.

The conference was jointly held alongside the international group for mathematical creativity and giftedness (igMCG). Confererence participants from ECHA and igMCG could freely choice between the conference presentations. A fully edited igMCG proceedings with full texts can be found: 14th International Conference on Mathematical Creativity and Giftedness (MCG 14).

Happy reading!

Professor Valerie Margrain, Karlstad University

Conference Chair

Symposiums

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Birgit Broekhoven[1] and Lineke van Tricht[2]

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Abstract title: Equity in Gifted Education: A Multinational Dialogue on Inclusion and Excellence

Type of presentation: Symposia

Equity in Gifted Education: A Multinational Dialogue on Inclusion and Excellence

Symposium chair and discussant: Birgit Broekhoven, project leader, Stichting VO Haaglanden
Presenter 1: Marlies Tierens, partner, Thomas More
Presenter 2: Lineke van Tricht, partner, Bureau Talent
Presenter 3: Cathy Woods, partner, Dublin City University

This symposium, presented at ECHA, explores the pressing issue of equity in gifted education through an engaging dialogue among experts and practitioners from across Europe. Drawing on insights from Bureau Talent (Netherlands), Thomas More (Belgium), Kolegji Heimerer (Kosovo), Dublin City University (Ireland) and Stichting VO Haaglanden (Netherlands), the symposium provides a platform to interrogate how gifted education can be more inclusive and accessible, particularly for underrepresented and underserved populations.

The Equity in Gifted Education project, supported by Erasmus+, aims to dismantle barriers that hinder equitable access to gifted education programmes. These barriers often stem from cultural biases, socioeconomic disparities, and systemic exclusion. In this symposium, contributors will share insights from their diverse contexts and highlight innovative practices that promote both equity and excellence in education. The discussion will include key findings and tools developed through the project, such as teacher training modules and inclusive identification practices.

The symposium's interactive format emphasises dialogue and reflection. By connecting expertise across different educational systems and cultural settings, the presenters will illuminate shared challenges and unique approaches. Key questions include: How can gifted education avoid reinforcing privilege? What systemic changes are necessary to ensure equity? How can educators and policymakers collaborate to address these challenges?

Audience participation is central to the symposium, providing an opportunity for attendees to engage directly with presenters, pose questions, and contribute to the conversation. Together, we aim to deepen our collective understanding of equity in gifted education and inspire actionable solutions that foster talent development for all.

From Overlooked to Recognized: Equity in Identifying Gifted Learners

Marlies Tierens, PhD, Thomas More University college, Belgium

Giftedness transcends socioeconomic status and ethnicity, yet high-ability students from disadvantaged backgrounds are frequently overlooked and lack the support needed to realize their potential. The Erasmus+ project *Equity in Gifted Education* addresses this issue by focusing on the identification of cognitively gifted students from underprivileged contexts. First, the project utilizes a non-verbal, digital, and adaptive cognitive test designed to assess fluid reasoning. This test is being adapted to facilitate implementation across diverse European countries and incorporates local norms to better identify cognitive talent in disadvantaged students. Second, the project is developing a culturally sensitive identification guide that integrates multiple sources of evidence, offering schools and teachers practical strategies for recognizing cognitive giftedness in various domains. Recognizing that all methods of identifying giftedness carry inherent biases, the guide emphasizes a holistic approach to uncover hidden talent, aligning with insights from Reis and Peters (2021). This presentation will share preliminary findings and key lessons from the project's first year.

Equity in Gifted Education: Improving Academic Literacy in Gifted Students from Underprivileged Backgrounds
Lineke van Tricht, Bureau Talent, The Netherlands

Due to opportunity inequality, background and socioeconomic status rather than intellectual or academic capacity often determine academic success (OECD, 2023; Paulus et al., 2021). Language seems to be a major factor in this, among others (Hof, 2013). Therefore, the goal of our project is to give talented students from underprivileged backgrounds the opportunity to improve their academic literacy. In our project, an academic language programme for underprivileged gifted students that was developed in Dutch for the Netherlands and Flanders in our previous Erasmus+ project is researched, modified, and implemented. Our first objective is to adapt the academic language programme so that it can be used to teach academic language in other nations involved in the project: Ireland and Kosovo. During an international training meeting in Kosovo in the autumn of 2024, teachers from Kosovo and Ireland learned about the academic language students need, they selected words from their own teaching materials, and they exchanged ideas on how to teach the academic vocabulary. An impression of these training activities will be shown during this part of the symposium.

Bureau Talent is a small enterprise, specialised in gifted (secondary) education. Their expertise ranges from student counselling and online Talent Projects for secondary school students, to teacher training, school board consultancy, and project initiation, participation, and management. Bureau Talent is a European Talent Point, and as such partner of the European Talent Support Network (ETSN).

Equity in Gifted Education: Implementation of a Parent-Focused Programme for Gifted Students from Disadvantaged Backgrounds
Cathy Woods, Dublin City University, Ireland

The Centre for Talented Youth, Ireland (CTYI) at Dublin City University, Europe's largest programme for gifted students, is introducing an innovative programme to address the intersection of gifted education and socio-economic disadvantage. Located in North Dublin, an area characterised by socio-economic challenges, CTYI recognises the untapped potential in gifted students from disadvantaged backgrounds and the crucial role their families play in their development. This project aims to implement a parent-focused programme that complements an academic language curriculum for gifted students.

Rooted in models such as Epstein's Framework of Six Types of Involvement, the programme seeks to empower parents as active partners in their children's education. Recognising barriers such as socio-economic constraints, cultural differences, and institutional disconnects, the programme employs inclusive strategies to foster meaningful parental engagement. Key activities include information sessions on giftedness, collaborative workshops, and culturally responsive community events. These initiatives will enhance parents' understanding of gifted education, provide tools for at-home academic support, and create opportunities for cultural exchange to strengthen school-community ties.

Research indicates that parental engagement significantly influences student outcomes, particularly for underrepresented groups. This initiative not only addresses the educational inequities experienced by gifted disadvantaged students but also highlights the importance of parental involvement in bridging these gaps. By integrating theoretical insights and evidence-based practices, the programme aims to create a supportive environment that nurtures the academic and socio-emotional growth of gifted students while empowering their families to advocate for and participate in their children's educational journeys. This presentation will explore the programme's design, implementation, and anticipated impact, contributing to the wider discourse on inclusive practices in gifted education and parental engagement.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Lianne Hoogeveen[1]

[1]Social Sciences, Radboud University, Nijmegen, Netherlands

Abstract title: How to improve the development of gifted people; RITHA alumni tell you how

Type of presentation: Symposia

Parnassos, a fitting alternative?

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The Parnassos class at the Johan van Oldebarnevelt gymnasium in Amersfoort has been offering a two-year first class since 2020. The fact that it is a two-year first class is relatively new. Until now most curricula or interventions for young high ability children stretch only one year is not supported to go on for several years or be assisted in any way up to secondary school. Parnassos has that connection, provides a lot of extra support for the children, but also includes a way of teaching that is found to be more appropriate for these students.

In the framework of her final product for the RITHA programme, Saskia developed brochures and a theoretical framework about Parnassos that can inspire other gymmnasia (grammar schools) or educational organizations. She will explain this theoretical framework (with the Greek name Pàratima), which endorses and explains why this kind of special education, like Parnassos, is suitable for young children (age 9 or 10) with characteristics of high ability, high cognitive skills and have also finished the curriculum of the primary school. The Pàratima describes the what, why, who and how for this kind of special educational curriculum. The most important challenges to overcome through Parnassos is the empowerment of learning, thinking and resilience.

Peercontact for gifted teenagers during school hours

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Since 2018, the Erasmiaans Gymnasium in Rotterdam has established a dedicated space for peer contact among gifted teenagers. This peer contact takes place during school hours, with the school allocating two hours daily for these sessions, facilitated by specially selected supervisors. Students are free to engage with one another as they wish during this time.

The goal of the RITHA graduation project was to evaluate these peer contact sessions and develop product ideas to improve them. In-depth interviews and a diary study with 12 students were conducted to gain insight into how students experience

peer interactions and what they need during these gatherings in the future. The final outcome of the project was a detailed magazine, which presents an interior design proposal for a new peer contact space.

During a brainstorming session with students, organized as a focus group, initial ideas for the interior design were shared and discussed. The many findings from the diary studies, interviews, and focus group were incorporated into the proposed design for the new peer contact space.

The research revealed that peer contact sessions serve as moments of rest where students feel no obligations, as a place to meet others, and as an environment where they can converse with like-minded peers. However, it became apparent that not all students feel confident enough to join in conversations, which can lead to feelings of loneliness. The challenge for the interior design was therefore to create a space that encourages interaction and inclusivity.

During her presentation, Frederique will talk about her experiences with the peer group, show you the special furnished space and hope to convince you that every school needs a space like this.

The motivation of high-ability students from disadvantaged backgrounds

Lineke van Tricht
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Students from families with a low socioeconomic status (SES) are underrepresented in the higher levels of secondary education in general, and in high-ability programs in particular. One of the reasons seems to be that only a small percentage of these students are high performers (OECD, 2023). Since motivation and performance are strongly related, it is interesting to know whether motivation works differently in low than in high SES students. And if this is the case, it is necessary to know what can be done to motivate high-ability, low SES students to perform well at school. Giving these students the opportunity to develop their high academic abilities is important for these students themselves as well as for society. After having graduated as an ECHA specialist in gifted education, and having worked in the field of (gifted) secondary education for 30 years, Lineke van Tricht started her Ph.D. research. Her focus is the motivation of high-ability secondary school students from low SES backgrounds. During this symposium she will present the insights she gained so far from the first three of her studies.

OECD (2023), PISA 2022 Results (Volume I): The State of Learning and Equity in Education, PISA, OECD Publishing, Paris, https://doi.org/10.1787/53f23881-en

Specific Learning Needs of High-Ability University Students:
The Role of University Lecturers and Study Advisors

Marianne Nannings
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This presentation is based on Marianne Nannings' final thesis for the RiTHA (Radboud International Training on High Ability) program, which she completed in 2022. The thesis was the stepping stone for her PhD project addressing the challenges faced by high-ability university students in reaching their full academic potential. These students often encounter barriers in higher education due to a lack of recognition and understanding of their unique needs. The central research question is: How can we ensure that high-ability university students achieve their full potential? The project is structured into three phases. The first phase involved a systematic review of existing literature to identify factors contributing to underachievement among high-ability students in higher education. In the second phase, a mixed-methods approach is employed to explore the educational and social-emotional needs of these students. Insights from the students themselves will be used to uncover specific barriers and facilitators to their academic success. The third phase adopts a repeated-measures design to evaluate the impact of targeted training for university lecturers and study advisors. By increasing awareness and understanding of giftedness, the study examines whether changes in knowledge and attitudes can lead to better support for high-ability students. This PhD proposal aims to contribute to inclusive education by advocating for institutional policies and practices that address the specific needs of high-ability students. Its findings are intended to ensure that these students receive the support necessary to fulfil their academic potential. The presentation will outline the methodology, preliminary results, and implications, providing valuable perspectives for educators, advisors, and policymakers in higher education

Gifted Adults with a Migration Background

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The target group of gifted adults with a migration background remains largely unaddressed in existing research.
Gifted adults with a migration background often face challenges in the early recognition of their giftedness. These barriers, rooted in systemic and cultural biases, result in their limited inclusion in programs designed for gifted individuals. During development, parents and teachers play critical roles in shaping their opportunities, yet their support often does not align with the specific needs of this group. Resilience and perseverance are frequently identified as key factors contributing to their eventual success.
The duality of living between two cultures adds complexity to their experience. Many gifted migrants struggle with identity formation, navigating between their heritage and dominant societal norms.
Research in this area is heavily influenced by Western perspectives, which often fail to incorporate non-Western values. A broader and more inclusive understanding of giftedness is necessary – one that integrates the cultural values and experiences of migrants.
Fatima El Hasnaoui-Atiouny reviewed the literature review to explore the barriers and success factors that influence the development and flourishing of this group's talents. Previous studies have predominantly focused on gifted children with migrant backgrounds, leaving gifted adults significantly underrepresented. A thorough literature search revealed no studies combining the terms "gifted," "adults," and "migrants" or their equivalents.
To address this gap, Fatima El Hasnaoui – Atiouny interviewed several gifted adults with a migration background, focusing on three key sub-themes: identification, development, and environmental factors.
In her presentation she will present the preliminary results of this study.

Oral presentations

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Ignace Ryheul[1]

[1]Sint-Jozef Humaniora, Bruges, Belgium

Abstract title: The Flemish approach: education policy based on learning needs as a foundation for inclusion

Type of presentation: Oral presentation

In collaboration with the inter-university expertise center TALENT, twenty so-called "anchor schools" are developing policies for cognitively highly functioning students in Flanders.

In less than five years, approximately five hundred Flemish schools joined "learning networks" on this topic. This cooperation between schools is based on an evidence-informed approach, and an intention to continuously learn from each other.

A well-defined conceptual framework is used as a guideline.

In addition, the focus on the learning needs of the students undoubtedly determines the success of the project. This focus helps teachers to adopt a more inclusive attitude towards the kids, pupils and students in the classroom.

In this session I briefly explain the inspiring foundations of this Flemish policy.

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Valerie Margrain[1], Nadine Huchthausen[1], Charlotta Lindvall[1] and Gisela Priebe[2]

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[2]Department of Social & Psychological Studies, Karlstad University, Karlstad, Sweden

Abstract title: Children's rights and democratic risks for gifted students in Sweden: Developing an illustrative figure

Type of presentation: Oral presentation

The United Nations Convention on the Rights of the Child (CRC1989) provides an international mandate for protecting children and supporting best outcomes for them. In this presentation we share our conceptualisation of an illustration of key CRC articles (2, 3, 5, 12, 13, 14, 19, 28 and 29). Articles 28 (education) and 29 (learning) for the social system for gifted education and the bounded system of our illustration. In the centre of the illustration we have positioned Article 3, as the fundamental work of education must be shaped by the best interest of the child and child well-being. We then position the other rights which we have drawn attention to in our discussion: non-discrimination (Article 2), Guidance (Article 5), the right to be heard (Article 12), information (Article 13), freedom of expression (Article 14), and safety (Article 19). The presentation is a summary of the key ideas we have developed for a chapter focusing on Nordic moral and democratic education and is informed by our wider research with gifted education. In the presentation we will also describe the creative process used to develop the illustration.

United Nations. (1989, November 20). *Convention on the rights of the child.* https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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Abstract title: Personality and Talent Development in LemaS – towards an inclusive school and teaching culture

Type of presentation: Oral presentation

In the research and school improvement project “Leistung macht Schule” (“Promoting Excellence in School Education” - LemaS) researchers from various disciplines and practitioners are collaborating in a large-scale research-practice-partnership (RPP), framed by politics at federal and state level. LemaS is set up for 10 years (2018-2027) and aims to establish a nationwide school culture fostering the talent and personality development of all students and, furthermore, aligning the school system towards more educational justice. The change towards an inclusive school and teaching culture that promotes potential and performance that LemaS aims to achieve is taking place at the classroom and school level.

The oral presentation first provides a brief insight into the key theoretical foundations, educational objectives, and main content focuses of the project. In particular, it presents the concept of potential and performance that has been established with LemaS. Two specific sub-projects are then used to illustrate how LemaS contributes to the transformation of schools and teaching. In concrete terms, the diFF project is presented to show an evidence-based adaptive digital and material-supported learning architecture for innovative teaching and school design that aims to promote self-regulated and research-based learning in all students by means of effective learning strategies, as well as to challenge individual learning potential and interests. In addition, a tool called SELF (acronym for “school development dimensions for a school design that promotes potential and performance”) which was developed in close cooperation between research and practice, will be presented. Both diFF and SELF also address issues relating to implementation and transfer.

The explanations are underpinned by research results from qualitative and quantitative surveys carried out for the LemaS project. Finally, the explanations will be put up for discussion.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Johan Nyh[1]

[1]RFSB (The Swedish National Association for the Gifted), Stockholm, Sweden

Abstract title: Included to exclusion: A challenge to the differentiation paradigm

Type of presentation: Oral presentation

There is a vast difference between being placed in a heterogeneous classroom and actually feeling included. Starting with a short historical overview of the egalitarian north, we'll arrive at the current state of the assumingly inclusive Swedish educational system. Concurrently, there's a pedagogical research tradition that often acts in wedlock with existing paradigms and methods rather than broadening the perspective. Aligning research, recommendations and policy with what is practically doable close to today's regulations and organizational settings comes at the price of deprioritizing emotional, social and academic experiences and needs of gifted children and their families. Similar tendencies can be seen in a multitude of countries, not least in Europe. There's still a growing policy maker awareness, such as when the Swedish minister of education recently spoke of "the inclusion debacle", emphasizing that a one-size-fits-all approach to education is deeply flawed, whether differentiating within this size or not. At the same time, there's a deeply rooted occupational culture working in the opposite direction, along with The Swedish National Agency for Education having gone to great lengths to ensure compliance with the established egalitarian worldview, even cutting research summaries to shape. This lecture sets out to put the actual children and their families back in the equation, collecting and summarizing experiences from wider communities for gifted children and their families as well as niche groups focusing on exceptionally gifted children (IQ140+) and radically accelerated children (having skipped three or more grades). Relevant models from e.g. psychology and economic theory will also be covered. Putting claimed inclusion in the form of differentiation within the mixed classroom into a larger context and lifting alternatives and complements highlights that although it has great merits for many students, there are other tools in the box which should not be ignored and excluded.

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Gila Hammer Furnes[1] and Gunnvi Sæle Jokstad[2]

[1]Pedagogy, NLA University College, Bergen, Norway
[2]Teacher education, NLA University College, Bergen, Norway

Abstract title: Interdisciplinary collaboration for gifted learners: A case study of partnership dynamics in educational adaptation in Norway

Type of presentation: Oral presentation

This case study explores a partnership between a primary school, a talent centre, and two university colleges in Norway regarding shared knowledge and developing resources for gifted learners. Gifted students are not a homogeneous group. They possess different talents and face various challenges. Each student requires individual adjustments and tailored educational support. Tailored education for this group of students requires teachers to be competent in identifying and adapting instruction for them. Although adapted and inclusive education in Norway is rooted in the Education Act, studies and the white paper NOU 2016:14 indicate that gifted learners are not receiving education tailored to their level and abilities. Collaboration between schools and expert partners has become common for sharing knowledge and developing resources. To study this partnership, we draw on theoretical perspectives from activity theory developed by Engeström (2001) and expanded by Torgersen and Steiro (2018), which views cross-sectoral interaction (*samhandling* in Norwegian) as an open communication process where participants complement each other's expertise and work towards common goals, relying on trust and mutual involvement. A qualitative thematic analysis is conducted from logs and surveys sampled from participants to identify themes and patterns, extract meaning, and compare contrasts to uncover deeper insights. Findings show that participants perceive interdisciplinary cooperation as a strength, conditioned by a solid project leader, clear communication, and reciprocal exchange of knowledge, experiences, and resources.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Gila Hammer Furnes[1] and Gunnvi Sæle Jokstad[2]

[1]Pedagogy, NLA University College, Bergen, Norway
[2]Teacher education, NLA University College, Bergen, Norway

Abstract title: United for gifted learners: Crafting tailored education through partnership in Norway

Type of presentation: Oral presentation

This case study investigates an interdisciplinary partnership involving a primary school, a talent centre, a parent organisation, and two university colleges in Norway, which is focused on sharing knowledge and developing resources for gifted learners. Gifted students represent a heterogeneous group with distinct talents and challenges, requiring individualised adjustments and specialised educational support. Despite the emphasis on adapted and inclusive education in Norway's Education Act, studies, including NOU 2016:14, reveal persistent gaps in meeting the needs of gifted learners.

The study is guided by activity theory (Engeström, 2001; Torgersen & Steiro, 2018), which frames cross-sectoral interaction (Norwegian: *samhandling*) as a dynamic process relying on trust, communication, and mutual involvement. Data were collected using a multi-method approach to capture different aspects of the partnership: a focus group interview provided insights into participants' experiences and perceptions of collaboration; surveys gathered structured feedback on the effectiveness of communication, leadership, and resource development; and participant logs documented real-time reflections on the process. A qualitative thematic analysis was conducted to identify recurring patterns, contrasts, and areas of improvement.

Findings show that interdisciplinary collaboration strengthens the ability to tailor educational adaptation for gifted learners when supported by clear communication, reciprocal exchange of expertise, and strong leadership. Participants highlighted the importance of trust and mutual respect in fostering shared project ownership. However, challenges such as differing institutional priorities and resource constraints were also noted.

This study offers new insights into how interdisciplinary partnerships can facilitate sustainable solutions for gifted learners within inclusive educational frameworks. Emphasising the integration of specialised provisions highlights the potential of such collaborations to bridge gaps in policy and practice, advancing equity and innovation in gifted education.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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Abstract title: Exceptional Individuals with Autism - Presentation of some Research Focuses from a Scoping Review

Type of presentation: Oral presentation

Twice-exceptionals (Reis et.al, 2014) with the combination of high cognitive abilities and autism can create challenges for the individual, environment, and in educational settings. This study map existing empirical research on gifted individuals who are also autistic – often referred to as twice-exceptional individuals. The research question is: *What research exists on twice-exceptional autistic individuals and how do these studies elucidate the simultaneous occurrence of exceptional intellectual abilities and autism.* In this scoping review we search the following databases: Education Source, ERIC, PubPsych, PsycINFO, Pubmed, Cochrane, Scopus and Web of Science using Rayyan.ai as a review-tool. The review includes 49 articles published between 1996 and 2023. The two main focuses of the articles are mapping and identification. The review shows diagnosing twice-exceptional individuals is a complicated process. Child-psychology services diagnosing autistic individuals pinpoint difficulties in taking their giftedness into account. However, the strengths of these individuals may enable them to compensate for their difficulties. Interest in the field is growing, but the research is fragmented. A limited number of studies focus on educational facilitation and interventions addressing both talent *and* difficulty, but research projects conducted indicate that educational facilitation and interventions yield good results. Capacity building among teachers and stakeholders is necessary to better identify and help twice-exceptional individuals. There is also a need for twice-exceptional researchers to enable more research "with" and not just "on" these individuals.

References

Reis, S. M., Baum, S. M., & Burke, E. (2014). An operational definition of twice-exceptional learners: Implications and applications. *Gifted Child Quarterly*, *58*(3), 217-230.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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[2]Behavioral Science Institute, Radboud University, Nijmegen, Netherlands
[3]Behavioral Science Institute , Radboud University, Nijmegen, Netherlands

Abstract title: Fostering Inclusive Education for Students with High Abilities in Higher Education: Insights from a Systematic Literature Review

Type of presentation: Oral presentation

High intellectual abilities offer immense potential but do not ensure academic success. Students with high abilities often experience unique social-emotional and educational challenges distinct from those of their peers. While these needs are well-documented in primary and secondary education, their implications for higher education remain underexplored. This lack of understanding is significant as higher education institutions aim to support diverse student populations. Despite programs like honors initiatives, the specific needs of high-ability students frequently go unmet. Many of these students encounter underachievement and delays, posing challenges to creating inclusive environments where all learners can thrive. This presentation reveals findings from a systematic literature review on the social-emotional and educational needs of high-ability students in higher education. The review synthesizes research to:

1. Identify the specific social-emotional needs and educational needs of these students.
2. Assess the effectiveness of interventions, such as honors programs.
3. Provide actionable strategies for establishing inclusive systems that foster their success.

Relevance to Inclusive Education
Inclusive education seeks to provide environments where all students, regardless of ability, can succeed. While traditionally centred on students with disabilities, true inclusivity must also encompass the often-overlooked challenges faced by high-ability students. This study addresses these gaps, highlighting barriers to their success and proposing strategies to enhance equity by recognizing and supporting cognitive diversity.

Presentation Highlights

- Key challenges faced by high-ability students in higher education.
- Insights from the literature review.
- Practical strategies for educators and policymakers.
- Recommendations for future research.

Interactive Component
An engaging Q&A session will allow participants to explore how these findings can inform their practices.

This research fills a critical gap, advancing dialogue on inclusivity in higher education and ensuring all students are empowered to achieve their full potential.

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Abstract title: Career decision-making of gifted and nongifted students: A comparative study in Türkiye

Type of presentation: Oral presentation

Career Decision-Making of Gifted and Nongifted Students: A Comparative Study in Türkiye

This study aims to qualitatively identify the key factors influencing the career decision-making processes of gifted and nongifted students in Türkiye. By examining these factors, we seek to enhance our understanding of how they contribute to students' career choices. The research focuses on three participants aged 18 to 21: one gifted graduate from a selective co-educational public high school, who is multitalented in general intelligence, visual arts, and music; one male participant from a 12th-grade all-boys religious high school; and one female participant from a selective private school, who is a high achiever and has prepared for Biology Olympiads but is not identified as gifted. Recruitment was conducted through the personal and professional network of the first author.

The study employed eleven semi-structured interview questions developed based on Social Cognitive Career Theory (SCCT). Interviews were conducted in Turkish between August and October 2024.Thematic analysis is particularly useful when the topic is under-searched and the focus is on meaning; for these reasons, it was employed in this study. Data were analyzed inductively using patern codes and deductively using theoretical frameworks. After the coding, we created a thematic map to asisst with interpreting the findings.

The results indicate that, regardless of school type, gender, or identification as gifted, there is a significant discrepancy between career aspirations and career outcomes among students. The career decisions of students in Türkiye are influenced by a variety of factors, particularly the social and economic context of a developing country. Hence, it should be acknowleged that the authentic selves and potential of youths may be hidden at a significant cost.

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Colm O Reilly[1], Jennifer Cross[2] and Tracy Cross[2]

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Abstract title: Predictors of School Liking: An Analysis of Irish Gifted Students' School Experiences and Emotional and Behavioral Difficulties

Type of presentation: Oral presentation

As part of a large, ongoing study of Irish gifted students' psychosocial development we explored the relationship of school liking with school experiences and emotional and behavioral adjustment. Students were asked to report the frequency with which they received differentiated assignments, were able to go in-depth as much as they wanted, and were bored because they already knew the material (from 1=Every day to 6=Never) in different classes (e.g., Science, History, etc.). They also responded to the Strengths and Difficulties Questionnaire (SDQ), a 25-item instrument with five subscales: Emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behaviors.

We hypothesized that the amount of attention to their giftedness in school and emotional and behavioral difficulties would be associated with students' liking of school. Irish secondary students attending a summer residential enrichment program (N = 403), aged 13-17, 46% male, completed the survey. In a hierarchical multiple regression, with school liking as the dependent variable, school experiences of frequency of challenge (b =.10) and boredom (b =.10) were related to school liking ($p < .05$). Conduct (b =.10) and prosocial behaviors (b =-.11) contributed significantly to the model ($p < .05$), but the most impactful predictors were hyperactivity/inattention (b =.27) and peer problems (b =.19). These findings indicate social issues and distractibility have much to do with students' feelings about school. To increase school liking, improving self-regulation skills and attending to peer problems should have a positive effect.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Lineke van Tricht[1], Lianne Hoogeveen[1] and Anouke Bakx[1]

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Abstract title: An intervention for motivating high-ability, secondary school students from low SES families: A design-based study

Type of presentation: Oral presentation

Inequity in gifted education is a concern in many countries, visible in the underrepresentation of low SES students in the higher levels of secondary education in general, and in high-ability programs in particular (Aalders et al., 2020; Ford et al., 2019; OECD, 2011; Vlaamse Overheid, 2021). Because motivation and achievement are strongly related (Gottfried et al., 2001; Hornstra et al., 2013; Meens et al., 2018), an intervention, aimed at enhancing the motivation of high-ability students from low SES families, was developed, piloted, and evaluated in an exploratory design-based, mixed method pilot study with a pre-test-intervention-post-test design. Former studies on motivation interventions (Dixson, 2019; Harackiewicz, 2016; Hulleman et al., 2016; Lazowski & Hulleman, 2016; Oyserman & Destin, 2010; Rosenzweig et al., 2019; Rosenzweig et al., 2020; Rosenzweig et al., 2022; Wigfield et al., 2021) were integrated to come to a new intervention, appropriate for our specific target group. Ethical approval was asked and granted by the Radboud University Ethics Committee. Eight students participated in this study. The quantitative part of the study consisted of two questionnaires, one on achievement motivation (Hermans, 1971, 1979) and one on academic self-efficacy (Muris, 2001). Qualitative data were collected by recordings of the intervention meetings, student materials, and a focus group interview after the intervention. Although quantitative analyses did not show significant differences between pre- and post-test, the qualitative results were promising: Students all reached their self-set goals. Meeting role models was an inspirational and educational experience, according to the students, because they learned about strategies in the face of adversity. The intervention seems to have the potential to provide students with opportunities they need to move from abilities to competency to expertise. (Reference list available with first author.)

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Haido Samaras[1], Georgia Tsoulfa[2], Danai Kyriaki[2] and Eleftheria Gonida[3]

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[3]Psychology, Aristotle University, Thessaloniki, Greece

Abstract title: Exploring the Role of AI Tools in Supporting Gifted Students' Learning and Creativity

Type of presentation: Oral presentation

The integration of artificial intelligence (AI) tools in education has sparked interest in their potential to support the unique needs of gifted and talented students. High-ability students excel in environments that challenge their curiosity and foster creativity. However, traditional classrooms often fail to provide such opportunities, leading to disengagement and underachievement. Additionally, these students frequently avoid seeking help due to fear of judgment or embarrassment, which can further hinder their academic progress.

Large language models (LLMs), such as ChatGPT and Gemini, offer a promising, judgment-free personalized learning and inquiry platform. As interactive learning environments, these tools support student progress through Bloom's Taxonomy, encourage interdisciplinary thinking, and nurture curiosity through open-ended exploration. Unlike traditional educators, whose expertise is often confined to specific domains, LLMs enhance creativity by helping students draw connections across diverse fields—a particularly valuable skill for all students.

This presentation seeks to examine the impact of AI tools on gifted students' engagement and learning processes through an investigative approach. Data collection will shape further analysis and discussion. The broader goal is to understand how AI can be meaningfully integrated into educational practices to complement traditional methods and empower students to reach their full potential.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Elisabet Mellroth[1]

[1]Department of mathematics and computer science, Karlstad University, Karlstad, Sweden

Abstract title: Outcomes from an ECHA certification training in a Swedish municipality

Type of presentation: Oral presentation

In this symposium, we will present the outcomes of 14 studies conducted by 18 educators as part of their examination for the ECHA certificate training (2023 – 2025). The ECHA training program consisted of three courses. The first course, delivered during the first year of professional development, focused on expanding knowledge of gifted education and the needs of highly able students. The second course aimed to design a study that would investigate and/or enhance education for highly able students in the educators' own practice.

The participants included four educators from preschool (children aged 1–6), twelve from compulsory school (children aged 6–16), and two from upper secondary school (youth aged 16–19). Collectively, they teach subjects such as language (Swedish and English) and mathematics, and hold various roles, including subject teachers, class teachers, special education teachers, and one principal. Some participants work in specific schools, while others are employed by the municipal education department. This diversity of backgrounds means the studies cover a broad range of educational contexts, yielding many insightful findings.

During the symposium, we will present results from studies such as: a problem-solving group in preschool; meetings in preschool aimed at developing knowledge of identifying highly able toddlers; strategies for including highly able learners through differentiated instruction; methods for identifying and supporting highly able learners who speak a foreign language at home; creating role-playing activities in English to encourage and stimulate highly able students; and fostering advanced conversations around complex literature. Additionally, two pairs of educators will provide more detailed presentations of their studies.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Maria Dahlberg[1] and Marie Wittesjö[2]

[1]Special education teacher, Jönkoping, Sweden
[2]special education teacher, Jönköping, Sweden

Abstract title: Text conversations with advanced readers in grade one

Type of presentation: Oral presentation

Abstract

During our years as teachers, we have noticed that students who are advanced readers in year one do not always get the challenges they would need. According to the school's curriculum, all students have the right to develop according to their conditions and needs (Swedish National Agency for Education, 2022). Text conversations with advanced readers can be one of the environmental catalysts that, according to Gagné (Sims, 2021), influence the development of abilities in a person. The text conversations can be opportunities for challenges, stimulation and support, and challenge people's thinking so that they use higher order thinking according to Bloom's revised taxonomy, as described by Mellroth (2021). A qualitative study has therefore been carried out to find out how text conversations can be used to stimulate advanced readers in year one.

In the qualitative area, we chose participatory observation as a method. The text conversations were designed according to "The Thinking Reader" (Westlund, 2021), which involves asking questions before, during and after the conversation. The book that was chosen and the questions that were used were taken from Polylino, a reading promotion digital tool. On three occasions, the text conversations were conducted with two selected pairs of advanced readers at two different schools.

The results show that all participants in the study have a well-developed ability to analyze and connect their own experience to the read text. In addition, the participants show a special curiosity and creativity in their answers to various questions, which shows that their higher thinking has been stimulated. The analysis of the results points to the importance of the type of questions that are asked as it has an impact on the degree of stimulation for advanced readers.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Darko Kocev[1]

[1]Mathematics, NLA Høgskolen, Bergen, Norway

Abstract title: Comparison of tasks in national mathematical competitions in Norway and Serbia

Type of presentation: Oral presentation

Mathematical competitions provide talented students opportunity to develop their knowledge and skills. Norway and Serbia have different traditions and points of view towards mathematical competitions and IMO (International Mathematical Olympiad), so they have different approaches when it comes to working with talented students. This study explores which differences and similarities have tasks in their national competitions that serve as qualifications to IMO with respect to complexity and context.

In order to explore complexity and the context of tasks, the study used the work of Lithner (2006) related to reasoning as well as Brehmer et al. (2015) regarding the context of tasks.

In the study is used mixed method that includes quantitative and qualitative approach. Data is collected by analyzing tasks from all rounds of National mathematical competitions in Serbia and Norway in the last five years (2019-2024). There are approximately 440 tasks that are considered in analysis. In addition, two professors that are included in preparing tasks for competitions are interviewed, one from Serbia and one from Norway.

Preliminary findings indicate that mathematical tasks from Serbian competitions appear to be more complex and demanding than those from Norwegian competitions.

There is not much research in Nordic countries dedicated to the topic of math competitions, so this research might provoke other researchers to explore this topic from different angles.

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Anna Payne[1] and Ryan Fox[2]

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[2]Department of Mathematics, Computer Science, and Data Science, Belmont University, Nashville, United States of America

Abstract title: "Well, back in my day" or "See, I turned out alright": Reflections on evolving teaching practices to get gifted students not to hate math

Type of presentation: Oral presentation

As a conservative field of study, much of the traditional work and approaches to mathematics learning remained entrenched to this day. For example, debate continues regarding the merits of teachers assigning homework to students to complete outside the regular school day and classroom (Sayers et al., 2022) or timed assessments to measure student understanding and fact fluency (Tsui & Mazzocco, 2006). Expectations exist that with familiar methods of rehearsal, practice, and application, students would become proficient mathematically or even excel. While individual successes have allowed for continued discoveries and improvements in the highest levels of mathematics, overall trends suggest mathematical knowledge is decreasing around the world.

Burtenshaw's (2024) elaboration of Mathematical Egotism illustrates a particular problem to mathematics, with these barriers leading to students becoming disengaged from the beauty of mathematics and school-level academic studies. While the term "math trauma" is getting extra attention in North America currently (Vakaria, 2024), the idea of psychological concerns created in school-age children by doing skills-based homework assignments is neither new or unique to the Americas, with a report by Danish researchers from 2011 serving as the setting for an article in *Educational Studies in Mathematics* (Lange & Meaney). Adding to these stresses are the expectations that female students identified as gifted must maintain certain behaviors and attitudes in the classroom and in social settings (Guthrie, 2020). Moving forward, our session will address these concerns and encourage discussion on next steps as well as ideas for supporting colleagues who may be "stuck" in the past. Our guiding questions are: what pedagogical practices inhibit or support students' construction of meaningful mathematical knowledge while addressing barriers or obstacles that a demographically diverse group of students overcome to reach similar successes as students who have already demonstrated a level of success or promise?

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[3]National Science Center, Oslo University, Oslo, Norway

Abstract title: High ability students and their experiences with a university level mathematics course.

Type of presentation: Oral presentation

Different countries are equipping students with the skills necessary to compete in the 21st-century global economy, innovation, and technological competency. School students with high mathematical abilities need educational opportunities to be motivated and develop their mathematical potential. Such educational provisions are scarce in Nordic countries, but efforts are being made by both policy and practice. Despite their efforts, there is still lack of systematic recognition and educational opportunities for high ability students and research studies on this topic are scarce (Sims, 2021; Tourón, J. & Freeman, J.).

The present qualitative study explores school students' experiences with a university course in mathematics. Our interest is in their current opinions on this specific provision as well as their reflections about perceived differences between school mathematics and the university course.

A number of 28 pupils (mean age 18) completed an anonymous online survey. Overall, results point to general satisfaction with the university course where aspects such as challenge, engagement, adapted learning and social dimension are highlighted by students.

Our study contributes to a better understanding of the needs of these school students and can inform educational policy and mathematics educators of the ways in which school mathematics should be taught to students who have the potential to develop mathematical talent.

Sims, Caroline Snäckerström (2021), Särskild begåvning i praktik och forskning. Studentlitteratur AB. ISSN 9789144135670. s. 193–212.

Tourón, J. & Freeman, J. (2017), 'Gifted Education in Europe: Implications for policymakers and educators', S.I. Pfeiffer (Ed.) APA Handbook on Giftedness and Talent. Washington: American Psychological Association (APA).

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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Abstract title: The Importance of Parent Associations in Gifted Education

Type of presentation: Oral presentation

It is well-established that parents and caregivers play a vital role in the intellectual development and social-emotional well-being of gifted children. However, families and parent organizations are also crucial to the success of sustainability and inclusivity efforts within gifted education. Engaging in gifted advocacy requires long-term vision and a sustained commitment, including years of research, networking, political action, and volunteerism (Robinson & Moon, 2003). Parents and caregivers are often gifted students' most vocal advocates, and finding ways to amplify and then maintain individual advocacy is the work of parent associations. Additionally, parents and parent associations are instrumental in welcoming underserved populations into the gifted community. In this oral presentation, attendees will learn about techniques for establishing, growing, and sustaining gifted parent organizations. The presenters will draw upon both the success of parent associations across Europe and gifted advocacy models offered by researchers (Dettmer, 1991; Grantham, Frasier, Roberts, & Bridges, 2005). Special attention will also be paid to new research concerning the importance of multigenerational gifted advocacy (Webb et al., 2004). Attendees will leave this session with a step-by-step plan for creating sustainable parent associations in their own gifted communities.

Dettmer, J. (1991). Gifted program advocacy: Overhauling bandwagons to build support. Gifted Child Quarterly, 35, 165–171. https://10.1177/001698629103500401

Grantham, T., Frasier, M., Roberts, A. C., & Bridges, E. (2005). Parent advocacy for culturally diverse gifted students. Theory Into Practice, 44,(2) 138–147. https://10.1207/s15430421tip4402_8

Robinson, A., & Moon, S. M. (2003). A national study of local and state advocacy in gifted education. Gifted Child Quarterly, 47, 8–25. https://doi.org/10.1177/001698620304700103

Webb, J.T., Gore, J.L, Karnes, F.A. & Daniels, A.S. McD. (2004) Grandparents Guide to Gifted Children, Great Potential Press

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Aiswarya Radhakrishnan[1], Colm O'Reilly[2] and Lorraine Boran[3]

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Abstract title: Co-designing Strength-Based Interventions for Twice Exceptional Students with Autism Spectrum (2e-AS) through collaboration from children, teachers, parents and subject experts.

Type of presentation: Oral presentation

The Center for Talented Youth Ireland (CTYI) at Dublin City University serves over 6,000 students annually, with up to 25% demonstrating both high ability and learning difficulties, particularly autism. Research highlights that a significant proportion of the autistic population possesses exceptional academic talents and heightened cognitive abilities, categorizing them as twice-exceptional (2e-AS). Despite growing recognition, research and tailored interventions for this group remain limited.

This study employs a Patient and Public Involvement (PPI) approach to co-design a strengths-based intervention for 2e-AS students in collaboration with CTYI. Phase 1 engaged parents, teachers, and subject experts to identify the strengths, challenges, and supportive strategies relevant to this population, contributing to the development of key intervention elements. Stakeholder feedback strongly emphasized the importance of child participation, leading to the development of an additional step within Phase 1. Thus the current study aims to collect comprehensive data on the challenges, strengths, and effective support strategies for 2e-AS children. Six child-caregiver dyads (three primary-age and three secondary-age) will participate in semi-structured discussions guided by the Lundy (2007) framework, ensuring that both the child's and caregiver's perspectives inform the intervention's development. This step prioritizes ethical inclusivity, emphasizing the lived experiences of 2e-AS children and reinforcing the importance of embedding the child's voice in educational research. The process is overseen by an independent Young Person's Advisory Board, further ensuring ethical and inclusive practices.

Findings from this phase will undergo thematic analysis, identifying key strengths, challenges, and effective strategies for supporting 2e-AS students. These insights will directly inform the next stage of study, ensuring that future interventions are tailored to the unique needs of this population. By embedding child participation in research, this study offers a collaborative framework for designing interventions that enhance both the educational and social outcomes of 2e-AS students.

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Henrik Gustafsson[1]

[1]Educational studies, Karlstad University, Karlstad, Sweden

Abstract title: A Cognitive Behavioral Model of Athlete – New Avenues for Prevention and Treatment

Type of presentation: Oral presentation

Burnout is a significant concern in competitive sports, characterized by emotional and physical exhaustion, reduced sense of accomplishment, and sport devaluation. Research indicates that approximately 12% of young elite athletes experience clinically relevant levels of burnout symptoms (Gerber et al., 2018), underscoring the need for effective models to understand and address this issue. A Cognitive-Behavioral Therapy (CBT) model of athlete burnout is introduced, adapted clinical burnout model (Almén, 2021). This new model emphasizes the maintenance of athlete burnout through maladaptive behaviors and cognitive patterns, even after the initial stressors have subsided. In the athletic context, this model suggests that burnout is perpetuated by factors such as perfectionism, overcommitment, and inadequate recovery, leading to a cycle of sustained stress and impaired performance. The CBT model posits that interventions should focus not only on alleviating external stressors but also on modifying the internal cognitive and behavioral processes that maintain burnout. This includes strategies like cognitive restructuring to address perfectionistic thoughts, behavioral activation to counteract withdrawal behaviors, and the development of effective recovery routines. Additionally, mindfulness and acceptance-based approaches can enhance psychological flexibility, allowing athletes to better cope with the demands of their sport. Despite its theoretical promise, the CBT model of athlete burnout requires empirical validation. Future research should explore the model's applicability and assess the effectiveness of CBT-based interventions, and maintenance mechanisms. This model offers a comprehensive framework for understanding and mitigating athlete burnout.

Almén, N. (2021). *A cognitive behavioral model proposing that clinical burnout may maintain itself. Int J Environ Res Publ Heatl*, 18(7), 3446.

Gerber, M., Gustafsson, H., Seelig, H., Kellmann, M., Ludyga, S., Colledge, F., ... & Bianchi, R. (2018). Usefulness of the Athlete Burnout Questionnaire (ABQ) as a screening tool for the detection of clinically relevant burnout symptoms among young elite athletes. *Psyc Spo Exe*, *39*, 104-113.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Lena Ivarsson[1]

[1]Departemnt of Education, Mid Sweden University, Sundsvall, Sweden

Abstract title: Enriching challenge

Type of presentation: Oral presentation

The *Enriching Challenge project* is a collaboration between Mid Sweden University, Härnösand Municipality, and Technichus Science Center. The project aims to offer after-school activities for gifted students in mathematics, science, and technology in grades 4-8 at two pilot schools in Härnösand Municipality. Sims´ (2023) cluster model and conversations with teachers and parents form the basis for identifying the gifted students in this pilot study. The students met at Technichus Science Center every three weeks during the autumn of 2024 and will continue with this during the spring of 2025. During the autumn, they could try different activities, materials, and machines. They have worked individually, in pairs, and groups. During the spring, they will work on their own projects. The autumn activities have been documented through observations. Results so far show students appreciate using their theoretical knowledge more practically and concretely, which they get to do at Technichus Science Center. The students have made new friends and expressed great joy over the activities and the opportunity to meet like-minded friends. During the spring of 2025, empirical data collection will continue through observations of the activities at Technichus and interviews with parents, students, and teachers. It is too early to draw any conclusions from the project. Still, we can state that all students except one remain in the pilot project, that in principle, all students come to every meeting, and that the students' social relationships are developing positively. Results also show that it is a challenge to mix gifted students from grade 4 to grade 8 in one group, especially during the autumn when many of the activities were common. Finally, it is hoped that the results from this pilot study will form the basis for similar activities at several Science Centers in Sweden, as there is a great interest among them.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Salma Baghajati[1]

[1]Private University College of Teacher Education of Christian Churches Austria , Austrian, Vienna, Austria

Abstract title: Sustainable Equity Through STEM: Inlcusive Gifted Education in an Austrian Primary School

Type of presentation: Oral presentation

This study examines the implementation of STEM education as an inclusive approach to gifted education at an Austrian public primary school. Through a qualitative case study, data were collected via interviews with school leadership, STEM coordinators, focus groups with teachers and students, classroom observations and school data analysis. This qualitative case study aimed to reveal practical insights into optimising STEM instruction to foster the potential of all students and investigate the role of teachers as key facilitators in establishing systemic approaches to inclusive gifted education. Weekly STEM sessions, open to all students, form the centrepiece of the school's programme. These sessions, where the children conduct chemical experiments, prioritise creativity, problem-solving, and teamwork, foster curiosity and provide equitable opportunities for all students to explore their potential. Observational data revealed that inclusive teaching strategies successfully engage all learners, positioning STEM as a transformative tool for sustainable and equitable pathways in gifted education. Students highlighted the programme's positive impact, particularly in enhancing creativity and problem-solving abilities, while offering joyful, hands-on learning experiences. However, the findings of the qualitative case study also identified systemic challenges. Leadership and teachers predominantly adhered to an "identification-focused" paradigm of giftedness, expressing scepticism towards inclusive talent development and prioritising STEM over other disciplines. These attitudes underscore the need for professional development to align teachers' perspectives with Austria's existing Gifted Education Policy.

The findings highlight the transformative potential of integrative STEM programmes to cultivate both academic and social competencies, contributing to a future-ready and equitable society. Moreover, the study emphasises the crucial role of teachers' mindsets in advancing inclusive practices. This qualitative research illustrates how STEM initiatives, when effectively implemented, can foster individual growth of each student while driving systemic school improvement, thus offering a sustainable pathway for addressing societal and educational challenges.

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[2]Department of Psychology, Faculty of Education, J. E. Purkyně University, Ústí nad Labem, Czechia

Abstract title: "I don't want to be [seen as] gifted." An IPA study of gifted students' experience in mainstream schools

Type of presentation: Oral presentation

Inclusive education in its full sense requires us to recognise the diverse needs of all children, and to adapt the educational process to meet them. We can hardly achieve such a goal without asking the children themselves what their needs are and what could help them to feel and learn better in school. This basic principle of participatory approach strengthens both knowledge and ethical dimension of research, and can be applied directly in school practice, too. Our study provides gifted students with an opportunity to tell what experience they have with learning and relationships in a heterogeneous class, how they perceive the role of the teacher, and how they think about their educational journey.

Focused on lower-secondary level, we sought out the rare cases who did not leave for selective multi-year secondary school (ISCED 2-3) and stayed in mainstream nine-year school (ISCED 1-2). This made our sample more homogeneous and might have led us to instances of good practice. Six gifted students aged 11-14 years participate in our research. The project is designed as a case study, using simple purposive sampling, semi-structured interview, and interpretative phenomenological analysis (IPA). It adheres to essential ethical principles, especially respect for dignity, protection of privacy, the right to express oneself freely.

Idiographic orientation of IPA only allows for low-level generalisations, i.e. it reveals certain convergences across participants' accounts. The most significant ones include the importance of peer relationships and class climate, sensitivity to disrespectful or unjust treatment, and the tendency to refuse the gifted label along with expectations involved. Nevertheless, the phenomenon under study appears to be much more complex and diversified. Building on both current findings and previous research, our study draws conclusions and recommendations that hopefully could help to provide gifted students with more suitable conditions in mainstream (increasingly inclusive) schools.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Eliška Glatzová[1]

[1]Pre-primary and Primary Education Department, Faculty of Education, Charles University , Čelákovice, Czechia

Abstract title: Forced to change school: experience of gifted children´s families in seeking for optimal educational environment

Type of presentation: Oral presentation

The interactive oral presentation introduces a study exploring the experiences of Czech parents who initiated transfer of their gifted young age-school child from public school to private one or opt for homeschooling to provide more suitable environment. The research is a part of a dissertation project.

The purpose of the research is to gain a deep understanding of parent´s perspectives, focusing on the motives and circumstances that led to school transfer, and how public schools addressed or failed to address the specific needs of their children. Ultimately the presentation reveals the key elements that helped families to identify a more suitable educational setting.

This ongoing research employs grounded theory to provide rich data and contextualized insights. In order to ensure consistency, in-depths semi-structured interviews were conducted with six parents. The data have been analyzed using the software MaxQDA for open coding to identify recurring themes and patterns. The conducting of interviews and the subsequent handling of data are in accordance with ethical principles.

The parents frequently report inability of mainstream schools to offer adequate differentiation or enrichment opportunities. They also mention problems connected to sensitivity and social challenges. The dissatisfaction was intensively manifested at school and at home. The key to children's satisfaction has been varied. However, common factors include the opportunity to focus on the areas of interest and, in cases of twice-exceptionality, less emphasis on learning disabilities. Respectful school approach and understanding of giftedness have been crucial. Nevertheless, their needs have not been always fulfilled.

The findings highlight the systematic inadequacies in inclusive education and suggest certain improvements in practice. Policymakers should better address the gaps in current system and prioritize also the gifted education.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Margaret Sutherland[1] and Catherine Reid[1]

[1]Education, University of Glasgow, Glasgow, United Kingdom

Abstract title: If not inclusion, then what: and what might this mean for gifted education?

Type of presentation: Oral presentation

In 1994 the Salamanca Statements called for inclusive education. Since then, establishing inclusion and inclusive education have become the goal of many countries across the globe. Much attention has been paid to the underachievement of those with disabilities, those living in poverty or those who struggle with learning for example, and often in the belief that "the gifted" have no such problems with learning. This is contrary to what is stated in the Salamanca Statements where the "gifted" are specifically mentioned. In this paper we will argue that both the fields of inclusive education and gifted education must take responsibility for this situation. We will contend that hitherto, well known figures in inclusive education have not specifically addressed the issue of gifted learners while simultaneously the field of gifted education has not fully engaged with inclusive education. While there is potential for the fields to come together to make learning better for all, we will examine whether current trends in education mean this is less or more likely to happen. Inequality is increasing in society and there are many concerns about social equality in education and the potential polarisation of society. These continued inequalities in income, healthcare, water, sanitation, life expectancy and education present a worrying trend with inclusion as a concept being called into question. The paper will conclude by arguing that the field of gifted education needs to step out of the silo and engage in meaningful ways with special and general education if we are to avoid education retreating to a deficit model that focuses on problems, exclusion and division. A retreat to the past and away from inclusion could well endanger the learning of all resulting in worrying consequences for society.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Daniel Virtus-Palacios[1] and Martha Lucía Orozco Gómez[1]

[1]Faculty of Education, Burgos University, Burgos, Spain

Abstract title: Leadership in High Abilities and High Achievers

Type of presentation: Oral presentation

A high interest in social issues, strong organizational skills, and a well-developed sense of justice are traits often associated with high abilities. These characteristics suggest that highly able students may have greater potential for developing leadership skills. Sometimes leadership abilities are evaluated to identify highly able students, and some models even include leadership as a domain in which talent can emerge. This study evaluates the leadership abilities of highly able students and compares them with their high-achieving peers.

A quantitative methodology was employed, using an adapted version of the Blake & Mouton Leadership Questionnaire. This questionnaire consists of 16 Likert-scale items (0–5) designed to measure two subscales: (1) task-oriented leadership and (2) group-oriented leadership. The sample included $N = 162$ participants divided into four groups: (1) Highly able males ($n = 51$), (2) Highly able females ($n = 33$), (3) High-achieving males ($n = 35$), and (4) High-achieving females ($n = 43$). The highly able group was drawn from an extracurricular enrichment program, while the high-achieving group was recruited from a science summer camp. SPSS software was used, and the significance level was fixed at 0.05.

MANOVA revealed no significant differences in the group-oriented leadership subscale. However, a statistically significant difference was found in task-oriented leadership: $F\ (2, 157) = 2.67$, $p = 0.01$, Wilks' Lambda = 0.9, $\eta^2 = 0.05$. Post hoc ANOVA with Bonferroni correction identified significant differences ($p < 0.01$) between highly able females ($M = 26.96$, $SD = 4.7$) and high-achieving males ($M = 21.14$, $SD = 7.39$).

The findings suggest that leadership differences between highly able students and high achievers are limited to specific groups. Overall, no significant differences were found in most cases, leading to the conclusion that leadership abilities are broadly similar between highly able students and high achievers.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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[1]Faculty of Educational Sciences, University of Helsinki, University Lecturer, Helsinki, Finland
[2]Faculty of Educational Sciences, University of Helsinki, Postdoctoral Researcher, Helsinki, Finland
[3]Faculty of Educational Sciences, University of Helsinki, Professor, Helsinki, Finland

Abstract title: Mindsets and Effort Beliefs of Finnish High-Achieving Gifted Students

Type of presentation: Oral presentation

The aim of the present study was to examine how Finnish elementary school students' mindsets and effort beliefs are associated with their school achievement. More specifically, we were interested in how high achieving gifted fourth grade students differ from their peers in their mindset and effort beliefs. For this, 199 fourth grade students from two Finnish elementary schools filled in a questionnaire regarding their mindset and effort beliefs, and their fourth-grade mathematics and Finnish grades were obtained. Based on our results, fourth grade students with the highest possible grades in both math and Finnish believed more in the utility of effort in enhancing one's ability than did their peers, while the difference in the belief about the malleability of intelligence was only marginal. This indicates that not just beliefs about the malleability of intelligence, but also and possibly more so the beliefs about the importance of effort in enhancing one's abilities might be important for students' high achievement.

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Matthew Makel[1]

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Abstract title: Can we Trust Characteristics Lists of Gifted Students?

Type of presentation: Oral presentation

Characteristics lists of gifted students are used to inform stakeholders and identify students for services. However, they have many limitations. These include lack of empirical basis, varying relevance based on the specific services being offered, jingle/jangle fallacies, and potential reification of existing biases and inequities.

As pointed out by Pfeiffer and Foley-Nicpon (2018) in a discussion about twice-exceptionality, population level epidemiological studies are required to make any realistic estimates about prevalence rates. Without realistic estimates of prevalence rates, how can any feature be determined to be a characteristic? If lists are created based solely on who has been identified previously, they will recreate the inequities that already exist that many are striving to remove. For an extreme example, in many schools a not-entirely-inaccurate list of characteristics of students who have previously been identified for gifted services could have looked like, “White, Wealthy, Well-Behaved, Male”. However, if schools seek to move beyond perpetuating existing inequities, they cannot rely on lists built on features of students who have been identified previously.

It is a dereliction of duty and a violation of the public trust if the research community misrepresents a thinly supported set of assertions as though they were well grounded in empirical support. If there is a rich and well-sourced empirical body of research supporting characteristics lists, we need to highlight this strength while making the benefits of such lists more tangible and transparent. If there is not a well-sourced body of research (or if it is uneven), the research community needs to act before it advises. Or it needs to advise with clearer caveats. Absent data, the research community risks losing its reputation and value that it provides to society. This session will help attendees take action that aligns with their aspirations and avoid mistakes.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

MARIA PRIOVOLOU[1], PANAGIOTIS GRIDOS[1], GEORGE KARGIOTAKIS[1] and ANASTASIA BELITSOU[1]

[1]ELLINIKO, EUROPAIKO PROTYPO SCHOOL, ATHENS, Greece

Abstract title: How Recreational Mathematics enhances the development of mathematical skills. An educational scenario.

Type of presentation: Oral presentation

How Recreational Mathematics enhances the development of mathematical skills. An educational scenario.

Gridos Panagiotis,Phd

Kargiotakis George, Phd

Belitsou Natasa, Phd

Priovolou Maria, Msc

Europaiko Protypo School

Athens, Greece

This study presents an innovative educational scenario designed to foster mathematical talent development among students aged 9-12 years, emphasizing inclusive practices that recognize and nurture diverse manifestations of mathematical giftedness. The intervention leverages recreational mathematics as a catalyst for engaging all students, regardless of their initial mathematical performance, thus promoting sustainable talent development practices in mainstream classrooms.

The scenario employs curiosity-driven learning through carefully selected puzzles and games from recreational mathematics, creating an inclusive environment where different types of mathematical thinking can flourish. By integrating elements of play with systematic problem-solving approaches, the program aims to uncover and develop mathematical potential across the entire student spectrum.

The methodological framework emphasizes collaborative learning through team-based problem-solving activities, creating a supportive environment where diverse thinking styles are valued. This approach particularly benefits students who may not traditionally identify as mathematically gifted, allowing their unique problem-solving approaches to emerge and be recognized. The scenario incorporates various elements including geometric and stereometric games, Egyptian numerology, and magic squares, providing multiple entry points for mathematical engagement.

Key pedagogical objectives include:

- Fostering creative and original thinking through open-ended problem-solving

- Developing critical thinking skills through collaborative exploration

- Building mathematical confidence through self-directed error correction

- Creating sustainable engagement with mathematical concepts

- Identifying and nurturing diverse manifestations of mathematical giftedness

Initial findings suggest that recreational mathematics serves as an effective vehicle for inclusive talent development, creating an aesthetic mathematical experience that appeals to diverse learning styles and abilities. This approach aligns with current perspectives on gifted education that emphasize talent development as a dynamic, inclusive process rather than a fixed trait.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Karin Landschulze[1] and Gila Hammer Furnes[2]

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[2]Pedagogy, NLA University College, Bergen, Norway

Abstract title: Argumentation and rich tasks in mathematics: Engaging and identifying potentially gifted 1st-grade students in a “powerful classroom”

Type of presentation: Oral presentation

This case study employs mathematical argumentation in a Norwegian 1st-grade “powerful classroom” to enhance learning and identify potentially gifted students. It aligns with Gross (2006) in promoting expanding academic and social opportunities for gifted students. Gifted students are not routinely identified in Norway, but they are present in the usual classroom and need to be catered for. This study has a dual focus on using problem-solving to enhance learning for a mixed group and to identify potentially gifted students through their argumentation. To study these young students’ mathematical argumentation, we employ Toulmins simplified model for argumentation consisting of data, warrant, backing and conclusion (Krummheuer, 2007; Schwarz et al., 2010). The qualitative analysis is based on observations of student groups to identify different kinds of arguments and creative ideas. The study shows that 1st-grade students in a “powerful classroom” use both mathematical and non-mathematical arguments to support their claims. It suggests that employing argumentation in rich mathematical tasks can elevate students’ knowledge, even as young as 1st-grade. Furthermore, the study indicates that students’ mathematical arguments of rich tasks might facilitate identifying potentially gifted students. The advanced mathematical reasoning observed in some students suggests the presence of giftedness, emphasising the necessity of early identification and support for gifted students through differentiated instruction and enrichment activities.

Gross, M. U. (2006). Exceptionally gifted children: Long-term outcomes of academic acceleration and nonacceleration. Journal for the Education of the Gifted, 29(4), 404-429

Krummheuer, G. (2007). Argumentation and participation in the primary mathematics classroom: Two episodes and related theoretical abductions. The Journal of Mathematical Behavior, 26(1), 60-82. https://doi.org/https://doi.org/10.1016/j.jmathb.2007.02.001

Schwarz, B. B., Hershkowitz, R., & Prusak, N. (2010). Argumentation and mathematics. In C. Howe & K. Littleto (Eds.), Educational dialogues: Understanding and promoting productive interaction (pp. 115–141).

The 4th thematic European Council for High Ability conference on inclusion and sustainability

MARIA PRIOVOLOU[1], ANASTASIA BELITSOU[2], PANAGIOTIS GRIDOS[3], GEORGE KARGIOTAKIS[2] and THANASIS KOPADIS[2]

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[3]EUROPAIKO PROTYPO SCHOOL, ATHENS, Greece

Abstract title: Approaching education inclusively, sustainably and with an emphasis on mathematical giftedness.

Type of presentation: Oral presentation

Approaching education inclusively, sustainably and with an emphasis on mathematical giftedness.

Gridos Panagiotis

Kargiotakis George

Kopadis Thanasis

Belitsou Natasa

Priovolou Maria

This case study presents a comprehensive mathematics program implemented at a Greek school over the past 14 years, demonstrating a sustainable approach to inclusive education that nurtures mathematical giftedness across all student populations. The program represents an innovative departure from traditional Greek educational practices, incorporating experiential learning, differentiated instruction, and self-directed assessment within an inclusive framework.

The school's pedagogical philosophy is grounded in the principle that mathematical ability manifests through multiple domains. This approach recognizes mathematics as an integral part of diverse contexts: natural phenomena, gaming theory, daily applications, puzzle-solving, historical perspectives, literary connections, and artistic expressions. Serving students aged 4-15 years, the program transcends conventional textbook-based instruction to embrace a holistic learning environment that cultivates creative thinking and problem-solving abilities.

Key Program Features:

- Implementation of Creative, Competitive, and Recreational Mathematics curricula
- Emphasis on conceptual understanding through experiential learning
- Differentiated instruction tailored to individual student capabilities
- Development of comprehensive student portfolios from age 4
- Integration of mathematics across multiple disciplines

Assessment Framework:

Primary Level:

- Daily practice with differentiated difficulty levels
- Student-selected challenge levels in assessments
- Structured self-correction opportunities
- Individualized goal setting and tracking

Secondary Level:

- Open-book examinations promoting critical thinking
- Self-directed assessment strategies
- Portfolio development aligned with individual cognitive development
- Participation in mathematical competitions

The program's success is evidenced through:

- Sustained student engagement across all ability levels
- Notable achievements in mathematical competitions
- Development of comprehensive mathematical portfolios
- Regular presentations at academic conferences
- Positive outcomes in identifying and nurturing mathematical talent

This model demonstrates how inclusive educational practices can effectively support talent development while maintaining academic rigor. The program's 14-year implementation provides valuable insights into sustainable approaches for nurturing mathematical giftedness within mainstream education settings.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Jessica Potts[1]

[1]Davidson Academy Online, Reno, United States of America

Abstract title: Online and Hybrid Learning as the Frontier of Sustainability and Inclusivity in Gifted Education

Type of presentation: Oral presentation

Interest in online learning was on the rise even before the COVID-19 pandemic, with enrollments growing at a rate of about 6% per year (Digital Learning Collaborative, 2019). Research has routinely shown that online learning can work to meet the needs of gifted students in that it offers individualization, flexibility, autonomy, access to appropriate curriculum, and interaction with intellectual peers (McKoy & Merry, 2023; Ng & Nicholas, 2010; Potts, 2019; Thomson, 2010). Along with being an excellent method of intellectual engagement, online learning is on the frontier of sustainability and inclusivity in gifted education. Gifted programs can create "digital green campuses" that exist almost exclusively on learning management systems. These virtual platforms significantly reduce the need for energy-intensive infrastructure, carbon-producing transportation, and paper-consuming textbooks (Du Preez, 2022; Tobel, 2024). Additionally, virtual classrooms offer different levels of accessibility and inclusivity than brick-and-mortar classrooms. For example, opportunity gaps are a challenge to gifted students who live in rural areas or who are economically disadvantaged (Rasheed, 2020; Xu et al., 2024), and online learning may serve as a chance for these students to access intellectually appropriate instruction. Online learning may also be a positive choice for some twice-exceptional students, as it allows for high levels of flexibility and individualization (Coxon et al., 2020). Throughout this presentation, attendees will learn about the benefits of moving toward a "green digital campus" and will be given specific advice on how to leverage the flexibility of online learning to meet both the needs of gifted students and institutional goals concerning sustainability and inclusivity. Special attention will be paid to hybrid learning, as this mode of instruction can be a viable option for gifted programs that are committing to having brick-and-mortar classrooms.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Jessica Potts[1] and Megan Griffiths[2]

[1]Davidson Academy Online, Reno, United States of America
[2]Centre for Talented Youth Ireland, Dublin, Ireland

Abstract title: Inclusive Enrichment: Irish Gifted Students' Perceptions of Online Courses

Type of presentation: Oral presentation

Online learning was growing worldwide even before the COVID-19 pandemic (Digital Learning Collaborative, 2019), but for many gifted students in Ireland, their first experience with full-time virtual classrooms came during COVID shutdowns. The "emergency remote teaching" (Milman, 2020) employed during COVID left Irish gifted students yearning for in-person classes, as they believed brick-and-mortar instruction offered more interesting and challenging activities, better support from teachers, and greater levels of motivation (Cross, Cross and O'Reilly, 2022; McDonnell, et al., 2023). However, research has shown that intentionally-designed online learning can meet the needs of gifted students as it offers individualization, flexibility, autonomy, access to appropriate curriculum, and interaction with intellectual peers (McKoy & Merry, 2023; Potts, 2019). For gifted students in Ireland, online learning also offers a solution to geographical barriers. Centre for Talented Youth Ireland offers Saturday courses at seven centers outside its Dublin headquarters to serve students nationwide. However, due to staffing and resource limitations (computer labs, laboratories), these centers offer a reduced schedule of 5-10 courses, compared to the 30-40 courses per term in Dublin (CTYI, 2024). Additionally, online learning may increase both the sustainability and inclusivity of gifted programs in Ireland, as virtual options can serve more students than brick-and-mortar courses, are often less expensive than traditional gifted programs, are less energy-intensive in terms of infrastructure, and can reduce carbon use via a reduction in transportation (Du Preez, 2022; Tobel, 2024). This presentation will reveal the findings from a mixed methods study on gifted Irish students' perceptions of online enrichment classes. This study aims to understand not only students' academic and social experiences, but also how these online classes impacted their ability to access gifted programming. The findings from this study will hopefully encourage the growth of online gifted programs in Ireland, making gifted education more accessible and sustainable.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Silvia Greiten[1]

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Abstract title: Assessments of highly gifted students regarding the offers of the 'digital revolving door' in terms of developing and promoting interests and motivation – results of an interview study

Type of presentation: Oral presentation

In Germany, the concept of the 'Revolving Door' (Renzulli et al., 1981) is one of the best-known school support measures (Greiten, 2016). It is based on the Three-Ring-Concept and the Enrichment Model (Renzulli et al., 1981; Renzulli et al., 2008). The assumption is that talents develop and flourish through the interaction of above-average ability, creativity and task commitment (ibid.). In the context of the 'Revolving Door', highly gifted students can leave their regular classes for a few hours a week to work on their own projects. This allows them to experience learning situations that can support the development and promotion of their interests and motivation.

In the wake of the coronavirus pandemic, the 'Digital Revolving Door' was initiated in Germany – an innovative educational format (https://digitale-drehtuer.de/). Three different formats are provided free of charge on a *digital campus*: *live courses, self-learning programmes and hybrid courses*, with a variety of topics for primary and secondary school students. Currently, 1200 schools and 14,000 students are registered.

The paper presents an interview study. The research question is: How do highly gifted students assess the offers of the 'Digital Revolving Door' in terms of developing their interests and promoting their motivation? Guided interviews with highly gifted students (n=16) from different grades were analysed using structured qualitative content analysis and MAXQDA (Kuckartz & Rädiker 2024). Results from five case studies are presented from the data corpus (n=16), which, as contrasting cases, allow for the formation of types.

Renzulli, J. S., Reis, S. M., & Brigandi, C, (2008). ENRICHMENT THEORY, RESEARCH AND PRACTICE. In: Plucker, J. & Callahan, C. (Hrsg.), Critical Issues and Practices in Gifted Education: What the research says. Pufrock Press.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

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[2]Curriculum and Instruction, Baylor University, Waco, TX, United States of America

Abstract title: Guidelines for Sustainable and Inclusive Academic Acceleration Policies: A Case Study of One Southern State in the United States

Type of presentation: Oral presentation

One of the most widely researched approaches for meeting the needs of advanced learners is acceleration (Assouline et al., 2015). Accelerated learning pathways may result in a student advancing a grade or more or receiving advanced instruction in one or more subjects. Even though over eight decades of research supports the use of acceleration for advanced students in PreK-12 education contexts, policymakers, educators, and caregivers still harbor misconceptions about what acceleration is, how it works, and who it benefits (Plucker & Callahan, 2020).

Acceleration policies can provide clarity about the goals of acceleration, increase access to advanced learning opportunities, and guide decision-making processes, but very few states in the U.S. have this type of legislation. Without equitable, sustainable, and transparent guidelines for acceleration, important decisions about educational placements for students with advanced learning needs may be based on misconceptions or personal beliefs. Poorly written policies that do not include careful planning, systematic assessment, and dynamic monitoring throughout the acceleration process may create barriers (Lupkowski-Shoplik et al., 2018; Plucker et al., 2017; Southern & Jones, 2004).

In this session, results from a case study of one state with 67 local district education agencies that enacted an acceleration policy will be shared. A qualitative descriptive approach was used to identify key policy elements, synthesize findings across public school districts, and examine the accessibility, equity, and transparency of acceleration practices. Four themes will be shared with examples and recommendations for others interested in developing or revising their own acceleration policies.

Selected Reference:

Assouline, S. G., Colangelo, N., & VanTassel-Baska, J. (2015). *A nation empowered: Evidence trumps the excuses holding back America's brightest students* (Vol. 1). University of Iowa, The Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Kim Kiekens[1]

[1]SPRING-STOF, Leuven, Belgium

Abstract title: No child left bored! Cross-school accelerated math course for gifted students

Type of presentation: Oral presentation

‘No child left bored!' SPRING-STOF is a non-profit organization in Leuven (Belgium) where we bring together gifted students from different schools from all over Flanders. Starting in 2019, we grew to more than 200 students (from more than 100 schools) in 2024.

With SPRING-STOF, we provide dedicated courses for gifted students (4-18 years) in STEM, languages and history during school hours. Schools give permission to come to SPRING-STOF for (half) a day to these children that need more challenges than the school can provide. Teaching in small groups (max. 6 students) allows students to meet peers and to give individual guidance and feedback.

We have grown to 22 different trajectories in 2024, including both accelerated courses and courses that focus on enriching. Besides content, we focus on skills such as collaborating with peers, dealing with frustration and perseverance.

Our ‘accelerated math courses’ gain interest year after year.

The last TIMSS results confirmed the trend of the last decade. The learning performance of Flemish science and math pupils is further deteriorating compared to four years ago. Internationally, we are the strongest declining region. We also see the number of top performers going down.

Standard school material is not adapted to gifted learners and doesn’t challenge them to develop their talent. With our accelerated math course, we fulfill the needs of these children (and their parents) and we give children the opportunity to learn at their own speed, which can be up to more than 5 times faster than the standard curriculum.

We start each lesson with some ‘problems of the week’ where we investigate different solutions for a problem, using different problem solving techniques. Short instructions, immediate feedback, and answers to all the questions they have on a certain topic motivates students to learn and enjoy.

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Lena Ivarsson[1] and Caroline Sims[2]

[1]Mid Sweden University, Sundsvall, Sweden
[2]Humanities, Gävle University, Gävle, Sweden

Abstract title: Students' Experiences of Acceleration in Swedish Education

Type of presentation: Oral presentation

A common way to support the development of gifted students is through acceleration. This could mean that students take some (or all) classes with students of a higher year-group, or that they remain with their biological Year-group but work on learning materials intended for older students (Southern & Jones 2015). Several international studies attribute positive outcomes to this strategy in terms of academic achievement, social circumstances, and emotional well-being (c.f. v Tassel-Baska 2023; Steenberger-Hu 2016; Rogers 2007; Dare & Nowicki 2018; Jovanovic et al. 2024).

More recent changes in the Swedsih Education Act now support the acceleration of gifted and high-achieving elementary school students to upper-secondary level, and allow upper-secondary school students to complete their studies in less than the usual three years, intended to give them early access to university.

Despite this, Swedish research has highlighted that acceleration is not without its challenges. For example, there is a lack of continuity and planned progression of such activities and accelerated students tend to be set to work in isolation from their peers. In addition, there is no recognition of the extended skills and content possessed by those who have been accelerated making their extra effort and capabilities effectively invisible (Sims 2023). Moreover, headteachers, who are essential in creating the right conditions for acceleration, are uncertain as to how to apply this strategy and do not possess the requisite knowledge to do so, making student provision uncertain (Ivarsson 2023).

This presentation is based on a case study consisting in face-to-face interviews with students at different of levels of the education system, investigating their intellectual, social, and emotional experiences of being accelerated. In addition, background data has been collected from guardians in the form of timelines covering their children's educational trajectories.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Gisela Priebe[1]

[1]Department of Social and Psychological Studies, Karlstad University, Karlstad, Sweden

Abstract title: Identity development and coping strategies of gifted children and youth in educational contexts

Type of presentation: Oral presentation

A better understanding is needed of how gifted children and youth can develop an identity where their giftedness is well integrated. Like any other children and youth, they need to feel that they can be themselves in various circumstances and that they are included and accepted by others. This promotes their socio-emotional development and mental wellbeing and strengthens their ability to learn well and to make meaningful contributions for themselves, others and society in the longer run.

Gifted children and youth need to cope with mixed messages about giftedness in their interpersonal context and the wider society. These messages affect how they perceive themselves and how they chose to present themselves for others. Previous research describes how gifted children and youth use different grades of making their giftedness visible, invisible or even disidentify with giftedness when trying to balance between "being themselves" and "fit in" in social contexts such as the school.

This presentation takes its starting point in developmental psychology and existing scientific literature. First, a short overview of identity development in general will be provided. It will be followed by a presentation of different aspects of gifted children's and youth's identity development and the coping strategies they use in order to handle the mixed messages they may receive, especially in an educational context. Awareness of socio-emotional aspects is important for a well-functioning and inclusive educational milieu.

Coleman, L.J., Cross, T.L., & Riedl Cross, J. (2021). Lived experience, mixed messages, and stigma. In T.L. Cross & J. Riedl Cross (Eds.), *Handbook for counselors serving students with gifts and talents. Development, relationships, school issues, and counseling needs/interventions* (2nd ed.) (pp 427 – 449). Prufrock Academic Press.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Kirsti Hauge Kyed[1]

[1]Cognitive Systems, Department of Applied Mathematics and Computer Science, Technical University of Denmark (DTU), Lyngby, Denmark

Abstract title: Well-being Among Gifted Students in Different Educational Contexts

Type of presentation: Oral presentation

Gifted students are often assumed to thrive academically and socially in school. However, research from Denmark and internationally paints a more complex picture: many gifted children report experiencing boredom, disconnection, and even emotional distress in everyday school life. These challenges stem not from a lack of ability, but from a lack of meaningful challenge and relational connection.

This PhD project – currently in development at the Technical University of Denmark (DTU) – investigates the relationship between educational context and well-being among gifted students. Grounded in both national and international literature, the study compares gifted students' experiences of stimulation, belonging, and self-perception across three educational settings: mainstream public schools, private schools, and specialized schools for gifted learners.

Using a mixed-methods design combining questionnaires, interviews, and classroom observations, the project seeks to understand how pedagogical practices, school culture, and academic expectations shape gifted students' motivation, social relationships, and emotional well-being. Particular attention is given to identifying which practices from specialized school environments might be adapted to mainstream settings to better support this often overlooked group.

As part of the analysis, the study engages with the findings of Denmark's national *Well-being Commission*(Trivselskommissionen, 2025) to examine how broader definitions of school well-being align—or clash—with the lived experiences of gifted students. This provides a unique opportunity to critically reflect on whether national well-being frameworks adequately capture the needs of high-ability learners.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Szilvia Fodor[1]

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Abstract title: From strengths to success: Character strengths as predictors of achievement and burnout prevention in adolescents

Type of presentation: Oral presentation

Character strengths significantly influence both achievement and preventing student burnout among adolescents. The VIA (Values in Action) classification of character strengths provides a framework for understanding these processes. Weber et al. (2014) highlight that students utilizing their strengths experience more positive feelings at school, correlating with improved functioning. The link between character strengths and burnout is also well-documented. Allan et al. (2017) found that identifying and applying strengths reduces burnout symptoms, while Huber et al. (2019) emphasize signature strengths' importance for fostering well-being and reducing burnout.

In this study, we investigated the relationship between character strengths, student burnout, and academic performance among 355 high school students aged 14–18 years. Ethical issues included informed consent, anonymity, and cultural sensitivity. Character strengths were assessed using the VIA Youth Inventory (McGrath, 2022), burnout was measured with the Student Burnout Inventory (SBI, Salmela-Aro et al., 2009), and academic performance data were collected. The most commonly identified strengths were Love, Hope, Appreciation of Beauty and Excellence, and Humor.

Linear regression analysis revealed that Teamwork, Honesty, Fairness, Gratitude, and Perseverance were the most significant predictors of academic performance, collectively accounting for 22.9% of the variance. In the context of burnout prevention, Zest (ß=-0.323, $p<0.001$), Perseverance (ß=-0.154, $p=0.003$), Love (ß=-0.129, $p=0.008$), and Self-Regulation (ß=-0.122, $p=0.015$) were identified as protective factors. Interestingly, Creativity (ß=0.179, $p<0.001$) and Spirituality (ß=0.138, $p=0.006$) were positively associated with burnout, a finding particularly relevant for gifted students, for whom creativity is a core aspect of talent development.

The findings highlight the significant role of character strengths in enhancing academic achievement and reducing burnout. However, rather than adopting a simplistic approach, it is crucial to address the specific needs of students who exhibit heightened levels of creativity and spirituality, as these traits present unique challenges.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Laura Elena Runceanu[1]

[1]Utbildningsförvaltningen (Department of Education), Stockholms Stad, Stockholm, Sweden

Abstract title: Professional learning in gifted education: A case study from Sweden

Type of presentation: Oral presentation

The International School of the Stockholm Region (ISSR) in Stockholm, Sweden, offers professional learning experiences to its staff that aim to facilitate sustainable changes in curricular and instructional practices applied to teaching high ability students, and increase awareness of and support for twice-exceptional and multi exceptional students. These learning experiences follow the *Global Principles for Professional Learning in Gifted Education* (World Council for Gifted and Talented Children, 2021), the guiding principles in developing equity-driven professional learning in gifted education (Nowak, Lewis and Weber, 2020), and the features of effective professional development outlined by Darling-Hammond et al. (2017). According to Darling-Hammond and collaborators, an effective professional development is content-focused, incorporates active learning, supports collaboration, uses models of effective practice, provides coaching and expert support, offers feedback and reflection, and is of sustained duration.

In the period 2022-2024, ISSR offered ongoing, job-embedded and targeted professional learning experiences (e.g., online learning – eGift, study circles, coaching) to its staff (e.g., teachers, learning support staff, school counsellor). In this presentation, examples and lessons learned will be discussed in conjunction with WCGTC's global principles and issues of Diversity, Equity, Inclusion and Accessibility (DEIA) in gifted education.

References

Darling-Hammond, L., Hyler, M., Gardner, M., & Espinoza, D. (2017). Effective teacher professional development. https://learningpolicyinstitute.org/

Novak, A. M., Lewis, K. D., & Weber, C. L. (2020). Guiding Principles in Developing Equity-Driven Professional Learning for Educators of Gifted Children. Gifted Child Today, 43(3), 169-183. https://doi.org/10.1177/1076217520915743

Weber, C. L., & Mofield, E. L. (2023). Considerations for Professional Learning Supporting Teachers of the Gifted in Pedagogical Content Knowledge. Gifted Child Today, 46(2), 128-141. https://doi.org/10.1177/10762175221149258

World Council for Gifted and Talented Children (WCGTC). (2021). Global principles for professional learning in gifted education. https://world-gifted.org/professional-learningglobal-principles.pdf

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Karin Landschulze[1]

[1]NLA University College, Bergen, Norway

Abstract title: Professional development concerning in-depth learning and enrichment through adapted teaching – mathematics example

Type of presentation: Oral presentation

This presentation shares insights from a professional development project aimed at fostering mutual learning by valuing both theoretical and practical knowledge. The project "Students right to education: in-depth learning and enrichment through adapted teaching" was conducted in 2024. Specifically, this report explores the implementation of mathematically rich tasks and Liljedahls (2021) teaching practices to challenge high ability students while engaging all learners in public school classrooms.

The first phase of the project involved mapping the needs of the in-service teachers. These teachers had worked with the concept of giftedness on a general basis the previous year, and expressed a desire to learn more about implementing rich tasks that can cater to all students, also gifted ones. To address this, the researcher (university teacher) conducted two one-hour interventions for a middle school class (6^{th} and 7^{th} grade) to demonstrate the use of rich tasks and Liljedahls (2021) teaching practices. Many teachers at this school came to observe the first intervention.

In concluding the project, in-service teachers and the university teacher report different learning outcomes. The in-service teachers reported on experiencing an astonishing perseverance in doing mathematics for the whole class. They also acknowledged gifted students' struggles due to the unfamiliar challenges. Furthermore, teachers reported being inspired by the intervention(s) to further develop their own teaching. Meanwhile, the researcher gained hands-on experience in inclusive classroom, and a deeper understanding of pedagogical practice that increases the trustworthiness in teaching students on university level. In addition, the experience provided valuable insights into and a deeper appreciation of the power of the teacher-student relationship in learning situations, and how the relations can impact the pedagogical practice and opportunities for learning for all.

Liljedahl, P. (2021). *Building thinking classrooms in mathematics (grades K-12): 14 teaching practices for enhancing learning*. Corwin Press.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Jennifer Jolly[1] and Michael Matthews[2]

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[2]Special Education & Child Development, University of North Carolina at Charlotte, Charlotte, United States of America

Abstract title: Effective Preparation of Teachers of the Gifted: What do We Know?

Type of presentation: Oral presentation

For well over half a century both university-based coursework and professional development in gifted education have been implemented with untold numbers of teachers in thousands of schools around the world. Relevant professional standards have been developed and even redeveloped, including recently the 10 Global Principles for Professional Learning in Gifted Education (WCGTC, 2021) and the Initial Practice-Based Professional Preparation Standards for Gifted Educators (CEC, 2024; last revised in 2013). What has the field learned over this history about effective educator preparation in gifted education? Surprisingly little, as it turns out.

We describe the results of a systematic review of the English-language literature on the topic of teacher preparation in gifted education. We screened nearly 5,000 results obtained from a systematic search of the published literature on this topic. Unfortunately, most of these studies lacked a comparison group. Typical results described a single point in time, post-training, and largely addressed self-reported outcomes focused primarily on participant satisfaction and self-perceptions rather than on the changes in observed teacher behaviors or student-level outcomes that ideally should be the outcomes of such work (Worrell et al., 2014). We examined these thousands of results, eliminating those that were off-topic or of obviously low quality, yielding 158 studies that we then reviewed in full text.

Further review narrowed the body of relevant studies to fewer than 60 articles that we judged to meet our inclusion criteria for content, methods, and study quality. After describing the findings we synthesized from this review, we discuss the important implications they hold for sustainable and innovative practices in both the research community and for those engaged in developing or delivering professional learning in the service of students with gifts and talents.

Reference

Worrell, F. C., et al. (2014). Assessing and Evaluating Teacher Preparation Programs. http://www.apa.org/ed/schools/cpse/teacher-preparation-programs.pdf

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Ann Robinson[1]

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Abstract title: Pre-Service Teacher Observations of Gifted Education Best Practices in Inclusive Classrooms: Our Intent and Their Reality - Theme 1 Inclusion

Type of presentation: Oral presentation

Problem. Given the limited knowledge pre-service teachers have about gifted education prior to exposure in their preparation programs (Plunkett & Kronborg, 2021), the misconceptions they hold (Baudsen & Preckel, 2016; Troxclair, 2013), and the dismal preparation requirements with respect to talented learners in pre-service education (Rinn et al, 2022), a mandatory course in gifted education for candidates in a middle school pre-service teacher preparation program was developed and implemented (Robinson, et al., 2024; Smith et al., 2024).

Purpose. The aim of this qualitative evaluation study was to explore how pre-service teachers identified examples of differentiated instruction provided to advanced learners in inclusive classrooms. As inclusive models are common across educational systems, examining pre-service teacher thinking in national (Brevik et al., 2018) and cross-cultural contexts (Lassila, et al., 2023) informed the scope of course assignments on gifted education practices we intended our candidates to learn.

Method. Participants were two cohorts of pre-service teachers (n = 22; n = 23). Data included pre-post assessments of course content and work samples from pre-service teachers observing mentor teachers in a semester residency. Given structured protocols, pre-service teachers reflected on observed practices (questioning, flexible grouping, differentiation) with respect to talented learners in inclusive classrooms.

Findings. Although pre-service teachers increased their content knowledge as documented in gains on pre-post assessments, they struggled to: discriminate between high and low-level questions, recognize flexible grouping patterns when implemented by their mentor teacher, or identify content or process differentiation in response to the observational protocols.

Implications are that pre-service teachers are more likely to learn content than to recognize the application of that content in the classrooms they observe. Developing an undergraduate pre-service teacher course in gifted education is best sustained by linking course content with structured and supported field experiences.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Margareta Högberg[1]

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Abstract title: Invisible students: A study of how the transition from preschool into preschool class for gifted students is represented in Swedish national educational documents.

Type of presentation: Oral presentation

Transitions can be critical if information about a student's abilities, knowledge or difficulties is not transferred to the receiving organisation. This can be highly critical for all students, and especially for gifted students according to earlier studies (Ekesryd Nordström, 2023; Grant, 2013; Lundqvist & Sandström, 2020). Giftedness in this study refers to students who, compared to their peers, demonstrate advanced abilities in various areas.

There are studies on the transition from preschool into preschool class and school. There are also studies on gifted student´s educational experiences, but few studies combine transitions and giftedness. The purpose of this study is to address this research gap and investigate how the transition from preschool into preschool class and school for gifted students is addressed or omitted at the national level, with focus on factors contributing to continuity and discontinuity.

The chosen 12 documents were analyzed with descriptive content analysis and policy analysis influenced by Bacchi (2009). To carry out a policy analysis according to Bacchi involves analysing a text through a set of guiding questions, such as identifying the nature of the problem, examining the assumptions underlying the proposed solution and determining what is omitted from the documents i.e., which silences exists in the discourse. The findings indicate that while transitions are discussed in policy documents no specific attention is given to the needs of gifted students. Conversely, in the documents addressing giftedness, transitions are not considered which indicates that the needs of gifted students are made invisible in connection with the transition from preschool into preschool class.

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Gila Hammer Furnes[1] and Kari Kvandal[2]

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[2]Early Childhood education, Pedagogy, NLA University College, Bergen, Norway

Abstract title: Gifted education in early childhood: Rethinking inclusion through exploring policy on specialised provisions in Norway

Type of presentation: Oral presentation

Inclusive education is a key principle in Norway's early childhood education and care (ECEC) policy. However, the needs of gifted children (Norwegian: barn med stort læringspotensial) remain underexplored. This study examines theoretically, through thematic analysis, how national ECEC policies address gifted education, including The Kindergarten Act (2006), Framework Plan for Kindergartens (2017), whitepaper NOU 2016:14, two guideline documents concerning gifted education (Udir, 2019) and special education (Udir, 2017). Specifically, it investigates the ways in which these policies refer to, conceptualize, and prioritize support for gifted learners, thereby shedding light on the underlying assumptions and objectives that shape educational practices at the ECEC level. The findings indicate a significant gap in explicit measures, leaving local interpretations to determine practice. While policies emphasise inclusion, adaptation, and recognition of individual potential, they lack specific guidance for identifying and supporting gifted children in the ECEC setting. Kindergarten in Norway offer flexibility that can benefit gifted children, but this same flexibility risks neglecting their needs due to competing priorities, such as supporting children with learning difficulties and addressing multicultural complexities. The study highlights the importance of balancing general inclusion principles with targeted support for gifted children. Drawing on theories such as Sternberg's WICS model, and Renzulli's Three-Ring Model, the research underscores the need for equitable systems that nurture individual potential. It also emphasises the importance of aligning with UNESCO's Salamanca Statement to create clearer policies and frameworks. The study calls for national guidelines to ensure that gifted children are recognised and supported within Norway's inclusive ECEC framework.

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Fanny Mossberg[1]

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Abstract title: Identification strategies and teaching forms in inclusive preschools: Supporting gifted and talented children

Type of presentation: Oral presentation

Within inclusive preschool education, gifted and talented children should be identified and given opportunities to thrive, flourish, and develop. Inclusion is about providing a sense of belonging, along with development to the child's fullest potential.

This article aims to investigate education for gifted and talented children in inclusive preschools in Sweden, with a particular focus on early identification and teaching. The framework is constituted of the Bioecological model for human development (Bronfenbrenner & Morris, 1998, 2006) and the Differentiating Model of Giftedness and Talent (DMGT, Gagné, 2021). Before the study started, ethical approval was attained.

Structured (i.e., Classroom Assessment Scoring System, CLASS) and unstructured observations as well as semi-structured interviews were conducted at three preschools (N=3), involving six gifted and talented children, both boys and girls (N=6), and three preschool teachers (N=3). The data was collected over a period of thirteen days (N=13). Two thematic analyses were accomplished.

Regarding early identification (preliminary result), two identification strategies were created: Bird's-eye view – comparing all children, and Looking closely – getting to know each child. Regarding teaching (preliminary results), four themes were created: Whole groups, Small groups, One-to-one work, and Independent work. These constitute four teaching forms. The quality of education-child interactions (CLASS) is above average across all units.

Suggestions for practitioners and further research are provided. The study has relevance to student teachers, teacher educators, teachers, principals, policymakers, parents, educational researchers and others interested in early identification of giftedness and talent, inclusive education, childhood, and a sustainable society.

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Bo Andersen[1] and Ole Kyed[2]

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Abstract title: Early Identification and Nurturing of Giftedness: Insights from Denmark's New National Screening Initiative

Type of presentation: Oral presentation

Denmark has recently launched a nationwide initiative to screen for giftedness in 1st grade, aiming for early identification and support for high-potential learners. This symposium brings together key stakeholders to discuss the implementation process, preliminary findings, and anticipated impact of this ambitious program.

Ole Kyed, a prominent voice in gifted education, will provide expert commentary on the initiative's alignment with international best practices and its potential to foster inclusive excellence. Representatives from Begavet med Glæde (Gifted with Joy), a leading Danish organization advocating for gifted children, will share their perspectives on the initiative's practical implementation and its implications for parents and educators.

This session will offer a first look at emerging data from the initiative, providing valuable insights into the prevalence of giftedness among young Danish learners and the effectiveness of early intervention strategies. While complete data analysis is ongoing, the symposium will tease key findings and spark discussion on trends observed by the expert group and the Ministry of Education.

The symposium will delve into the following key areas:

Rationale and design of the screening process: How does the Danish model identify giftedness in young children, and what assessment tools are employed?

Early intervention strategies: What support structures and differentiated learning opportunities are being provided to identified students?

Collaboration between stakeholders: How are schools, parents, and support organizations working together to nurture the potential of gifted learners?

Ethical considerations and challenges: How does the initiative address potential issues such as labeling, equity, and access?

This symposium offers a timely and critical examination of a national effort to identify and support gifted learners. Participants will gain valuable insights into the Danish model, sparking discussion on effective strategies for early identification and nurturing of giftedness within diverse educational contexts.

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Felicia Augustsson[1]

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Abstract title: Exploring the Intersection of Academic Achievement and Physical Activity: A Theoretical Approach

Type of presentation: Oral presentation

Research focus

Oral presentation

Abstract

Exploring the Intersection of Academic Achievement and Physical Activity: A Theoretical Approach

Background
The following presentation deals with the theoretical foreground of a PhD project which explores academically high-achieving students' relationship to physical activity. Central to the study is Welk's (1999) *Youth Physical Activity Promotion Model* (YPAP), which identifies personal, social, and environmental factors that influence children's and youth's physical activity behaviors. YPAP (Welk, 1999) also sheds light on how perceived competence and intrinsic motivation influence physical activity behavior. For this project, these concepts will be applied to academically high-achieving students in upper-secondary schools in Sweden. To define this student group, the study relies on the *Differentiated Model of Giftedness and Talent* (DMGT) model (Gagné, 2013, 2020), which emphasizes the interaction between intrapersonal behaviors and environmental factors that shape the development of students' gifted aptitudes in talent domains, such as academic talent.

Aim
By combining YPAP and DMGT, the project aims to provide an overreaching understanding of how the academic development of high achieving students intersects with their engagement in physical activity during their school years. Hence, the focus is put on the interplay between between academic development, physical activity and well-being aspects.

Implications
This theoretical approach is thought to offer a nuanced perspective on fostering both academic and physical competence in academically high-achieving students. The implications for educational settings include shedding light on supporting a meaningful approach to physical activity for high-achieving students while excelling in an academical talent domain.

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Abstract title: Evaluation of Pre-service Teachers' Skills in Developing Differentiated Mathematics Lesson Plans

Type of presentation: Oral presentation

The heterogeneity of student abilities within primary school classrooms presents significant challenges for educators. The quality of education is significantly influenced by teachers' capacity to address these cognitive differences and adapt instruction accordingly. This demands the cultivation of advanced pedagogical competencies that complement basic classroom management and didactic skills. To effectively cater to the diverse needs of learners, teachers must possess the ability to differentiate instruction. Differentiation, a pedagogical approach that involves tailoring instruction to meet the unique needs of each student or small group of students, requires careful progress monitoring and ongoing adaptation. It entails proactively modifying the curriculum, teaching methods, resources, and learning activities to maximize learning opportunities for all students. This study investigated the extent to which pre-service teachers could effectively implement differentiated instruction. The topics of lesson plan preparation, differentiation, enrichment and creativity were taught in the Mathematics Teaching course in the Classroom Teaching Undergraduate Program. Sixty lesson plans developed by teacher candidates were analyzed and categorized into three levels (lower, middle, upper) of differentiation based on expert ratings. Interviews were conducted with pre-service teachers in these different groups. The subjects they had difficulty in differentiating and whether they were aware of the benefits of differentiating for their students were emphasized. The importance of differentiation was emphasized in line with the pre-service teachers' lesson plans and opinions. Suggestions were given on how differentiated lesson plans should be prepared and how this subject can be taught effectively in education faculties.

Keywords: Differentiation, mathematics education, lesson plan.

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Abstract title: A Systematic Review of differentiated instruction in Mathematics Education

Type of presentation: Oral presentation

Differentiated instruction emerges as a highly effective teaching strategy for addressing the diverse educational needs of students who learn at varying paces and struggle to benefit from general education programs. This approach is particularly valuable in mathematics courses, where heterogeneity is often pronounced. So the increasing development and expansion of Differentiated Instruction (DI) has significantly influenced mathematics education, as it has in other areas of pedagogy. Given the critical role of mathematics in the educational process and its distinct learning characteristics, DI presents a promising approach to addressing the diverse needs of students within the mathematics curriculum. This article seeks to explore the application of DI in mathematics education through a systematic review methodology. The review will examine peer-reviewed journal articles and conference papers published from 2000 to the present. The Web of Science and Scopus databases will be utilized for this review, as they are recognized as authoritative sources for citation indices and are widely regarded for their impact on academic research. The findings of this review will provide valuable insights for educators, practitioners, and researchers on the implementation of DI in areas such as effective teaching strategies, assessment, curriculum design, diversity, classroom management, and professional development. In light of the growing interest in DI, the authors will also offer recommendations for future research and highlight practical applications of DI in mathematics education.

Keywords: mathematics education, differentiated instruction, systematic review

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Megan Griffiths[1]

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Abstract title: 'Uniting Perspectives: Harnessing Irish Science Teachers and Gifted Students' Experiences to Guide the Creation of Resources and Guidelines to Support Sustainable, Inclusive Teaching Practices within the Science Classroom

Type of presentation: Oral presentation

Gifted students have often been neglected within Irish educational legislation and Special Educational Needs budgets (Cross, Cross and O'Reilly, 2018). Consequently, gifted students within Irish classrooms often experience 'educational malnourishment' (Cross, 2012). Their ability to easily attain the baseline curriculum, coupled with time constraints, large curricula, insufficient teacher experience and large, mixed ability class groups, drive underachievement and boredom within the Irish gifted student community. The focus on the secondary science classroom stems from strong topics found within the subjects, which allow for greater depth, exploration, idea formation and ability to link across subjects and with the real world (Ireland et al., 2020). With that, the current developments to Junior cycle curriculum in Ireland, create a more fluid and broad area of study, relieving some of the barriers ridged curriculums place on effective differentiation. However, the new specifications cannot be truly utilised to create an inclusive classroom environment if teachers are not equipped to do so. A study of 470 Irish teachers, conducted by Hinch et al., (2024) indicated that while 84.7% differentiate instruction for gifted students, they are not doing so effectively with only 11.3% eliminating curricular material that has been mastered, and only 13.2% using more advanced curriculum units. Implementing effective differentiation requires an awareness of students' needs and abilities, combined with knowledge on the most effective practices to support those students (Cowley, 2018). This study centres on outlining specific teaching methods and learning activities that create an effectively differentiated science classroom, creating worked examples, resources and guidelines to support the implementation of sustainable, inclusive practices in the science classroom. This presentation will share the results of a mixed-method study which reviews the invaluable experiences of both Irish science teachers and Irish gifted students' experiences, with respect to barriers to inclusion and provision of appropriate learning experiences.

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Abstract title: Bridging the gap: exploring a talent centre in Norway as an adaptation means for fostering thriving gifted students

Type of presentation: Oral presentation

Talent Centres in Natural Sciences in Norway gather gifted students several times a year to motivate them academically, socially, and emotionally, while offering opportunities to realize their learning potential. The centres develop and share teaching practices among themselves and via teacher training courses in collaboration with field practitioners. This study explores, through student participation, how a talent centre functions as a means of adaptation and identifies examples of good practice.

It is noteworthy that students' knowledge levels vary widely, as each centre group may include both students who have disengaged from school and those who have achieved expert levels.

The article draws on the theoretical perspectives of Renzulli and Gagné regarding high giftedness and the need for adapted education addressing social, emotional, and academic needs. Additionally, we employ Balzer's ABC method, Liljedahl's Thinking Classroom approach, and Bloom's taxonomy, all aimed at meeting students where they are and advancing their academic progression.

The study is based on four years of data from student evaluation forms, teacher logs from the Talent Centre, and accumulated classroom experience. Questionnaire data were analysed using mixed methods that combine quantitative and qualitative approaches. Furthermore, participatory observation—documented in teacher logs for each topic—provided deeper insights into the students' experiences.

Preliminary findings suggest that students thrive in the talent centre environment and subjects. Open-ended assignments and random groupings enhance learning. Several students value the application of theory in practice (authentic learning) and report forming new friendships, particularly those who previously had few social connections. However, some experience frustration when working in ways that differ from traditional school methods, with younger students being more receptive to non-traditional tasks than older students. We conclude that schools should identify gifted students early and adapt education to meet their social, emotional, and academic needs.

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Abstract title: Accelerated, more immersive, and more complex knowledge: Student feedback guiding tailored science education at a talent centre in Norway

Type of presentation: Oral presentation

Student feedback is crucial for understanding and adapting teaching to meet the needs of gifted learners. It gives valuable insight in how instructional approaches can be optimised for this group. This study investigates student responses to a teaching program on Electronic Communication Systems, developed by the Norwegian Centre for Science Education (Naturfagsenteret). Originally developed for lower secondary school, the program was adapted in this study for gifted learners attending a science talent centre in Norway, using differentiation principles that take into consideration their knowledge levels, learning capacities, and preferences.

The study applies a mixed-methods approach, collecting data through questionnaires, focus group interviews, and researcher logs to explore how the adapted program was experienced by the students. Findings show that students wanted a higher pace, deeper exploration, and more complexity in the content. They valued the program's flexibility and creativity, while also expressing doubt about the feasibility of implementing similar adaptations in ordinary schools. Particularly, the adapted elements were appreciated, showing the importance of differentiation for meaningful engagement.

This study argues for actively using student feedback in the development of teaching programs for gifted learners. Feedback is both a tool for refining practices and for identifying students with high potential. The findings also highlight the need to increase teacher competence in recognising and adapting teaching for gifted learners, as well as taking advantage of the flexibility provided by the Norwegian Education Act (Opplæringsloven) to support this group.

By situating differentiation within the frame of inclusive and sustainable education, this study contributes to the ongoing discussion of how to develop learning environments that better meet the needs of gifted learners while maintaining equity and accessibility.

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Abstract title: Why do they keep coming back? Swedish students' experiences of an enrichment course in mathematics

Type of presentation: Oral presentation

Mathematics is a highly interconnected subject that plays a crucial role in our complex global economy. Enhancing students' achievement and interest in mathematics should be a priority for every educational system. Several studies suggest that a lack of enrichment opportunities in school mathematics may contribute to diminished interest and achievement, particularly among students with high mathematical abilities. To address the needs of these students, enrichment courses have been developed for lower secondary school students in certain parts of Sweden. Despite some of these courses being offered for several years, there is limited knowledge about students' experiences in such programs. Understanding these experiences is essential for improving the courses to better meet students' needs.

This study aims to contribute to the understanding of students' experiences in a mathematics enrichment course for lower secondary schools. Using an interview-based approach, the study explores the reasons for course participation among students (n=10, aged 13 to 16 years) with the highest attendance over the past two years. Data were analyzed through thematic analysis.

The findings reveal overall satisfaction with the enrichment course and offer valuable insights into students' mathematical needs when compared to their regular school mathematics experiences. Significant differences were identified between their school mathematics lessons and enrichment course sessions, particularly in teacher competence, teachers' approach when providing support, the type and level of tasks assigned, the emphasis on rigor and depth in reasoning, and opportunities for creative mathematical reasoning. The results also show the importance of the study environment, including the enjoyment of group work, engaging in mathematical discussions, connecting with like-minded peers, and having the opportunity to immerse themselves in mathematics without the pressure of performance.

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Abstract title: UBUIngenio: An Enrichment Program for Highly Able Students

Type of presentation: Oral presentation

UBUIngenio is an extracurricular enrichment program for highly able students, hosted by the University of Burgos, Spain. Launched in 2012 as a pioneering initiative, it initially targeted students aged 8 to 12, offering three levels (I, II, III). Recently, a new Level 0 was introduced for younger students aged 4 to 8. The program consists of 12 annual sessions: Level 0 sessions last one hour, while other levels span two hours. UBUIngenio focuses on three core pillars: students, families, and research.

Regarding students, three main areas are involved: (1) STEM enrichment, encouraging talent and fostering scientific vocations, especially among girls; (2) Emotional intelligence, supporting students in applying their talents effectively to achieve personal success. (3) Peer socialization, providing opportunities for interaction with peers who share similar abilities and interests. The program supports families by hosting an annual conference on high abilities, offering parents tools to better understand and support their children's development. Research focuses on the identification of highly able students, talent promotion, and traits like creativity and leadership.

UBUIngenio has shown positive outcomes: students enjoy the sessions and view them as engaging, motivational, and enjoyable. Parents report increased motivation, understanding, and happiness in their children, key indicators of the program's success. Also, research derived from the program has contributed to the academic field.

The program has inspired specialized initiatives for twice-exceptional students, such as TecnoarTEA, combining technology and arts for students with high creativity, technological talent, and autism spectrum disorder, and DEArte, supporting creative students with reading or writing difficulties.

As a consolidated initiative, UBUIngenio offers a replicable framework to guide universities or organizations interested in developing similar enrichment programs.

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Åsa Melander[1]

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Abstract title: Meeting needs for challenge: a better focus than 'identification'

Type of presentation: Oral presentation

A Swedish and Nordic focus on ‘identifying’ ‘gifted’ students has emerged. This is often based on ‘labelling’ being a useful means of learning what students to focus on. ‘Identification’ and ‘labels’ were promoted in policy and used in England in the late 90s to the noughties. Experiences of this indicate that it was not an effective way of providing additional challenge. Interpretations differed considerably and there was no consistency in application. Many initiatives aimed at ‘gifted’ students were taken up mainly or solely by children with higher socio-economic status and/or implemented in areas with higher socio-economic status.

Sharing information about this experience, my presentation will discuss the risks with a main focus on formal once and for all ‘identification’ to identify needs for challenge for potential high achievers. Data from recent interviews with English and Swedish headteachers show that English headteachers have a good understanding of the risks with labelling, but Swedish headteachers’ interpretations of ‘giftedness’ (‘*särbegåvning’*) varied; as did the views on how or if such labels might be useful.

In addition to disagreement among educators, terms like ‘giftedness’ (‘särbegåvning’) are not rarely mocked in societal debate, sometimes based on justifiable confusion about terminology. These terms are therefore not conducive to a the important debate on how to provide education equitably to all students, which includes potential high achievers.

Based on this, I will argue that a focus on ‘labels’ is outdated, ineffective and not a beneficial way of discussing and providing suitable challenge to potential high achievers. A focus on ‘meeting needs for challenge’ where the focus lies on implementation instead of on ‘identification’ is a more useful means to provide equitable education. I will use examples from the experiences in England and data from interviews with English and Swedish headteachers, and surveys with teachers.

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Annette Heinbokel[1]

[1]Institut für Enrichment und Akzeleration, Bremen, Germany

Abstract title: Courses for 'Curious Mice'

Type of presentation: Oral presentation

Courses for ‘Curious mice’

In 1997 options for bright and gifted children were introduced at our orientation level school (O-Stufe) for children in 5th and 6th grade. It was a pull-out programme: the children were allowed to leave regular lessons up to twice a week. Most important was their interest in what was on offer. Over the years we offered foreign languages, maths and physics, biology, visits to museums when there was an interesting exhibition, …

The parents had to agree, as well as the teacher whose lesson they missed. Permission by the teacher was not based on good grades (and not on IQs, none of the children were tested), rather on the teachers’ expectation that the pupils would independently acquire the knowledge and practice they might have missed. This worked without any problems, with experience teachers would let go small groups of children.

The teachers were some of the staff, a teacher presently out of a job, students from university, a parson offering philosophy ... None of them were paid, so the project was run without money. It lasted for seven years and only ended because O-level schools were abolished.

During those years more than 300 children took part in the courses. The school was also open to grade skipping: Five girls and one boy skipped at our school, just as many skipped from primary school into our school, none of them had any problems.

The project started two years before the state of Lower Saxony launched its own programme. It invested a lot of money. Our school took part, but the state programme was badly planned and did not work at all. Therefor I was relieved when O-level schools were abolished.

The courses were simple to implement, they could easily be copied.

Workshops

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Chor Hui, Theresa Heng[1] and Lay Chin Tan[2]

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Abstract title: Designing Inclusive Inquiry-Based Mathematics: Engaging High-Ability Learners in Diverse Classrooms

Type of presentation: Workshops

Gavin (2024) emphasises engaging mathematically talented students in complex problem-solving, conceptual understanding, and creative thinking. Curricula should focus on abstract reasoning and depth, using inquiry-based approaches. In response, inquiry-based mathematics learning units were developed to engage all learners while challenging high-ability learners (HALs) in Singapore's elementary classrooms.

This workshop examines the design principles for inquiry-based mathematics resources based on experiences developing these inquiry-based units. Taking reference from Artigue & Blomhøj's (2013) three-phased didactical model, these units are designed to allow dialectical interactions between exploration, problem-solving, and structured reflection. Learning experiences are scaffolded through carefully sequenced activities, progressing from foundational strategies like guess-and-check to advanced applications in game-based problem-solving and mathematical observations. Grounded in Renzulli's (2021) enrichment pedagogy, web applications are specially designed to complement the learning activities in the units, fostering active learning and enhanced conceptual understanding. These activities ensure accessibility for all learners while providing HALs opportunities to deepen understanding and extend their potential.

The workshop aims to equip participants with tools to design and implement inclusive, stimulating inquiry-based mathematics lessons for all learners. They will learn to adapt activities for diverse learners and encourage self-paced exploration. Participants will explore the importance of strategic questioning to activate thinking and foster discussions, and the application of differentiated instruction to create cohesive learning for all. Through analysis of actual student work and teacher feedback, they'll understand the effectiveness of these approaches.

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Abstract title: Are you hungry? For meaningful math tasks?

Type of presentation: Workshops

How mathematically gifted students approach and solve tasks has been a fruitful line of research for mathematics and gifted educators (Ozdemir & Isiksal Bostan, 2021; Rotigel & Fello, 2004; Sriraman, 2003). In most of these studies and reports, the tasks focus on mathematical content for the sake of mathematics, either in the acceleration or enrichment of the school curriculum. Students—even those of high abilities—desire to see a connection to their mathematical work beyond what can be done in the classroom. In the proposed workshop, we present a variety of tasks to refine and expand mathematical creativity (Fox & Payne, 2024; Payne & Fox, 2024) using the context of food. While some tasks could address meaningful questions, some potential tasks in this session could be humorous in context to ignite a sense of playfulness and joy within the individual completing the task. In the proposed presentation, we will connect playfulness and joy to established literature (Baker, Le Courtois, & Eberhart, 2023; Brizuela & Strachota, 2024). The tasks span a variety of grade levels and strands/cluster domains within mathematics and can be used within the general education classroom to support low floor/high ceiling tasks (Boaler, 2016; Smith & Stein, 2018). We will present these tasks as opportunities for prospective and in-service teachers to grow in their own professional development and knowledge of mathematics for teaching. We hope the presentation sparks discussion on identifying, selecting, modifying, and assessing tasks to bring in real-world connections to school mathematics classrooms (Fox & Bass, 2021, 2024; Payne & Fox, 2024).

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Helen Brink[1]

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Abstract title: Exploring and adjusting activities in technology education using the CAAS framework

Type of presentation: Workshops

The aim of this workshop is to inspire researchers and teachers to bring about change for gifted education based on gifted students' needs. Technology education in compulsory school has a particular responsibility to create and maintain interest in technology so that more students choose higher technology education, to fulfill the worldwide need for qualified engineers. Both practical and theoretical aspects are part of technology education which makes it challenging for technology teachers to differentiate teaching to meet different interests and needs of gifted students, and there is a risk that gifted students' needs may be neglected or overlooked. In this workshop we will analyze and adjust activities according to gifted students' needs as described in the CAAS framework. The CAAS framework describes gifted students' needs in technology education in terms of complexity, autonomy, authenticity and support. During the workshop, examples for lower secondary school technology education in Sweden will be given, taken from a study in which the CAAS framework was used as an analytical tool on educational books. Participants will use the framework to adjust activities to meet the needs of gifted students. The CAAS framework is not limited to technology education and can be useful in other subjects where practical and theoretical aspects intertwine. The CAAS framework can be used by both teachers and by researchers as a tool for planning, evaluating, and analyzing activities in technology education.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Lilyana Thorsager[1]

[1]Department of Educational Studies, Karlstad University, Karlstad, Sweden

Abstract title: Making sense of schooling, making room for giftedness

Type of presentation: Workshops

Educational policies, especially mandatory ones, outline the opportunities and restrictions for schools. In a way, they establish the purpose of education while also constructing the guiding principles and parameters for those 'doing' the educating.

When seen through the lens of cultural historical activity theory, policy texts can be traced to all elements in the central activity system of a school and to other interrelating activity systems.

For example, the educational act and the core curriculum constitute the basis for compulsory education. They provide an object for the school activity, while also stipulating the what and the how of schooling.

However, the composition of each element and the activity itself is realised by those engaged in pursuing the collective motive. This entails individual and collaborative sense-making of the object, which in turn will resonate throughout every aspect of the activity.

With the regulatory framework in mind, the question is how educators and school leaders can incorporate education for promoting giftedness in a school setting. That is, how inclusion for gifted students can be an inherent aspect of the central activity system.

This workshop explores tensions and possibilities regarding inclusion and gifted students in relation to school improvement and development work. By delving into the meaning of the object and potential tensions and conflicting motives, we can gain a deeper understanding of the complexities of qualitative change. Thereby, the aim is to inspire initiatives in both research and practice which can support sustainable inclusive education.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Ósk Dagsdóttir[1]

[1]Education, Háskóli Íslands, Reykjavík, Iceland

Abstract title: Creative mathematics - Interactive workshop

Type of presentation: Workshops

Mathematics is in its essence creative and mathematicians and scientists often collaborate to build new knowledge. However, mathematics is often not taught creatively in schools but instead focuses on memorization, following predetermined algorithms with little cooperation. Focusing on creativity in mathematics is a way to foster inclusion and create classrooms that sustain groups with varied ability. Both gifted and twice exceptional students can benefit from creative mathematics learning as it allows them to experience mathematics in a new way and to collaboratively develop flexible ideas. These students can develop their talent by collaborating on open-ended problems and by developing patterns and models. Supporting teachers to promote creativity in their mathematics classroom is vital. Although teachers sometimes recognize the importance of creativity in mathematics, they often lack the means or ability to foster creativity in their own mathematics classrooms. Teachers need to have experienced creative mathematics learning themselves in order to support students with that. This workshop will focus on supporting those who wish to learn ways to foster creative learning in mathematics education. The workshop is interactive, and participants will be presented with practical methods to work with creative mathematics. The main focus of the workshop is to allow the teachers to work creatively in small groups. Through conversations, hands-on projects and play the participants will get to experience creative mathematics. The goal of the workshop is to present the participants to ways that they can then use in inclusive settings to support students of high ability and twice exceptional students. These and other students can reach their full learning potential if they are allowed to actively collaborate and to be creative in their mathematics learning. By supporting teachers to foster creativity in mathematics, all students can grow and learn.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Bo Andersen[1]

[1]Begavet med Glæde, Copenhagen, Denmark

Abstract title: FIRST LEGO League (FLL): Fostering Inclusion and Sustainability for Gifted Learners

Type of presentation: Workshops

Gifted students often face challenges finding a sense of belonging within traditional educational settings. FIRST LEGO League (FLL) offers a unique, inclusive solution, providing a space where these students can connect with like-minded peers and thrive while exploring the principles of sustainability.

FLL's structure, encompassing hands-on robotics, coding, and research, caters to diverse learning styles and encourages collaboration among students with varying abilities. The program's emphasis on teamwork and problem-solving fosters a supportive environment where gifted learners can develop their talents without feeling isolated. Furthermore, the annual thematic challenges often focus on real-world issues related to sustainability, such as energy, recycling, or environmental protection. This encourages students to think critically and creatively about global challenges, promoting awareness and a sense of responsibility towards the planet.

By integrating FLL into the curriculum, educators can create a more inclusive learning environment that addresses the unique needs of gifted students while promoting sustainability. Whether used to establish a gifted cohort or implemented as an after-school activity, FLL empowers students to:

- **Develop 21st-century skills, including critical thinking, problem-solving, and collaboration.**
- **Cultivate an understanding of and commitment to sustainable practices.**
- **Build self-confidence and a sense of belonging within a supportive community.**
- **Discover their potential and become active, engaged citizens.**

FLL demonstrates that inclusion and sustainability can be effectively interwoven within a challenging and engaging program that benefits gifted learners and fosters a more equitable and sustainable future for all. It allows kids to break out of their established patterns and discover new sides of themselves and others. -this allows for new class dynamics also in the regular classroom.

Learnings may be transferred to other Project Based Learning concepts

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Tina Refning[1] and Ole Kyed[2]

[1]Radboud Universitet / yintelligence.dk, Kerteminde, Denmark
[2]olekyed.dk, Kgs. Lyngby, Denmark

Abstract title: Gifted Education in Denmark – "The Screening Initiative" one year in.

Type of presentation: Workshops

In early summer 2024, we submitted the Danish contribution for the book, Nordic Perspectives on Gifted Education (Refning & Kyed, 2024). At the time, Denmark was just about to roll out a new initiative concerning screening for giftedness in 1st graders with the help of checklists for the teachers, the parents, and the children themselves (Department of Children- and Education, n.d.). Besides the checklists, Danish portals for teaching materials were in the process of being updated with new materials for differentiation.

In this workshop we will first share updates on the screening initiative one year in. We invite other Danish participants to share with us. After sharing, we hope for a lively discussion about how the screening initiative is unforlding, and what could and should be done in year 2.

Department of Children- and Education. (n.d.). *Værktøj til screening af højtbegavede elever*. Https://Www.Uvm.Dk/Folkeskolen/Test-Evaluering-Og-Skoleudvikling/Vaerktoej-Til-Screening-Af-Hoejtbegavede-Elever.

Refning, T., & Kyed, O. (2024). *Chapter 6: Gifted Education: Denmark*.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Ole Kyed[1]

[1]National Correspondent for Denmark at NNGE, private practice, Greater Copenhagen Area, Denmark

Abstract title: Facilitating wellbeing and motivation for learning in gifted children and youngsters by collaborative participating

Type of presentation: Workshops

The workshop will focus on how to create sustainability and develop inclusion in thinking, action and binding networks in the long run.

I will draw on perspectives from my own practice over the last 50 years where I have worked together with children and relevant actors in education, and in clinical psychology such as hundreds of assessments of children's intellectual functions.

Litterature on how to support fragile children to become more robust and anti fragile in a time where social media have a great impact on children's wellbeing and development will be shared.

The research-based foundation for the workshop references research data from Unicef Denmark, the Childrens' Council and Danish Students (DSE), The Convention of the Rights of the Child and newer rapports and initiatives from the current Danish political situation.

Number of participants: 30-40

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Truus van der Kaaij[1]

[1]own practice, former affiliation Radboud University Nijmegen, Nijmegen, Netherlands

Abstract title: Giftedness, a constitution of awareness, a state perspective

Type of presentation: Workshops

The present dominant IQ-based identification doesn't cover physiological and spiritual factors, nor does it address the life needs and struggles that may accompany giftedness. Therefore, concerning the nature of giftedness a new constitution-based State perspective of awareness is presented, a perspective that is both developmental and innate. The State perspective expands horizons of the field by a synthesis between Humanities and Natural Sciences, in which Humanities introduces a broader worldview, allowing a definition of constitution.

A constitution model is offered for a phenomenological identification of giftedness by means of an identifiable psychological profile.

This model also provides a research based specific profile for ADHD and Autism. Using a valid questionnaire https://www.bolkscompanions.com/instrument-childrens-constitution. it gives a profile of the cognitive, affective and conative developmental domains, known form psychology. Research with this model showed a remarkable overlap in the affective and conative domains in the profiles of ADHD and Autism, in contrast to the difference in the cognitive domain.

Focusing study on the inner lived experience, and the disharmony perspective on giftedness our findings may give an additional guiding approach in healthcare and inclusive and sustainable education for the multiple exceptional gifted. An approach used in medicine and education for decades all over the world. As tool for implementation of the constitution-based perspective we use the threefold typology of the G&T: the head, heart or hands type.

The literature study is a six-fold project carried out over many years with two reviews, three expert consultations, and a paper submitted for publication on invitation.

This workshop is a follow-up of presentations at ECHA Dubrovnic 2019, WCGTC 2021, ECHA 2022 and 2024. During the workshop we will present the study leading to the State perspective of giftedness as a constitution, and discuss the constitution model and associated questionnaire.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Susan Dulong Langley[1]

[1]Educational Psychology, University of Connecticut, Storrs, United States of America

Abstract title: Differentiate Up! A Practical, Purposeful Way to Differentiate

Type of presentation: Workshops

Differentiation—essential for advanced learners—is easier said than done. Take the stress out of differentiation with Project BUMP UP's Advanced Differentiation Options Planning Tool (A.D.O.P.T.) guide. Learn to use our research-developed guide through a mathematics example. Consider student data to make informed choices about differentiating through 1) advanced standards, 2) supplemental sources, 3) tiering for cognitive complexity, or 4) increasing Depth of Knowledge.

Attendees will leave this session with a practical approach, graphic organizer, and resources to implement advanced differentiation the next time they meet with their class.

Differentiating curriculum is an open-ended process that benefits from an organizational framework (Hawkins, 2009). However, the process of selecting and organizing options can be complex, prompting our design.

This guide is a practical tool for busy educators. Attendees will take a hands-on approach to manageably selecting vetted, advanced differentiated math options in response to student data. Options include selecting advanced standards, introducing more complex content from supplemental sources, tiering to increase cognitive complexity, and building the Depth of Knowledge. Attendees will work with strategies to consider differentiation options by individual lesson, topics, or entire units as well as choosing between acceleration and enrichment. They will also learn Project BUMP UP's Three-Step Approach to Increasing Depth of Complexity in Math Tasks.

This session focuses on math because limited exposure to advanced content results in gifted students starting ahead in math achievement at grade 3, but not growing faster than other groups by grade 5. In some cases, gifted students show slower growth than non-gifted peers (Long et al., 2019). Gifted and talented learners often spend a great deal of time reviewing and practicing concepts they have already mastered in the classroom (NAGC, 2014), especially in math. In order for gifted math students to grow, they need new and challenging instruction. Our process helps teachers do just that.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Tania Gevaert[1]

[1]Member, Oostende, Belgium

Abstract title: How to cater to the specific educational needs of students with high IQ and ASD

Type of presentation: Workshops

Young children with high IQ and ASD often are misdiagnosed as being gifted. They tend to show strong verbal comprehension on IQ test such as SON-R and WPPSI-III/IV. At the same time we see a stronger need for guidance and predictability. But as these children ask more questions, teachers and parents often conclude this is coming from a need to discuss rather than the need to try and get a grip on the world.

In the ages 5 to 11 we also use KIQT+ (a non-verbal IQ test developed for gifted children in the Netherlands), always next to WISC-V. There we see children with high IQ and ASD tend to show significant differences in full scale IQ in the benefit of KIQT+. We took this under scrupulous investigation and found that a large number of these children were later diagnosed with ASD. Often in the ages between 8 and 10. A lot of them got the label as being gifted in early childhood and were accelerated at school. They were not functioning as expected, specifically socio-emotionally.

In this workshop we will show you the difference in guidance at school for a child with high IQ and ASD from the common practices with gifted children. We start from the difference in (learning) need and will inspire you with cases from our practice to think out of the box of should we say ‘in the box’. We will engage you to think in connection with the needs of children with high IQ and ASD as to their talent development.

We work evidence based (e.g. Assouline and Nicpon, Burger-Veltmeijer, Grandin, Henderson et al., Hughes, Spek, Vermeulen, …)

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Tove Ekelund[1]

[1]Department of educational work, Karlstad university, Tanumshede, Sweden

Abstract title: Twice-exceptionality: The interplay between giftedness and dyslexia

Type of presentation: Workshops

Twice-exceptionality (2e) refers to students who are both gifted and have a disability, such as dyslexia. The dual characteristics of these students can result in them being overlooked or misunderstood – their giftedness can mask dyslexia, while dyslexia can mask their giftedness. One example is students who perform well on reading comprehension tests despite struggling with decoding, which can result in dyslexia going unidentified.

This workshop, based on the book *Särskild begåvning och twice-exceptionality: Inkluderande undervisning och pedagogisk differentiering,* aims to:

- Provide a foundational understanding of what dyslexia is and how it may manifest in gifted students.
- Highlight how the interaction of these traits impacts learning and the challenges of identifying needs.

The workshop is designed to raise awareness about how 2e-students with dyslexia may present, focusing on the complex interplay of their strengths and challenges.

Reference: Ekelund, T. (2024). *Särskild begåvning och twice-exceptionality: Inkluderade undervisning och pedagogisk differentiering.* Studentlitteratur.

Posters

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Rotraut Engelhardt[1] and Thomas Eckerle[2]

[1]Clever & Co – Pädagogische Praxis für Familien, Kompetenzzentrum Babenhausen Frankfurt, Babenhausen, Germany
[2]Institut für Leistungsentwicklung (IGL), Babenhausen, Germany

Abstract title: The way back from inner emigration and schoolabsenteism to happiness and success for high gifted students

Type of presentation: Poster presentation

Based on a scientific education (masters in psychology, pedagogic, special pedagogic) we started to work together in 2000. Our subject is to realize high potentials: both our own and our clients ones. Investigation of intellectual potential, personality, disabilities, sensibility and more is one of our basics. The other includes, based on an analysis of situation, strength and weakness of persons and systems, an intervention, which is aiming both on changes of the conditions and on changes of minds and behaviours of all involved people, not only the students themselves.

Each client makes us evaluate our procedures and ideas. We think critically against ourselves and improve our work continuously. We also develope new instruments depending on the needs of the families who visit us. We want to show one of these instruments. It is our process guide to help with inner emigration and schoolabsenteism of gifted students. Our presentation shows a graduated guideline which begins with helping teachers to identify and treat students who only are physically sitting in their classrooms and ends with a long period of stabilising the kids and their families, reorganizing the students ability to use their wonderful minds and guiding them back to school, while their teachers are being instructed to give them mindfull lessons.

Added to this inclusive help system we founded two special schools. The first, Oswald Nell Breuning Schule II in Offenbach/Main, is designed for socioemotional handicapped gifted children, The second, Karl Popper Schule Frankfurt/Main, integrates so called underachievers and regular performers, twice exceptionals and neurodiverses. The students are getting in touch with school online, a few ours or the whole day so much as they can and want to.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Keri Guilbault[1]

[1]Counseling, Johns Hopkins University, Baltimore, MD, United States of America

Abstract title: Understanding the Inner Lives of Primary School Children with High Ability: Caregiver Perceptions as a Guide for Sustainable Support in Inclusive Environments

Type of presentation: Poster presentation

Children with high potential are a valuable resource to society and are the future leaders and innovators of change. Early talent spotting is a useful strategy that can help adults recognize student strengths and then provide appropriate interventions to ensure their optimal development and motivation for addressing societal concerns as adults.

Caregivers play an important role in the development of talent in high-potential children and are valuable sources of information regarding their child's accelerated development, gifted behaviors, and social-emotional characteristics (Hertzog et al., 2018; Mun et al., 2021). However, limited empirical research exists on caregivers' perceptions of their child's social-emotional development. This information may be used to recognize students in need of adjustments in inclusive educational environments and adaptive parenting strategies. Furthermore, across the globe, social-emotional development is often overlooked in both programming and as a data point in the identification process of students with gifts, talents, and advanced learning needs.

In this session, results from an exploratory study that examined caregivers' perceptions of the social and emotional characteristics of gifted children ages five to nine will be shared. Semi-structured interviews were held with 15 caregivers of intellectually gifted children to explore their perceptions of their child's affective development and key needs. Findings from a thematic analysis of interview data revealed two primary themes: (1) sensitivities and intensities, and (2) behaviors associated with challenges at home and school. Additionally, two surveys were conducted to investigate student overexcitability patterns and personality profiles. Survey results will be discussed and an overview of these instruments - the *ElemenOE* (Bouchard, 2004) and the *Big Five Questionnaire for Children* (BFQ-C; Barbaranelli et al., 2003) - will be shared with implications for sustainable support practices and future research.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Line Massé[1], Claire Baudry[1], Claudia Verret[2] and Marie-France Nadeau[3]

[1]Psychoéducation, Université du Québec à Trois-Rivières, Trois-Rivières, Canada
[2]Sciences de l'activité physique, Université du Québec à Montréal, Montréal, Canada
[3]Faculté des sciences de l'éducation, Université de Sherbrooke, Sherbrooke, Canada

Abstract title: Exploratory study of the effects of a cluster grouping of gifted and twice exceptional students in a regular classroom

Type of presentation: Poster presentation

Little research has been conducted on educational services adapted for twice exceptional students. Within an action research, a cluster grouping was set up in an elementary school in Quebec, bringing together gifted or twice exceptionnal students (n = 11) and students not identified as gifted (n = 8) within a multilevel class (3rd and 4th years). Twice exceptional students had either attention deficit hyperactivity disorder (n = 8, including 3 with specific learning disability) or autism spectrum disorder (n = 2). Differentiated instructions strategies were implemented, including the possibility of progressing at their own pace of learning, independent study or research projects, flexible accommodation, tutoring with older students and the development of socio-emotional learning. The study aimed to assess the impacts of the grouping on all students, their academic motivation, and their socio-emotional adaptation. A mixed method was used combining a qualitative approach with a quantitative approach. Semi-directed interviews were conducted with students (N = 18, 4 girls and 14 boys aged 8 to 9) and one of their parents (N = 18) at the end of the school year. Parents and students completed two questionnaires at the beginning and end of the school year: the Behavior Assessment System for Children-3, children's or parents' versions (BASC-3, Reynolds and Kampus, 2015) and the Academic Motivation in Education (Vallerand et al., 1993). Parents also completed the Multidimensional Student Life Satisfaction Scale (Huebner, 1994, adapted by Fenouillet et al., 2014). Mixed thematic analyzes were carried out on the data from the interviews using the N'Vivo software. Related-samples Wilcoxon rank-sums tests were conducted for the data from the questionnaires. These results indicate that this approach could benefit not only gifted and twice exceptional students, but also students not identified as gifted.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Bo Andersen[1] and Keri M. Guilbault[2]

[1]International Gifted Youth Committee, Mensa, Copenhagen, Denmark
[2]International Gifted Youth Committee, Mensa, Dunedin, Florida, United States of America

Abstract title: Mensa International Gifted Youth Programs: Supporting High Potential Students and Families for a Sustainable Future

Type of presentation: Poster presentation

The Mensa International Gifted Youth Program (MIGYP) is a global community dedicated to nurturing the potential of gifted youth. This program brings together educators, gifted youth coordinators, and families to share resources and information, working towards that gifted children receive the guidance and opportunities they need to thrive.

This session will delve into how the MIGYPs exemplify these principles through its diverse array of initiatives and activities.

MIGYP promotes inclusivity by hosting events, lectures, and camps where gifted youth can engage with peers and mentors, fostering a sense of belonging and acceptance. Families find support through national Mensa group events and online communities. This approach benefits gifted students and enriches the educational experience for all, promoting an inclusive culture.

Sustainability is another fundamental focus of the MIGYP. Many local Mensa gifted youth programs, such as the one in Sweden, emphasize the continuous professional development of educators through workshops and seminars, equipping them with the skills and knowledge necessary to identify and support gifted learners effectively, while considering national culture and needs. Additionally, by providing families and schools with resources and knowledge, the program supports the development of robust and adaptable support systems for gifted students in changing educational landscapes.

We will provide an overview of the MIGYP's strategies and successes in fostering inclusive and sustainable gifted education programs around the world, including how the international program supports activities within national mensas. Attendees will gain insights into how to implement similar initiatives within their own contexts, ultimately contributing to a more inclusive and sustainable future for gifted education worldwide. National Mensas are encouraged to build relationships with local organizations that share similar objectives. During this session, we will also examine instances of such collaboration, how to involve Mensa in your country, and your ideas for development.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Alicia Bernier[1]

[1]Psychoéducation et travail social, Université du Québec à Trois-Rivières, Bécancour, Canada

Abstract title: Improving academic success and well-being of twice exceptional students in primary schools: perspectives of students, parents, teachers and school principals

Type of presentation: Poster presentation

Twice-exceptional students are less likely to benefit from educational measures appropriate to their high abilities and actual needs (Bianco, & Leech, 2010; VanTassel-Baska et al., 2009). Interventions often overlook the giftedness of these students and tend to focus more on their deficits (e.g., their learning difficulties), which can lead to further adaptation problems or result in underachievement (Misset et al., 2016). Unfortunately, little empirical research exists about this population of students and how to fulfill their educational needs. This qualitative study aims to explore the school experience of these students and to identify the conditions which favored or hindered their well-being or their educational success. A multiple case study design was used. The sample consists of 10 twice-exceptional students (4 girls and 6 boys) aged 6 to 11 years (M = 9.10; SD = 1.73), their parents, teachers and school principals. The participants were recruited from 8 schools in a school district. The students have various diagnoses: 4 with ADHD, 3 with autism spectrum disorder, 1 with dyslexia, 1 with a behavioral disorder, and 1 with both ADHD and dyslexia. Semi-structured interviews were conducted with the participants. Mixed thematic analyzes were carried out on the data from the interviews using the N'Vivo software. The qualitative analysis of the discourses makes it possible to cross the different perspectives of the actors. The preliminary results highlight the importance of the quality of the teacher-student relationship, recognition of giftedness by school stakeholders, enrichment opportunity (especially personnel project), flexible pedagogy, and early access to accommodations.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Erika Daria Torello[1]

[1]Pedagogy, University of Jaén, Jaén, Spain

Abstract title: Gifted Education in Italian and Spanish Primary Schools: training needs and a toos for early identification

Type of presentation: Poster presentation

Gifted education, a fundamental area of education, is often underestimated in Italy and Spain. This study investigated the awareness and needs of primary school teachers in Italy and Spain regarding the identification of gifted students. Data collected through a questionnaire administered to teachers reveals a strong need for specific training on this topic. Teachers express the need for simple and practical tools to recognize gifted children early and direct them to giftedness assessments.

In response to these needs, a handbook has been developed for primary school teachers, designed to facilitate the process of early identification. This tool is accessible and usable daily by teachers, providing practical guidelines on how to recognize potential indicators of giftedness. It also offers suggestions for classroom intervention and collaboration with specialists in the educational field.

The handbook presents an overview of the main signs associated with giftedness and provides concrete examples to help teachers identify and adequately support high-potential students. This initiative helps bridge the information gap, promoting an inclusive and sustainable approach to gifted education.

The poster aims to share the research results and present the handbook to participants, inviting them to reflect on the importance of effective tools and targeted training for teaching staff. The goal is to foster a constructive dialogue with researchers and educators on the importance of gifted education in Italy and Spain.

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Leonieke Boogaard[1], Martina Rosenboom[2] and Krista Heins[3]

[1]Koepel Hoogbegaafdheid, Utrecht, Netherlands
[2]Talent Consulting , Palma , Spain
[3]Stichting Webb, Peers4Parents, Kikidio Velp, Velp, Netherlands

Abstract title: Collaborating to Build Strong and Sustainable Parent Associations

Type of presentation: Poster presentation

It is well-established that parents and caregivers play a vital role in the intellectual development and social-emotional well-being of gifted children. However, families and parent organizations are also crucial to the success of sustainability and inclusivity efforts within gifted education. Engaging in gifted advocacy requires long-term vision and a sustained commitment, including years of research, networking, political action, and volunteerism (Robinson & Moon, 2003). Parents and caregivers are often gifted students' most vocal advocates, and finding ways to amplify and then maintain individual advocacy is the work of parent associations. Additionally, parents and parent associations are instrumental in welcoming underserved populations into the gifted community (Grantham, Frasier, Roberts, & Bridges, 2005). In this poster session, members of ECHA's Empowering Families with High Ability Children SIG will walk attendees through steps for creating strong and sustainable parent organizations. The presenters will share insights from their own parent associations and foundational information from gifted advocacy models (Dettmer, 1991), both in-person and via electronic versions of the poster that attendees can access through a QR code. Attendees will be able to ask the SIG members specific questions about building sustainable parent associations that are appropriate for their own gifted communities.

Dettmer, J. (1991). Gifted program advocacy: Overhauling bandwagons to build support. Gifted Child Quarterly, 35, 165–171. https://10.1177/001698629103500401

Grantham, T., Frasier, M., Roberts, A. C., & Bridges, E. (2005). Parent advocacy for culturally diverse gifted students. Theory Into Practice, 44,(2) 138–147. https://10.1207/s15430421tip4402_8

Robinson, A., & Moon, S. M. (2003). A national study of local and state advocacy in gifted education. Gifted Child Quarterly, 47, 8–25. https://doi.org/10.1177/001698620304700103

Webb, J.T., Gore, J.L, Karnes, F.A. & Daniels, A.S. McD. (2004) Grandparents Guide to Gifted Children, Great Potential Press

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Mara Westling Allodi[1], Attila Szabo[2] and Diana von Börtzell-Szuch[1]

[1]Special Education, Stockholm University, Stockholm, Sweden
[2]Teaching and Learning, Stockholm University, Stockholm, Sweden

Abstract title: Advanced students' perceptions of school and learning: descriptive analyses from ETF database

Type of presentation: Poster presentation

The Evaluation Through Follow-up (UGU) is a large cohort-sequential research study which is used for evaluation and research about schools and education in Sweden (Härnqvist, 2000). The aim of this poster is to investigate academic achievement, attitudes to school, and perceptions of teaching among the share of students who demonstrate the highest cognitive abilities from Cohort 10, one of these nationally representative cohorts. The sample of Cohort 10 was divided into two subpopulations (i.e., students with high cognitive abilities, other students), where the division of the two groups was based on the 10 percent highest achieving on the aptitude test consisting of two verbal parts (i.e., synonyms, antonyms), one spatial, and one inductive part, carried out in Grade 6 for the UGU data collection. 523 of the students from Cohort 10 were identified as students with high cognitive abilities. The students also participated in a student questionnaire about the perceptions of teacher practices, motivation, and attitudes toward school. The questionnaire items were answered on a 4- or 5-point Likert scale with different answer alternatives. The answers to a selection of questions were analyzed with descriptive statistics in *IBM Statistical Package for the Social Sciences* (SPSS) version 29 and visualized. The main results indicate that students with high cognitive ability in the current sample, demonstrate a strong academic performance, are motivated to learn, and that they have a strong belief in their own academic ability.

Härnqvist, K. (2000). Evaluation through follow-up. A longitudinal program for studying education and career development. I C.-G. Janson (Red.), *Seven Swedish longitudinal studies in behavioral science* (p. 76-114). Stockholm: Forskningsrådsnämnden.

https://www.gu.se/en/evaluation-through-follow-up

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Hannah Holmqvist Mohammed[1]

[1]Dept of Special Education, Stockholm University, Stockholm, Sweden

Abstract title: Investigating the experiences of gifted students attending school in socially deprived suburbs: recruitment steps, identification, and other methodological choices

Type of presentation: Poster presentation

Previous research points to the fact that students from disadvantaged groups are less likely to be identified as gifted (Olszewski-Kubilius et al., 2023). In Sweden, the gifted research area is relatively newly established, and it would be desirable to avoid the shortcomings in identifying students with high potential from disadvantaged social groups. The aim of the ongoing research project is to explore and better understand the experiences and perceptions of students with immigration background who show advanced academic aptitudes. In order to identify suitable participants, a research-based tool is employed (Coleman, 2016). The tool describes relevant traits of the target students, and is used in collaboration with the students' teachers as a basis for assessment and recruitment. The teachers have found that the tool expanded their views of advanced abilities and academic giftedness. Two girls and two boys between the age of 13-15 were recruited. The project has a qualitative approach, where interviews are used, and also being conducted with the students' parents, teachers and principals. Data will be conducted and analyzed using thematic analysis (TA) and possibly also interpretive phenomenological analysis (IPA). A further aim is to follow the students over time, to also study possible stage change processes. Hopefully, future findings can illuminate the challenges and potential success factors for the school experiences of gifted students with immigration backgrounds.

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The 4th thematic European Council for High Ability conference on inclusion and sustainability

Tatjana von Rosen[1], Attila Szabo[2] and Mara Westling Allodi[3]

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[2]Dpt of Teaching and Learning, Stockholm University, Stockholm, Sweden
[3]Special Education, Stockholm University, Stockholm, Sweden

Abstract title: How is the Swedish educational system doing for the academically successful and resilient students: national trends over time and comparative analyses based on data from PISA 2022

Type of presentation: Poster presentation

The Programme for International Student Assessment (PISA) is part of the Organisation for Economic Co-operation and Development (OECD) programme. PISA measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills. This presentation analyses data from PISA 2022, looking at the performances of Swedish students with high ability in reading, mathematics and science. The participants consist of a nationally representative sample of students (n= 6072). Besides the tests on reading mathematics and science, PISA collects information about the students' attitudes and experiences, as well as on the characteristics of the school environment. It is possible to investigate trends over time concerning the students' performances comparing with results from previous rounds (SNAE 2012). PISA collect backgrounds data which allows to investigate the prevalence of academically resilient students (ARS). ARS are academically successful, despite coming from socioeconomically disadvantaged backgrounds, typically associated with poorer educational outcomes. Individual and contextual factors associated with academic resilience have been described by Erberber et al. (2015) and this paper will test these factors with Swedish PISA 2022 data. The research questions are: What are the PISA 2022 scores for the 95% percentile of Swedish students for Reading, Maths and Science? Which are the proportion of Swedish students that perform at level 5 or higher? Are there significant changes compared to previous available PISA data for these variables? Which is the proportion of students that are academically resilient in Swedish PISA 2022? What are their aspirations and which are the characteristics of their learning environments?

Erberber, E. et al. (2015). *Socioeconomically Disadvantaged Students Who Are Academically Successful: Examining Academic Resilience Cross-Nationally. Policy Brief No. 5*. IEA. https://eric.ed.gov/?id=ED557616

SNAE (2012). *Högpresterande elever, höga prestationer och undervisningen*. Report 379 https://www.skolverket.se/publikationsserier/rapporter/2012/hogpresterande-elever-hoga-prestationer-och-undervisningen

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The 4th thematic European Council for High Ability conference on inclusion and sustainability

Fredrik Ardenlid[1]

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Abstract title: Differentiated instruction and giftedness in Swedish mixed-ability classrooms: An interview study with teachers

Type of presentation: Poster presentation

Today's classrooms, in Sweden and globally, are increasingly heterogeneous with students exhibiting a wide range of abilities and needs. This presents challenges for teachers. Differentiated instruction (DI) is recognised as a way for addressing these diverse abilities and needs, fostering an inclusive classroom where all students have the opportunity to thrive and succeed. This study aims to describe and analyse experiences of Swedish teachers implementing DI to address the abilities and needs of gifted students and their peers in mixed-ability classrooms. Using the zone of proximal development as a framework (ZPD, Vygotsky, 1978), ten teachers (N=10) experienced in differentiated instruction were interviewed. Ethical approval was attained. Inductive content analysis delineated categories, emphasising teachers' principles and practices: (1) detecting and valuing differences, (2) creating a safe and joyful classroom, (3) assessing students' knowledge, (4) clarifying goals and encouraging students' ownership of learning, (5) instructing students in study skills, and (6) promoting peer-to-peer interactions and group work. Moreover, (7) engaging all students from the outset of a lesson or a classroom project, (8) using flexible and open tasks, (9) providing multimodal tools alongside schoolbooks, and (10) presenting and valuing different answers. These categories emphasise both fundamental principles and practices at a classroom level, and constitute a DI cycle. They offer insights for implementing, or further developing, differentiated instruction for gifted students and their peers in mixed-ability classrooms and it is relevant to pre-service teachers, educational practitioners, policymakers, and researchers.

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Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

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Nadine Huchthausen[1]

[1]Institutionen för pedagogiska studier, Karlstad university, Karlstad, Sweden

Abstract title: Teachers' attitudes toward giftedness and gifted education

Type of presentation: Poster presentation

Teachers' attitudes toward giftedness and gifted education

Teachers are essential to gifted education and their attitudes toward giftedness and to adjustments in teaching may impact how well they cater to the needs of gifted students. While teachers' attitudes toward the gifted have been studied for several decades internationally, research in the Swedish context is scarce. Allodi Westling and Rydelius (2008) conducted a pilot study on experienced teachers' attitudes toward giftedness and Ivarsson (2023) has explored principals' attitudes toward the gifted and their education. The authors emphasize that further examination of Swedish teachers' attitudes toward giftedness is needed.

This poster presentation focuses on the first study in my doctoral project in which I aim to answer the following research question; What are Swedish teachers' attitudes toward the gifted and their education? A questionnaire will be used to gather data from Swedish teachers working in preschools and schools in 18 different municipalities in Sweden. Knowing more about teachers' attitudes on the topic of gifted education is a good starting point for consideration of educational provision. This study also investigates teachers' perceptions of their knowledge about teaching gifted students which may generate valuable implications for future teacher education.

My ambition with the presentation is to give the audience an overview of what research on attitudes toward giftedness and gifted education shows so far and to present my research design and methods.

References

Allodi Westling, M., & Rydelius, P.-A. (2008). *The needs of gifted children in context: A study of Swedish teachers' knowledge and attitudes* [konferenspresentation]. The European Council for High Ability (ECHA), Prague, Czech Republic.

Ivarsson, L. (2023). Principals' perceptions of gifted students and their education. *Social Sciences and Humanities*, *7*(1). https://doi.org/10.1016/j.ssaho.2023.100400

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Samuel Alonso Benito[1]

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Abstract title: • Giftedness and Dyslexia: Profile and Gender Differences in Preadolescent Students with Double Exceptionality

Type of presentation: Poster presentation

This study analyzes the variables associated with dyslexia in the reading and writing processes of students with double exceptionality, meaning those who are both intellectually gifted and dyslexic, a combination that has been scarcely addressed in the scientific literature. Using a quantitative approach, the study evaluates reading and writing skills by comparing the performance of this group of adolescents with that of a representative sample of students across all Secondary School levels in the Spanish Educational System.

This study addresses an important gap in current research, as few studies have examined this profile in adolescence, a critical stage in academic and personal development. Additionally, it faces relevant methodological challenges, such as the difficulty in identifying cases, the high cost of sample selection, and the multidimensional complexity of dyslexia. Previous research, such as that of Berninger & Abbott (2013) and van Viersen et al. (2015, 2016), suggests that the cognitive strengths of these students may act as compensatory mechanisms, helping to mitigate the academic difficulties resulting from dyslexia.

However, these studies have focused on younger or heterogeneous age groups, whereas this work specifically targets adolescents aged 12 to 18, a stage that is critical in academic and personal development and has been scarcely addressed in this area of research. Furthermore, a novel aspect of this study is its focus on the Spanish language, a language with high orthographic transparency, meaning a strong correspondence between graphemes and phonemes, a factor that directly influences reading and writing learning. This characteristic, combined with the focus on adolescence, provides a unique perspective on understanding this profile. The findings offer a solid foundation for guiding teachers and specialists in implementing inclusive and effective educational practices that foster both academic performance and emotional well-being, thus promoting a more personalized education tailored to their needs.

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[2]Department of Psychology, Faculty of Education, J. E. Purkyně University, Ústí nad Labem, Czechia

Abstract title: Towards inclusion: The experiences and voices of gifted students in mainstream school setting

Type of presentation: Poster presentation

Inclusive education is (or should be) high-quality education adapted to all children in their local school. Currently, this is still more of a vision than a reality. Mainstream schools still rather fail to meet diverse needs of all students, including the gifted; allegedly they experience misunderstanding, loneliness, or lack of autonomy and challenge. To get more advanced learning and like-minded peers, many high-achievers in Czechia apply and leave for multi-year secondary school after completing the elementary level (grade 1-5) of a regular nine-year school. This brings an element of selectivity into a system that is supposed to move towards inclusion.

We were curious about what it is that could make the mainstream schools more gifted-friendly so that students identified as gifted stay there until the 9th grade. Thus, we sought out those rare cases who did, trying to find out what experience they have with learning, climate and relationships in heterogeneous class, how they perceive the role of the teacher, and how they think about their educational journey.

The project is designed as a case study, using simple purposive sampling, semi-structured interview, and interpretative phenomenological analysis (IPA). In compliance with essential ethical principles, six gifted students aged 11-14 years participate in the research. The preliminary results suggest that the reasons for staying in regular school were often related to the significance of peer relationships in both positive and negative sense, but they also reveal a tendency to underestimate one's own abilities and to avoid pressure for performance. However, the overall picture of the phenomenon under study appears to be much more complex and diversified. Building on both current findings and previous research, our study draws conclusions and recommendations that hopefully could help to provide gifted students with more suitable conditions in mainstream (increasingly inclusive) schools.

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Charlotta Lindvall[1]

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Abstract title: Extension programmes in Swedish municipalities: Tailored education to support gifted learners' mental well-being

Type of presentation: Poster presentation

Gifted students often require enriched teaching and accelerated progression to prevent potential negative impacts on their mental well-being. In 2024, all 290 Swedish municipalities were invited to participate in a study titled The Mental Well-Being of Gifted Students in Extension Programmes Compared to Their Peers. Extension programmes referred to in this study are initiatives that provide enhanced educational stimulation through acceleration and/or enrichment. However, only 19 municipalities, encompassing a total of 27 schools, chose to engage in the research. The reasons for this relatively low participation varied, but many municipalities reported the absence of gifted students or programmes within their local educational frameworks. During the same year, the Swedish Education Act was amended to make it easier for students to engage in an accelerated curriculum and study at a higher level (Sveriges Riksdag, 2024). This legislative change presents an opportunity for students in compulsory schools, special education schools, and Sami schools to pursue advanced learning, while high school students can progress at an accelerated pace. Through this poster presentation, we aim to shed light on the types of extension programmes identified in our study and explore how these initiatives help to mitigate the risk of mental health issues among gifted students who require additional intellectual stimulation. The findings highlight the importance of creating tailored educational pathways that support mental well-being of gifted learners by addressing their unique academic needs. These extension programmes are critical for ensuring that such students can thrive both intellectually and emotionally, without facing negative consequences that may arise from unmet educational needs.

Sveriges Riksdag. (2024). *Riksdagsskrivelse 2023/24:189: Att lättare få läsa i snabbare takt och på en högre nivå.* https://riksdagen.se

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Eliška Glatzová[1]

[1]Pre-primary and Primary Education Department, Faculty of Education, Charles University , Prague, Czechia

Abstract title: Between inclusion and exclusivity: dilemmas in educational system from the perspective of parents

Type of presentation: Poster presentation

This poster examines the notion of giftedness at schools from the perspective of Czech parents who were forced to change their child's school due to unfulfilled needs. Discussions around supporting gifted children often raise concerns about labels and elitism since gifted education is still associated with a touch of exclusivity.

The purpose is to explore dilemmas and challenges the parents face in the educational system oriented to inclusion. Their experiences reveal misconceptions about giftedness which can lead to a rejection of necessary support measures. This emphasises the tension in education between inclusion and exclusivity.

The ongoing research uses grounded theory as a methodological framework. Six in-depth semi-structured interviews were carried out with parents. The data have been analysed using MaxQDA software, which has facilitated open coding in order to uncover recurring themes and patterns. Findings are contextualised within academic discourse. All collected information is treated as sensitive and handled in accordance with ethical principles.

The parents reported schools often denied the existence of giftedness or held unrealistic expectations based on myths. Teachers frequently expressed scepticism toward support measures fearing they might appear elitist. Parents face a double challenge. At the parent level, they fear being labelled as elitist or encountering suggestions their children already "have too much and want even more". At the child level, they worry about their children facing unrealistic expectations. As a protective strategy, they often avoid using the term “giftedness”. Instead, they emphasize needs and challenges. Some parents use gifted heroes in pop culture to explain the giftedness, while others choose not to mention giftedness at all.

Systemically, policymakers should guarantee the support for gifted children as an integral part of inclusive education rather than an exclusive privilege.

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Stanislav Nemeržitski[1] and Tiina Kraav[2]

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[2]Tartu University, Tartu, Estonia

Abstract title: Beliefs about and attitudes towards giftedness, creativity, and their expressions among school students: Estonian teachers' perspective

Type of presentation: Poster presentation

The current study investigates how mathematics teachers in Estonia, representing different general education levels, perceive, evaluate, and promote giftedness and creativity among their students. The latest PISA 2022 demonstrated strong links between creativity and mathematical abilities, whereas teachers' dedication and attention to promoting creativity positively affected students' results. Do the PISA 2022 results reflect the same attitudes toward giftedness among mathematics teachers? How do teachers in Estonia recognize, evaluate, and most importantly, encourage students to fulfill their potential and giftedness in the classroom? What are the practices for working with gifted children in mathematics classes? To answer these questions, a combined study was conducted. First, in-service mathematics teachers (n = 102) completed a survey using Gagne & Nadeau's Attitude Scale "Opinions about the gifted and their education" (1991). Findings, including differences between novice and seasoned teachers, as well as teachers from different levels of general education, are described. In the second phase, semi-structured interviews were conducted with the focus group (n = 15) to look at the attitudes, beliefs, and teaching practices for recognizing, supporting, and emphasizing giftedness and creativity in the classroom, specifically during mathematics and language lessons. Suggestions and recommendations for teachers, as well as policymakers are demonstrated during the poster presentation and discussion.

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Karin Konksi[1] and Merle Taimalu[2]

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[2]Institute of Education, Tartu University, Tartu, Estonia

Abstract title: Supporting Mathematical Giftedness in Early Education: Insights from Research and Practice at SädeTERA (Tartu Private School)

Type of presentation: Poster presentation

Supporting Mathematical Giftedness in Early Education: Insights from Research and Practice at SädeTERA (Tartu Private School)

Modern gifted education prioritizes creating environments nurturing development over merely identifying gifted individuals. This presentation is based on the findings of systematic literature review by Konksi et al. (2025, accepted) including 20 empirical studies (2005–2024) on supporting mathematical giftedness in preschool and primary education. The review identified four strategies: differentiated instruction, ability grouping, acceleration, and curriculum enrichment. These interventions aim to nurture higher-order thinking, creativity, and problem-solving skills while addressing the needs of mathematically gifted students. Crucial factors include teacher training, flexible implementation, and access to specialized resources tailored to students' abilities and interests. Additionally, evidence shows that these strategies benefit not only gifted students but also their peers, promoting inclusive learning environments.

Interventions included in the review were found to influence multiple developmental aspects, including mathematical skills, attitudes toward learning mathematics, and cognitive, social, and emotional growth. Positive effects included improved problem-solving abilities, heightened motivation, and increased self-confidence in mathematics.

SädeTERA, a community school in Estonia, exemplifies the practical application of these findings. The school focuses on identifying and nurturing students' strengths through periodic assessments and personalized learning pathways. Practices such as flexible grouping, pull-out programs, and project-based learning integrate advanced mathematical concepts while encouraging exploration and creativity. Self-directed learning days empower students to set and evaluate mathematical goals, fostering autonomy and confidence. SädeTERA demonstrates how evidence-based approaches can be adapted to prioritize the recognition and development of students' strengths within a supportive educational environment.

This synthesis highlights how schools can bridge research and practice to create enriching opportunities cultivating mathematical giftedness and benefit all learners.

Konksi, K., Taimalu, M., & Täht, K. (2025). Supporting Mathematical Giftedness in Early Education: A Systematic Literature Review. Estonian Journal of Education, 13(1).

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Viktor Gardelli[1], Anna-Carin Holmgren[1], Ylva Backman[1] and Åsa Gyllefjord[1]

[1]Luleå University of Technology, Luleå, Sweden

Abstract title: Long-term perspectives on the social and educational situation of a twice exceptional student

Type of presentation: Poster presentation

Recently, research about high ability, or "gifted", students has increased in Sweden, but few studies concern twice exceptional (2e) students, even though many researchers in the field consider it a substantial group (cf. Assouline & Whiteman, 2004) with often unmet educational needs (Holmgren et al., 2023). Prior studies underline the importance of taking into account the perspectives of both 2e students and their guardians (e.g., Holmgren et al., 2023).

In a previous study (Holmgren et al., 2023), we conducted exploratory research through a single-case study on a twice-exceptional student in Sweden. Some researchers defined 2e students as those who "possess high ability […] along with one or more disabilities" (Foley-Nicpon & Assouline, 2020, 1615). In this presentation, we present new data from that exploratory single case study (cf. Holmgren et al., 2023) of a female student (age ≈ 13 years), based on semi-structured individual interviews with her and her two guardians. These new data detail her educational and social situation from pre-school and onwards into her early years of primary school. These results provide a more detailed view about how the educational situation of the student has developed and changed over time, as well as the family's first encounters with an educational system which aims to be presenting "a school for all" students, but which is not necessarily the most well-suited to meet the needs and preferences of 2e children.

Assouline, S. G., & Whiteman, C. S. (2011). Twice-Exceptionality. *Journal of Applied School Psychology, 27(*4), 380–402.

Foley-Nicpon, M., & Assouline, S. G. (2020). High ability students with coexisting disabilities. *Psychology in the Schools, 57*(10), 1615–1626.

Holmgren, A.-C., Backman, Y., Gardelli, V., & Gyllefjord, Å. (2023). On Being Twice Exceptional in Sweden. *Education Sciences, 13*(11).

The 4th thematic European Council for High Ability conference on inclusion and sustainability

Tamara Malešević[1]

[1]counseling, National Education Institute Slovenia, Novo mesto, Slovenia

Abstract title: “Inclusional Care for the Higher Potentials of 4-6 Year Old Preschool Children in Slovenian Kindergartens«

Type of presentation: Poster presentation

Compulsory primary education in Slovenia begins in the year a child turns 6. Children between 2 and 6 are wellcomed to attend the public preschool program ‘Curriculum for Kindergartens’ (1999).

Between 2022 and 2024, we tested some elements of systematic educational activities for preschool children with higher potentials (with 9 kindergartens, in 9 groups with approximately 250 children aged 4-6 years) in accordance with the Professional Guidelines (Bezić et al., 2019). This conceptual design includes three activities with children for educators:

1. Systematic observation of children’s interests and signals of their higher potentials.

2.Based on these observations, the educator plans and implements differentiated, individualized, and personalized pedagogical challenges and interventions.

3. Collecting evidence of the child’s progress in development and learning and documenting this evidence (portfolio).

The role of the pedagogical coordinator in this area (psychologists, pedagogues) is based on the inclusive paradigm, including systematic professional support for educators in using the knowledge acquired in training, exchanging good practices, studying literature, and cooperating with parents.

The consultants of the National Education Institute Slovenia monitored the introduction of these innovations into practice for 2 years.

The Final Report on the Experiment (2025) includes the results of surveys for educators, principals, and parents, as well as findings from observing activities and summaries of interviews conducted with kindergarten coordinators.

Most educators believe that it makes sense to start systematic work for supporting higher potentials in preschool programs. More than that, they believe they need additional training to work in this area.

Kindergarten principals highly evaluate the appropriateness of this approach because educators plan and implement activities based on systematic observation of children, which stems from the children’s interests and higher potentials, having a positive impact on the development of all children in the group."

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Silvia Greiten[1]

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Abstract title: The ‘digital revolving door’ – an innovative educational concept for the promotion of giftedness in Germany

Type of presentation: Poster presentation

In Germany, the concept of the ‘revolving door’ (Renzulli et al., 1981) is one of the best-known school support measures (Greiten, 2016). It is based on the three-ring concept and the enrichment model (Renzulli et al., 1981; Renzulli et al., 2008). The assumption is that talents develop and flourish through the interaction of above-average ability, creativity and task commitment (ibid.). In the context of the ‘Revolving Door’, highly gifted students can leave their regular classes for a few hours a week to work on their own projects. This allows them to experience learning situations that can support the development and promotion of interests and motivation.

In the wake of the coronavirus pandemic, the ‘Digital Revolving Door’ was initiated in Germany – a novel and innovative educational format (https://digitale-drehtuer.de/). Three different formats are provided free of charge on a *digital campus*: *live courses, self-learning programmes and hybrid courses*, with a wide range of topics for primary and secondary school. 1,200 schools and 14,000 students are currently registered.

This poster presents the concept of the ‘Digital Revolving Door’, the organisation of the digital campus and selected evaluation results from the students' point of view.

Greiten, S. (2016). School developments through the "Revolving Door Model" in Germany. A qualitative empirical study analyzing selection criteria and school support programs for gifted young students in Germany. *Journal of Education and Human Development, 5*(4), 1–9.

Renzulli, J. S., Reis, S. M., & Smith, L. H. (1981). The Revolving Door Identification Model. Creative Learning Press.

Renzulli, J. S., Reis, S. M., & Brigandi, C, (2008). ENRICHMENT THEORY, RESEARCH AND PRACTICE. In: Plucker, J. & Callahan, C. (Hrsg.), Critical Issues and Practices in Gifted Education: What the research says. Pufrock Press.

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Abstract title: Diversified Assessment and Emerging Paths of Gifted Children: Using College Entrance Enrollment Reform as a Catalyst

Type of presentation: Poster presentation

China's exam-oriented education system poses significant challenges to the emergence of gifted children, particularly if the college entrance examination remains the dominant evaluative mechanism without a complementary ecosystem aligned with talent development. This study conducts a textual analysis of the 2024 "success announcements" from 10 key high schools in City B, Zhejiang Province, to examine the limitations in schools' perceptions of ogifted children and the current challenges in their assessment practices. Based on these findings, the study employs qualitative research methods, including individual interviews and textual analysis, to conduct case studies on the admission systems of four leading universities in mainland China and research universities in Europe and the United States. By exploring diverse assessment methods and pathways for fostering gifted children globally, the study provides actionable insights for reforming China's college admission system. It aims to challenge the "score-centric" paradigm and offer policy recommendations to support the development and emergence of gifted children during the K-12 education stage.

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[2]Leadership, Sir Karl Popper School, Vienna, Austria
[3]Fakulteten för hälsa, natur- och teknikvetenskap Institutionen för miljö- och livsvetenskaper, Karlstad University , Karlstad, Sweden

Abstract title: Talent promotion of cognitively gifted students at the Sir Karl Popper School in Vienna, Austria

Type of presentation: Poster presentation

The Sir Karl Popper School, an integral part of the Wiedner Gymnasium in Vienna, Austria, offers a specialized educational program for cognitively gifted students in grades 9 to 12. This unique initiative fosters intellectual excellence and holistic personal development while embracing inclusivity by welcoming students from diverse socioeconomic backgrounds. The school's educational philosophy emphasizes critical thinking, lifelong learning, and active societal engagement.

A defining feature of the Sir Karl Popper School is its modular curriculum system, introduced in grade 10. This approach enables students to design personalized study plans by choosing from a variety of core, elective, and enrichment modules. These modules cater to individual interests and aptitudes, while also enhancing independent learning skills and preparing students for future academic and professional pursuits. Students benefit from interdisciplinary learning environments and active participation in project-based and inquiry-driven education.

The school's gifted education program is built on three pillars: acceleration, enrichment, and grouping. Acceleration is achieved through compacted curricula and flexible progression pathways, such as the option to complete selected subjects early or participate in advanced coursework. Enrichment is embedded throughout the program, emphasizing depth of understanding over rote knowledge and offering opportunities like scientific research projects, individualized creative endeavors, and extracurricular activities such as "Experts go Popper" lectures and international conferences. Grouping strategies support gifted learners by creating homogenous learning groups within the modular framework, fostering peer collaboration and intellectual synergy.

This comprehensive approach is supported by a team of highly skilled educators who adopt a constructivist teaching philosophy. The emphasis is on empowering students to actively construct knowledge, develop autonomy, and embrace challenges. Graduates leave the Sir Karl Popper School as motivated, reflective, and responsible individuals ready to make significant contributions to society.