

Educational provisions for gifted or highly able students in inclusive educational systems: Gifted education doctoral programme for teacher educators

1. Objective

The **objective** of the Doctoral Programme (DP) is to develop and establish a new field of research in educational sciences in the Nordic context, on the topic of educational provisions for gifted or highly able students in inclusive educational systems, from early childhood education to secondary education. The DP includes funding for nine PhD students that are or will be involved in teacher education in Sweden during their PhD studies. Their PhD exams will be in educational science, special education and didactics. Furthermore, the DP is a Nordic initiative, welcoming gifted education researchers and other research students from Nordic countries to take part in the DP's activities. Opportunities for the nine PhD students, allied researchers and other funded research students to develop international research relationships in gifted education will be provided by means of the DP. Educational policies for education of gifted or highly able students varies in the world but it is recognized in European policy documents (European Union, 2012) that giftedness should be promoted and teacher programs should provide knowledge on the needs of gifted students, enabling teachers to stimulate the development and well-being of students with abilities and potential that exceed average performances. This topic is presently discussed in connection with improving educational equity, special educational needs provisions and inclusive education in European countries in the project Strength through Diversity (OECD, 2021). In Sweden, the topic of promoting giftedness and planning educational provisions for gifted or highly able students in inclusive educational systems is generally not included in basic teacher education or in special education programmes, but various stakeholders, national agencies, education municipal boards, teachers and parents' networks, ask for professional development knowledge development and research on this area (Mellroth, 2019). Reports from the Swedish Schools Inspectorate ask for more effective educational provisions to stimulate students that easily reach the curriculum goals (Swedish Schools Inspectorate, 2014) and municipal boards have formulated guidelines that support teachers on these matters (e.g. Stockholms Stad, 2019). Knowledge and applied research needs for this topic arising from policy and practice (and gaps) could be fulfilled through an innovative DP where PhD students, allied researchers and other research students can build together a strong new field of research in educational sciences in gifted education which contribute to increasing teaching competence on this topic in teacher preservice and continuing education. Research on giftedness indicates that the students' abilities and potential need to be nurtured and stimulated throughout their educational curriculum, with personalized adaptations such as enrichment and acceleration, in order to develop fuller talents (Gagné, 2013; Tomlinson, 2016). Research shows also that underachievement may occur when gifted or highly able students are not offered adequate and adapted educational experiences (Steenbergen-Hu, et al., 2020). Negative effects from lack of support can persist into adulthood (Stålnacke & Smedler, 2011). Content analysis of survey data in Finland concludes "the fact that whether gifted students' needs are met and how depends upon the teacher. Teachers need more education in how to support gifted students more effectively and in differentiating teaching for the gifted" (Laine & Tirri, 2015, p. 149). When teaching is pedagogically differentiated, both the gifted or highly able students' and the other students can experience a meaningful education and work within the same subject area. The **overall theme** of the DP is the topic of educational provisions for gifted or highly able students (include herein the notion of children) in preschool and students in school in inclusive educational systems in Sweden. **Subthemes** are (1) high abilities, giftedness and learning theories, (2) gifted education didactics and differentiation in preschool and school, and (3) highly able or gifted students' mental health. As presented below, these subthemes constitute PhD courses that will be developed and provided in the DP. The student group that is on **focus** is defined with various terms in different contexts: "gifted students" or "highly able" is used in many countries, including Sweden (Wistedt & Edfeldt, 2009), "more able" in the United Kingdom (UK), "särbegåvade" [gifted] has been used in Sweden (Persson, 2010); and "särskilt begåvade" [especially gifted] has been chosen in current Swedish recommendations and

guidelines (Skolverket, 2020a). Gifted students represent around 5% to 10% of the student population and they perform, or have the potential to perform, at higher levels compared to others of the same age, experience, and educational environment in one or more domains. "Giftedness" will be understood as both a psychological and educational construct (Gagné, 2010, 2013; Sternberg, 2000 Sternberg & Ambrose, 2021) in the DP, but other theoretical perspectives will also be welcomed. Gagné (2010) theorises that giftedness is broader than academic, including such domain as intellectual, creative, social, perceptual, and physical. Thus, identification and assessment approaches need to be holistic and multidisciplinary, and teachers need to be alert to a wide range of potential indicators of high abilities and giftedness in gifted education. One group of students who need attention is those who achieve exceptionally highly and who stand out in educational assessment as achieving curriculum goals much earlier than expected for their age (Swedish Code of Statutes [SFS], 2010:800). For example, children that read fluently prior to starting school were studied in Sweden (Ivarsson, 2008). A second group of students needing attention includes those with high potential who are underachieving, and this group needs a range of psychological, behavioural or other assessment approaches. Teachers do not directly engage in IQ and other psychometric assessment, but they do contribute to identification and a role in responding to giftedness through educational practices. Concepts that guide the DP, drawn from international literature in the field of gifted education include, for example, exceptionality, potentiality, talent development, differentiation, and mental health theories. Today inclusion is valued (e.g. OECD, 2021; UN, 2015) and "gifted education" or the similar notion educational practices for gifted or highly able students should respond to educational as well as caring needs of this group of students and develop educational methods and practices that are adapted to the general goals and values of Swedish education policy.

2. Research Environment

The participating universities (Kau, SU and MDH) all have well-established research environments including protocols for academic training of PhD supervisors, research committees and support for research dissemination. Across the participating universities, there are a range of quality research courses, doctoral research activities and research expertise available to support PhD students. In this DP, a strong new field of research in educational sciences will include development of three specific third cycle courses, and specific DP activities. Across the participating universities, these will add to the existing research courses, doctoral research activities and research expertise with their focus on (1) high abilities, giftedness and learning theories, (2) gifted education didactics and differentiation (3) and highly able or gifted students' mental health. **Karlstad University** (Kau) received the European Commission's HR Excellence in Research award September 2020. Kau connects research and practice through 'transformational' regional partnerships (OECD, 2020), for example in a new advanced-level course on gifted education to teachers in Jönköping Kommun in autumn 2021 for which Margrain is the course leader. Note, this course is not part of the DP, but is an example of Kau work on gifted education. The Kau Department of Educational Studies (IPS) will host five PhD students (n=5) who are or will be involved in teacher education at Kau. Two of these five will be supervised in partnership with the Kau Centre for Research on Child and Adolescent Mental Health (CFBUPH) since they will conduct studies on areas such stress, resilience, anxiety, bullying or school refusal; these are areas which previous research indicate impact highly on gifted students' mental health and have high relevance for gifted education and teacher education. Other areas in which Kau has gifted education supervision expertise include assessment data, subject-specific education, and high physical performance. **Stockholm University** (SU) is one of the top 50 universities in Europe with 1,400 doctoral students, and 5,700 members of staff active in the scientific areas of Science and Human Science. The DP involves researchers from the Faculty of Social Sciences (Psychology and Special Education) and the Faculty of Science (Department of Mathematics and Science Education). The main SU partner who will host two PhD students (n=2) is the Department of Special Education (DSE) where 25 PhD students are enrolled of which 12 participate in a DP on early intervention. At DSE an advanced 7.5 credits course on Provisions for gifted students

in preschool and school for teachers and special educators has run since 2008, with about 100 participants to date. The course has been multidisciplinary, research-based and with the participation of national and international lecturers. These didactic experiences would be valuable to build upon in developing new courses at PhD level. Recent publications on gifted education at SU: Two dissertations, 12 articles or chapters, 20 theses at advanced level. SU contributes with a broad expertise on gifted education: educational and psychological aspects, individual and learning environment assessments, classroom observation instruments, didactics, policy development, collaboration practice-research. **Mälardalen University (MDH)** is Sweden's largest university college. Educational Sciences is one of MDH's six research specializations. Here researchers and PhD students are working primarily to raise the quality of Swedish education. MDH's research contributes to quality of Swedish education by new insights into the varying needs of children, students, youths and adults in relation to teaching and learning. MDH provides third-cycle courses in didactics and include gifted education aspects in advanced-level courses in special education as well as in large-scale research and development projects. One example of such a co-production large-scale development project is about differentiation and digital technologies. It includes more than 200 teachers from seven municipalities and is led by Lundqvist (participating researcher). MDH will host two PhD students (n=2) who are or will be involved in teacher education at MDH to research didactics. **Partners to the DP** (Table 1): International partnerships will strengthen the research environment, for example profiling a guest researcher, seminars, opportunities for PhD students to visit other universities and mutual participation in PhD courses. Budget will allow research partners to contribute to the DP, and PhD students to visit partners in person.

Table 1. Doctoral programme partners (*selected examples – plus exchange visits*)

Partners	Country	Name	Specific contributions
Helsinki University	Finland (FI)	Prof Kirsi Tirri	Advisory Group, Supervisor, PhD Course 2 contributor
		Dr Sonja Laine Taina Makkonen	DP postdoctoral affiliate DP PHD student affiliate
University of Oslo	Norway (NO)	Prof Ella Idsoe	Advisory Group, Supervisor, PhD course 3 contributor
		Possible PhD student	DP PhD student affiliate
University of Iceland	Iceland (IS)	Assoc Prof Meyvant Thorolfsson	Poss. PhD mentor/supervisor
Aarhus University	Denmark (DK)	Prof Poul Nissen	Poss. PhD mentor/supervisor
University College Southern Denmark	Denmark (DK)	Dr Lilja Kristiansdottir	Nordic DP research affiliate
Massey University	New Zealand (NZ)	Prof Tracy Riley	Advisory Group, PhD mentor
Australian Catholic Univ	Australia (AU)	Prof John Munro	Advisory Group
Oxford Brookes Univ.	United Kingdom (UK)	Helen Wilson	PhD course 3 contributor
Univ. of Roehampton	United Kingdom (UK)	Åsa Melander	DP PhD student affiliate
Middlesex University	United Kingdom (UK)	Joan Freeman	PhD course 3 contributor
National Association For Gifted Education	United States (USA)	Shelagh Gallagher	PhD Course 3 contributor

3. Doctoral Programme description

The DP (autumn 2021 to spring 2026) includes: (i) funding and supervision of nine Swedish PhD students who are or will be involved in teacher education – note that one of the nine PhD students is fully funded by Kau, providing substantive co-funding support for the DP; (ii) funding and development of three new PhD courses (3x 7.5 hp) and (iii) funding for all the other DP activities. These activities include steering-group meetings, PhD recruitment (N=9), final supervision decisions, supervisor-group meetings, PhD supervision, international advisory-group dialogues, ethical vetting when needed, ongoing internal evaluations and ethical reflections. The PhD students will attend other PhD courses to achieve total 90hp, PhD group

meetings, PhD group mandatory seminars (following the respective universities curriculum for graduate studies 10%, 50% and/or 90% seminars may be held). Other DP activities are: visits of guest researchers, PhD student visits abroad, wider international collaborations, PhD research disseminations, one Nordic research and teacher conference (in 2025), research publications and dissemination, dissertations (N=9), evaluation of DP and final report (Table 2). Collaboration of Kau, SU and MDH enables supervision of differing 3rd cycle degrees: PhDs in Educational Studies [Pedagogiskt arbete] at Kau, doctorates in Special Education [Specialpedagogik] at SU, and doctorates in Didactics [Didaktik] at MDH.

Table 2. Doctoral programme timeline

Doctoral programme Activities	Autumn 2021	Spring & autumn 2022	Spring & autumn 2023	Spring & autumn 2024	Spring & autumn 2025	Spring 2026
Steering group meetings	X	X	X	X	X	X
PhD recruitment (N=9)	X					
Final supervision decisions	X					
Supervisor group meetings	X	X	X	X	X	X
PhD supervision	X	X	X	X	X	X
Int. advisory group dialogues	X		X		X	
Ethical approvals, when needed	X	X				
Ongoing evaluations		X	X	X	X	
PhD courses new (3x7.5hp)		X	X	X	X	
Researcher group-meetings		X	X	X	X	X
PhD seminars (e.g. 90%)			X		X	
Guest researchers		X	X	X	X	
PhD student visits abroad		X	X			
Other international activities				X	X	X
PhD research disseminations			X	X	X	X
Nordic conference					X	
Dissertations (N=9)						X
Research dissemination			X	X	X	X
Evaluation of programme						X
Final report						X

Recruitment of the nine PhD students will be managed by relevant institutions at Kau, SU and MDH. PhD studies in gifted education can build on the research interest of a wide range of associated subjects: preschool and school subjects such as math, science and literacy; preschool and school phenomenon such as stress and resilience, anxiety, bullying or school absenteeism and school refusal; inclusion; early childhood education and care; leadership; professional learning; assessment. Multidisciplinary perspectives, for example between education and psychology, and elite sports, add strength to the DP and provide diverse perspectives to teacher education. PhD applicants provide a proposal for a specific area of gifted education research with their application, but once accepted may negotiate a revision. The specific configuration of requirements for each PhD student will align with local degree requirements, but all students funded will include the three new specifically designed gifted education courses in their degree programme outlined in the next subsection. Strong and growing interest in gifted education is evidenced by several (more than 200) Swedish candidate and Masters theses on gifted education from Kau, MDH and SU as well as other universities. Besides these thesis, enrolment of students (around 100) in a unique Stockholm University Masters level course on gifted education support the pool of potential PhD students to the school. **Supervisor suggestions** will be done in collaboration between the steering group and the employing faculties, with consideration of the specific research proposals to ensure that students have the most appropriate supervisors and research

context. The following multidisciplinary researchers have expressed willingness to engage as both contributing researchers and to contribute as lead supervisors: Prof Valerie Margrain, Kau (giftedness in the early years, parent partnerships, holistic assessment); Prof Gisela Priebe (mental health, trauma); Assoc. Prof Jorryt van Bommel, Kau (mathematical giftedness); Prof Michael Tengberg, Kau (student achievement, quant data analysis, teacher professional development); Professor Henrik Gustafsson, Kau (high performance and stress in sports); Professor Mara W. Allodi SU (early intervention, inclusion); Prof Emeritas Ann Charlotte Smedler, SU (neuropsychology, cognition); Assoc. Prof Johanna Lundqvist, MDH (inclusion, early childhood education and care, early school years, digital competencies, ethics). Associate supervisors and participating researchers [biträdande] include Swedish gifted education researchers such as Dr Elisabet Mellroth, Kau (mathematics, teacher professional learning), Dr Attila Szabo SU (mathematical giftedness, teacher professional learning), Dr Johanna Stålnacke SU (neuropsychology); and Assoc. Prof Louise Sund, MDH (sustainability, equity). **Internationalisation** is a key part of the research programme. Each PhD student will have either an associate supervisor from DK, FI, IS or NO or have an international mentor from Australia, NZ, UK, USA or other country contact (Table 1 provides selected examples). PhD students will have funded opportunity to visit a gifted education researcher abroad early in their DP (2022-23). Nordic research affiliates researching in gifted education are welcomed to the research programme, especially PhD and postdoctoral students funded elsewhere. For example: Dr Sonja Laine (postdoc in gifted education, Helsinki); Taina Makkonen (doctoral student, Helsinki); Åsa Melander (Swedish PhD student, University of Roehampton, UK).

4. Organisation

The organisation include the following. A **steering group and meetings**: The DP will have a steering group with at least two meetings per semester; the coordinator Margrain is chair. Roles within the steering group are outlined in the national coordination section. The group is responsible for the planning and evaluation of the RS. **Supervisors group and meetings**: The supervisors build a group (n=approx. 18) with at least one scheduled meeting per semester with discussion of the PhD students' research, activities and progression. Each university also has their own supervisor support networks. **Doctoral support/supervision**: Margrain will be responsible for overall PhD support/supervision of the nine PhD students, and PhD supervisors are responsible for specific thesis guidance. Together with associate supervisors, Allodi will provide support to the SU PhD students, Lundqvist to the MDH PhD students, Margrain to three of the five Kau PhD students, and Priebe to the two Kau PhD students affiliated with her research centre, CFBUPH. These four academics will maintain contact with each other to address PhD research, activities and progression, support needs and opportunities as they arise. **Research meetings, PhD seminars** (e.g. 50% and 90% level) and **other research seminars** (e.g. with guest researchers) will be conducted. These meetings and seminars include peer-reviews, knowledge sharing, inspiration and community building within Sweden, Norden and globally. Most of these seminars will use digital media to be accessible and open to the public, to also facilitate research interest about gifted education amongst colleagues in related areas of educational research, for example special education, subject-specific education, educational assessment, and early childhood education and care. Coordination of the research seminars will be managed by Margrain in collaboration with the steering group. **Guest researchers**: PhD students will be encouraged to meet guest researchers and present their work at seminars enrolling guest researchers. Guest researchers will be supported to contribute to the DP, and PhD students given opportunity to visit research centres abroad. **A Nordic gifted education research and teacher education conference** will occur in 2025 hosted by Kau, potentially as a combined digital and face-to-face medium to support accessibility. This conference will showcase new research within the DP, especially giving the PhD students presentation experience in the year prior to their disputation. External researchers will be invited to contribute provocations and possibilities within the conference programme, for example, NZ and Australian (Victoria) governments have in recent years invested heavily into gifted education research and research-informed practice.

Co-funding from strategic agencies and/or additional grant may be sought to expand the conference. An **international advisory group** (n=4) will be established to provide strategic feedback and advice to the steering group, meeting once per semester 2022-2025. Advisory group members will include Nordic and other international researchers (see Table 1), including: gifted education researchers Prof Tracy Riley (NZ) who is on the executive of the World Council for Gifted and leading NZ postgraduate gifted education; Prof John Munro (Australia) who advises the Victorian government on classroom-based gifted education research; Prof Kirsi Tirri (Finland) who has prolific Nordic research in giftedness and will bring PhD and postdoc researchers to our centre, and Prof Ella Idsoe (Norway) who has been a strategic advisor to the Norwegian government on their new gifted education initiatives. Costs for all items are in the budget, including advisory group reimbursement, but additional funding will be applied for in relation to the conference. The organisation includes the development and realisation of **three new PhD courses**. Margrain and Priebe (Kau), Allodi (SU) and Lundqvist (MDH) will work collaboratively to plan three new gifted education PhD courses delivered in English. However, each university will take the lead and host one course each as outlined below. The courses will also be open to research students outside the DP who have an interest in the topics, for example by PhD research related to diversity, inclusion, special educational needs, differentiated practice and equity issues. The PhD courses will be promoted to PhD students in other Nordic countries. To combine efficiency, accessibility, and simultaneously build collegial support, it is planned that the courses will operate digitally, with one face to face intensive meeting per course if possible. Each course will have one or more international partners (see Table 1). Course 1: High abilities, giftedness and learning theories, Autumn 2022, 7.5 hp. Location: SU (Allodi). Course 2: Gifted education didactics and differentiation in preschool and school, 2023, 7.5 hp. Location: MDH (Lundqvist). Course 3: Highly ably students, gifted students and mental health, 2024, 7.5 hp. Location: Kau (Priebe & Margrain). PhD students will also access wider course opportunities, including research methods, research ethics, information and dissemination skills and other obligatory requirements mandated by universities (Kau, MDH and SU). Remaining courses to achieve a total of 90 hp will be selected in consultation with supervisors, to support PhD students' research method and theory, and specific research question. PhD students will be encouraged to visit other universities affiliated with the DP, especially within the Nordic region, and if possible, to take PhD courses in these countries. **Gender issues** will be considered, including involving men, women or other gender.

5. Significance

Gifted students in Sweden and our neighboring Nordic countries learn in inclusive 'regular' local schools and preschools; there is no national operating separate educational system for their education. Although Swedish law and preschool and school curricula lack explicit mention of giftedness (Margrain & Lundqvist, 2019), mandate is implicitly evident through the democratic directive that that schools and preschools ought to support the learning needs of *all* students, and provide an equitable inclusive education. This is also the main goal of UN SDG 4, and supports the Convention of the Rights of the Child (United Nations, 1989), for example, articles 6, 18 and 29. Therefore, an inclusive education approach to gifted education is necessary, meaning that every classroom needs to be a place where learning needs of those with high learning potential and ability are considered. Despite Swedish law and curriculum statements, which state that *all* students have the right to learn according to their potential, the reality for most gifted students is that they do *not* have the opportunity for learning experiences at the level that matches their ability (Persson, 2010). Recent shift in curriculum discourse promotes *equitable* (not 'the same') educational experiences, but Nordic and internationally research points to uncertainty from teachers as to what this means in practice (Laine & Tirri, 2015; Margrain & Farquhar, 2012; Westling Allodi, 2014). Further, Skolverket states that at least 5%, or even more, of students in school can be gifted (Stålnacke, 2015) yet international, Nordic and national research notes that gifted education is amongst the most underserved areas in education, that gifted students receive little attention in comparison to other students (Walsh, Bowes & Sweller, 2017) and are at risk (Persson, 2010). Negative outcomes for gifted

students, exacerbated by lack of support, may include depression, anxiety and stress (Bakar, Yazid, Ishak, & Mohd, 2014), underachievement (Steenbergen-Hu, 2020), or low participation and engagement (Eriksson, Welander & Granlund, 2007). Negative outcomes can persist into adulthood, impacting on social productivity and adult mental health (Stålnacke & Smedler, 2011). What is more, Swedish Schools Inspectorate (Skolinspektionen, 2016) has reported that more than 30% of Swedish pupils were under-challenged in learning because of lack of challenge at school. This is a concerning high number, even though sample selection was not random. Examples of responsive practice include Spetsutbildning, in which Year 7 students have access to deeper and broader learning such as advanced courses at gymnasiet, is an example of an initiative for highly able students in Sweden. However, an equity issue is that there are only 24 schools in Sweden currently offering spetsutbildning (Skolverket, 2020a). 'The Rainbow' (Tellus barn 2021) is an example of a preschool that states it has a focus on gifted children in preschool. The applicants are aware of several such practical examples of gifted education, yet initiatives can be understood as *ad hoc* and more research is needed which connects to quality practice improvement and the notion of inclusion. One aspect of (in)equity relates to over-representation of boys in identification of giftedness, and underachievement of gifted girls (Tirri & Kuusisto, 2017). The nine PhD students, who already are or will be engaged (at 20 %) in teacher education can address equity in their teaching and thus be part of changing circumstance. The PhD students will be offered teacher education tasks that fit with their research project where possible. SU, MDH and Kau have all developed strategies in order to support successful integration of research and education, and fruitful teaching experiences and mentoring to PhD students. In short, this is a significant and fortuitous time for this DP for several reasons. First, the number of researchers and research publications within the Nordic region is growing, indicating growing research capacity which can be harnessed and nurtured (Mellroth, 2019; Sims, 2021). Secondly, research is timely that reflects societal and policy initiatives: the Swedish government 2019-2020 commissioned Skolverket to review and recommend initiatives in gifted education (Skolverket 2020b). Part of that process involved interviewing researchers within this application and Nordic colleagues such as Prof Ella Idsoe at University of Oslo (affiliated with this application). Thirdly, there is a body of graduates from advanced level courses in high abilities and gifted education interested in seeking doctoral opportunities. Fourthly, teacher educators and teachers in preschools and schools are seeking research evidence on how to adapt their inclusive practice with gifted students, as evidenced by new professional learning for teachers for example in Jönköping (2021). Fifthly, Nordic research colleagues are keen to collaborate and we participate in a gifted education network from the Nordic countries with researchers who are willing to contribute to the activities of this DP. Sixthly, the lead applicant Prof Margrain is a professor with 'gifted education' as part of her job description. Seventhly, researchers throughout Sweden and Norden who have been involved with gifted education have been consulted and/or invited to participate, as well as key Nordic contacts. These colleagues have strongly encouraged pursuit of this DP and will assist to promote and recruit PhD students. **Novelty** is evident in the DP throughout attention to a new research area, Nordic-wide emphasis, international partners and experiences, multidisciplinary perspectives, and digital outreach.

6. National coordination

The national coordination is as follows: The DP will be **led** and **coordinated** by Prof Valerie Margrain (Kau, Department for Educational Studies), lead applicant, who has 20% per annum. Margrain will take lead responsibility for budget liaison, arrangement and promotion of research activities, administration, digital platforms, internationalisation and reporting (Table 1). Margrain is a Professor in Educational Work in Sweden with 'gifted education' as part of her job description. She brings an international perspective to her leadership having worked in Australia and New Zealand (NZ) and with international networks in giftedness, early childhood and internationalisation. Kau provides a multidisciplinary doctoral research environment in educational studies and this application will specifically connect to the Kau research Centre for Child and Adolescent Mental Health (CFBUPH). **A steering group** (n=6) will be adopted. It consists of the coordinator Margrain (see above) and participating researchers Prof W. Allodi

(DSE, SU) and Lundqvist (School of Education, Culture and Communication, MDH), who each have 8% per annum (n=3). While this working group of three will collaboratively work on course planning and other DP activities (Table 1), Margrain will take leadership of overall PhD support/supervision, ethics and activity arrangements, Allodi will provide leadership for coursework planning and Lundqvist leadership for DP and PhD group building. The steering group will also, when needed, include: the DP administrator (Cathrine Andersson Busch, 5%); the CFBUPH coordinator (Prof Gisela Priebe, 3%), and a representative from Faculty board for Teacher Education (Deputy Dean Dr Nina Thelander, 3%) (n=3). The coordination time (20%) and other steering group allocations are exclusive of separately budgeted time for supervision or course development and teaching. The key role of Priebe is to connect the DP to CFBUPH, to provide multidisciplinary expertise and advice including psychological, and to support the two PhD students connected to CFBUPH. As Dean of Teacher Education, Thelander plays a strategic role to advise the group regarding national higher education ordinance (e.g Högskoleförordning, 1993:100), and has a portfolio role in internationalisation. The steering group will meet at least twice each semester, primarily digitally, to consider such issues as recruitment, staffing, supervision, promotion, ethics, budget and PhD group building. The steering group will also consider issues and advice raised by the International Advisory Group. The three universities Kau, MDH and SU play a key role because they have been part of teaching advanced level courses in gifted education within Sweden, and have knowledge to advance a research agenda in this topic. The three lead partners have previously worked together in various constructive ways. Margrain and Allodi have engaged with discussions with other Professors/Associate Professors in the Nordic region who support the desire for a Nordic research centre on gifted education. Margrain and Lundqvist have published together on gifted policy discourse (Margrain & Lundqvist 2019). Allodi and Lundqvist have worked together in teaching a masters-level gifted education course and published collaboratively. All three have held coordination roles in funded research project. Allodi (SU) can play a key role in the DP recruitment through the SU Masters course, and can build from this masters-level gifted education course when developing the first PhD course. She has key UK, USA and other partnership in gifted education. Lundqvist (MDH) can play a key role to the DP through her previous teaching in the SU Masters course in gifted education, her experiences of leading large-scale project and contributes a valuable emphasis on inclusive teaching offered from MDH. She has strategic sector connections to schools and preschool early childhood services. Priebe adds valued experience from multidisciplinary studies; social science grants and research centre leadership and addresses the aspect of student mental health. **Administration** for the DP will be managed by Kau. Kau has substantive experience managing DP and research budgets. **PhD course teaching** and **supervision** will be approved and managed by the participating universities, but coordinated in collaboration between the coordinator, steering group, and research group. Courses and employments must be approved by individual universities. **PhD students** will have access to a full range of support both from their employing universities, and from the DP.

7. International and other national collaboration

The international and other national collaboration are as follows: Opportunities for **international researchers** to engage with the DP include contributions to PhD course teaching, PhD seminars, employment as assistant supervisors, discussants, or examiners, presenting at the 2025 DP Conference, hosting PhD students who visit partner countries, contributing to the international advisory group, and engaging in collaborative research. Each semester at least one international gifted education researcher will be profiled and supported with (limited) guest researcher funding. **Nordic collaboration** with Nordic researchers in gifted education will ensure that the DP is a Nordic initiative, rather than solely Swedish. This is important to be able to share initiatives, collaborate on projects of relevance to inclusive Nordic contexts, and profile gifted education as relevant in Nordic education. Nordic partners with gifted education research and who have agreed to be affiliated to the DP (see table 1) include Prof Ella Idsoe (NO), Prof Kirsi Tirri (FI), Prof Poul Nissen (DK), and Assoc Prof Meyvant Porolfsson (IS). University of Helsinki have an existing PhD student (Taina Makkonen) and

post-doc (Dr Sonja Laine) researching in gifted education who can be affiliates, and the NO, DK and IS partners are exploring the possibility of new doctoral positions in gifted education. **Wider potential international contacts** held by the research applicants include such organizations and networks as *World Council for Gifted Education*, *European Talent Development Centre*, *ECHA*, *giftEDnz*, and *GERRIC* (Australia), and others. For example, Prof Tracy Riley is a valued partner as postgraduate studies in gifted education have been sustained in NZ for many decades and well connected to inclusive teacher education. Collaboration with Prof John Munro is useful as he gives research advice to inform the Victorian government (Australia) new package for gifted education support and research worth over 683 million sek. Partnership with Shelagh Gallagher (USA), Helen Wilson (UK) and others will build on their previous contribution to the SU Masters-level course in gifted education. Through all of the above and wider contacts, we will ensure that each PhD student either has an international assistant supervisor or international mentor. The applicants have strong **national** connections in the topic and will personally invite all known Swedish researchers in gifted education to participate in the DP. whose research is in, or aligned to, gifted education, for example: Prof Roland Persson (Jönköping Univ., education systems); Prof EvaSilfver (Umeå Univ., gifted geeks); Dr Lena Ivarsson (Mid-Sweden Univ., early readers); Dr Linda Mattsson (Blekinge Högskola, mathematical giftedness); PhD student Caroline Sims (Uppsala Univ., gifted policy); and PhD student Malin Ekesryd Nordström (Umeå Univ., giftedness in preschool). A DP **website** will establish an outreach and information about forthcoming activities such as seminars, publications and relevant conferences.

8. **Equipment** – no special equipment

9. **Need for research infrastructure** – no need for new research infrastructure

10. References

- Bakar, A., Yazid, A., Ishak, & Mohd, N. (2014). Depression, anxiety, stress and adjustments among Malaysian gifted learners: Implication towards school counseling provision. *International Education Studies*, 7(13), 6-13.
- Eriksson, L., Welander, J., & Granlund, M. (2007). Participation in everyday school activities for children with and without disabilities. *Journal of Developmental Physical Disabilities*, 19, 485–502. DOI 10.1007/s10882-007-9065-5
- European Union (2010). *Specific educational measures to promote all forms of giftedness at school in Europe: Working document*, June 2006. [Website]. Publications Office of the European Union. <http://op.europa.eu/en/publication-detail/-/publication/7de9cb30-5138-4a0a-a574-cd55ef94ef36>
- Gagné, F. (2010). Motivation within the DMGT 2.0 framework. *High ability studies*, 21(2), 81-99.
- Gagné, F. (2013). The DMGT: Changes within, beneath, and beyond. *Talent development and excellence*, 5(1), 5-19.
- Ivarsson, L. (2008). *Att kunna läsa innan skolstarten: Läsutveckling och lärandemiljöer hos tidiga läsare*. (Doctoral thesis). Umeå: Umeå University
- Laine, S., & Tirri, K. (2016). How Finnish elementary school teachers meet the needs of their gifted students, *High Ability Studies*, 27(2), 49-164.
- Margrain, V. & Lundqvist, J. (2019). Talent development in preschool curriculum and policies: Implicit recognition of young gifted children. In V. Margrain & A. Löfdahl Hultman, A. (Eds.), *Challenging democracy in early childhood: Engagement in changing global contexts* (pp. 41-55). Springer.
- Margrain, V., & Farquhar, S. (2012). The education of gifted children in the early years: A first survey of views, teaching practices, resourcing and administration issues. *APEX: The NZ Journal of Gifted Education*, 17(1). <https://doi.org/10.21307/apex-2012-005>
- Mellroth, E. (2019). Sverige och undervisning av elever med särskild begåvning i slutet av 2018. *Kognition og Pædagogik: Tidskrift om gode læringsmiljøer*, 29(111-112), 42-47.

- OECD. (2021). Strength through diversity. OECD. Retrieved January 31, 2021, from <http://www.oecd.org/education/strength-through-diversity/>
- Persson, R. (2010). Experiences of intellectually gifted students in an egalitarian and inclusive education system. *Journal for the education of the gifted*, 33(4), 536-569.
- Sims, C. (Ed.). *Särskild begåvning i praktik och forskning*. Studentlitteratur.
- Skolinpektion (2014). *Stöd och stimulans i klassrummet*. Rapport 2014:2.
- Skolinspektionen, (2016). *Ökat fokus på skolor med större utmaningar* Diarienummer 2015:6905 [Increased focus on schools with more challenges, experiences and results by the school inspectorate 2015].
- Skolverket. (2020a). *Försöksverksamhet med spetsutbildning i högstadiet*. Retrieved February 02, 2021, from: <https://www.skolverket.se/skolutveckling/anordna-och-administrera-utbildning/anordna-utbildning-pa-grundskoleniva/forsoksverksamhet-med-spetsutbildning-i-hogstadiet>
- Skolverket. (2020b). *Redovisning av uppdraget Elever som snabbare når kunskapskraven*. Dnr: 2019:01132. Skolverket. <https://www.skolverket.se/publikationsserier/regeringsuppdrag/2020/uppdrag-om-elever-som-snabbare-nar-kunskapskraven?id=6584>
- Steenbergen-Hu, S., Olszewski-Kubilius, P., Calvert, E. (2020). The effectiveness of current interventions to reverse the underachievement of gifted students: Findings of a meta-analysis and systematic review. *Gifted Child Quarterly*. 2020;64(2):132-165. doi:[10.1177/0016986220908601](https://doi.org/10.1177/0016986220908601)
- Sternberg, R. J. (2000). Patterns of giftedness - A triarchic analysis. *Roeper Review*, June, 231-235.
- Sternberg, R., & Ambrose, D. (Eds.) (2001). *Conceptions of giftedness and talent* (3rd ed.). Palgrave Macmillan.
- Stockholms stad (2019). *Utbildningsnämndens handlingsplan för att möta särskilt begåvade elevers behov* November 2019. <https://pedagog.stockholm/media/1396/handlingsplan-sarbegavade-barn.pdf>
- Stålnacke, J. (2015). *Särskilt begåvade elever: 1.2 Särskilt begåvade barn i skolan* [Gifted students: 1.2 Gifted children in school]. Skolverket.
- Stålnacke, J., & Smedler, A.-C. (2011). Psychosocial Experiences and Adjustment Among Adult Swedes With Superior General Mental Ability. *Journal for the Education of the Gifted*, 34(6), 900–918. <https://doi.org/10.1177/0162353211424988>
- Tellusbarn. (2021). Förskola Rainbow. <https://tellusbarn.se/the-rainbow/>
- Tirri, K., & Kuusisto, E. (2017). What factors contribute to the development of gifted female scientists? Insights from two case studies. In K. S. Taber, M. Sumida, & L. McClure (Eds.), *Teaching gifted learners in STEM subjects: Developing talent in science, technology, engineering and mathematics* (pp. 80-88). Routledge Research in Achievement and Gifted Education. <https://doi.org/10.4324/9781315697147-6>
- Tomlinson, C. A. (2016). *The differentiated classroom: Responding to the needs of all learners*. Pearson education.
- United Nations. (2015). Sustainable Development Goals 4. *Transforming our world: The 2030 agenda for sustainable development*. United Nations. https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E
- United Nations. (1989). *Convention on the Rights of the Child*, November 20, 1989, <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- Walsh, R., Bowes, J., & Sweller, N. (2017). Why would you say goodnight to the moon? Response of young intellectually gifted children to lower and higher order questions during storybook reading. *Journal for the Education of the Gifted*, 40(3), 220-246.
- Westling Allodi, M. (2014). Förbjudet område? Utbildning och kompetensutveckling om högbegåvade barns behov i skola och förskola. *Socialmedicinsk Tidskrift*, 91(2), 139–151.