

The Review Panel's Report

An external review of Karolinska Institutet's
doctoral education 2025

Introduction

Site Visit to Karolinska Institutet

On October 21, 2025, we conducted a site visit to Karolinska Institutet (KI) to evaluate the quality and structure of its doctoral education. The visit was part of a quality assurance initiative aimed at ensuring excellence in doctoral training.

The review panel consisted of the following members:

- **Professor Mia Ericson**, Sahlgrenska Academy, Gothenburg University – *mia.ericson@neuro.gu.se*
- **Professor John Creemers**, KU Leuven, Belgium – *john.creemers@kuleuven.be*
- **Professor Elina Mäki-Torkko**, Örebro University, Sweden – *Elina.Maki-Torkko@oru.se*
- **Docent Pirjo Nikander**, Tampere University, Finland – *pirjo.nikander@tuni.fi*
- **Doctoral student Anton Edlund**, Umeå University, Sweden – *anton.edlund@umu.se*
- Throughout the day, we conducted structured interviews with a wide range of stakeholders involved in KI's doctoral education. These included Robert Harris – Academic Vice President for Doctoral Education, Chair of the Committee for Doctoral Education (KFU) and Erika Franzén – Deputy-chair of the Committee for Doctoral Education (KFU) and:

8 representatives of the Management of KI's Doctoral Education

8 Doctoral Students (Appointed by DSA)

Upon our request, two clinical PhD students were (separately) interviewed on October 22. These extra interviews were conducted because this group of PhD students was not represented in the original panel of Doctoral students. We wanted to obtain more insight into the specific procedures and challenges of this group.

9 Supervisors (Random Selection)

8 Representatives from the Doctoral Course Organization

Directors of Doctoral Studies at 8 the Departments

This comprehensive set of interviews provided us with valuable insights into the governance, structure, and experiences of doctoral education at KI. The following sections of the report will detail our observations, reflections, and recommendations.

Assessment criteria 1: Human resources (supervisors and teachers)

Reflections

KI has over 2,200 active doctoral students and the number of doctoral degrees was 341 (60% women) in 2024. There are 1,300 appointed principal supervisors and each doctoral student must have at least one co-supervisor. The main supervisor must be employed by, or affiliated with, the KI department to which the doctoral student is admitted. The co-supervisors may have their employment or affiliation at other departments at KI or other higher education institutions.

Despite the impressive catalogue of doctoral courses, doctoral students have difficulties in taking some (obligatory) courses on time. This means repeated application rounds and presents the obvious risk for mismatch in timing between a certain course and the individual project plan. Course evaluations are analyzed at several levels, and in case a teacher gets negative feedback, actions are taken. Credit transfers from courses taken at other higher education institutions are described as difficult although there is a SOP for this.

To be appointed as a main supervisor it is mandatory to have taken the introductory doctoral supervision course. As the number of regulations related to doctoral education research, including doctoral student projects, is increasing it is important that also the course on relevant regulations remains mandatory for main supervisors (and must be repeated at least every 5th year). However, these courses are only recommended for co-supervisors.

The “green light” system was highly appreciated by the evaluation committee and is seen as an example of solid quality criteria regarding supervision. The system has been in use since 2018 at KI, but the practice varies between the 21 departments and is experienced by both supervisors and doctoral students to lack transparency. Even if the consistent use of the “green light” is challenging, the system has clearly increased awareness of the need to reflect one’s obligation to do a good job as a main supervisor which as such is a positive development.

When it comes to the co-supervisor’s role as an active part in doctoral student projects, it seems in part unclear and undefined as some co-supervisors are not always actively involved in the doctoral student’s education and progress towards reaching the national goals. There are indications that some co-supervisors are more collaborators or co-authors than co-supervisors, and the practice varies between the departments.

One of the challenges regarding supervision is the time available. This is an overarching and common issue but especially relevant at KI regarding clinical supervisors.

Recommendations

1. Make the introductory course and the course on rules and regulations mandatory to both main supervisors and co-supervisors. In case the co-supervisor comes from another higher education institution, a corresponding course could be accepted.
2. Clarify the roles of the supervisor group in each doctoral project and increase the involvement of the co-supervisors in the doctoral education.
3. Harmonize the use of the “green light” at all departments.
4. Use the individual study plan (ISP) as a tool and make sure that both the doctoral students and the supervisors know that the ISP is a legal document.
5. The capacity of the obligatory courses with a waiting list should be increased. To calculate the necessary capacity, we suggest you take the number of new doctoral students plus about 10% margin.
6. To increase the accessibility for the doctoral students and to save time for teachers, it might be beneficial to make courses partly online. The model already exists and has been shown to be feasible.
7. Using recorded lectures together with in-person examinations might increase flexibility for some doctoral students and reduce teaching time for the teachers.

Assessment criteria 2: Doctoral education environment

Reflections

Karolinska Institute places strong emphasis on ensuring that every doctoral student has access to a high-quality research and learning environment, reflecting the university's ambition to uphold excellence in doctoral education. To support the doctoral students there are clear administrative frameworks, quality assurance mechanisms, and structured follow-up points (e.g. the Exit Poll, annual revision of the ISP, the half-time review) which demonstrates a systematic approach to monitoring and supporting doctoral progression.

The clinical research schools, where available, represent a strength of the doctoral environment. They provide well-defined structures, allocated research time, and valuable opportunities for networking and peer interaction, which are especially important for clinical doctoral students.

Supervision is taken seriously, with many supervisors demonstrating reflective practice and engagement in ongoing development. The Green Light system encourages supervisors to self-assess their ability to take on new doctoral students, which is very positive. The overall culture of zero tolerance toward harassment and discrimination also signals KI's commitment to a safe and inclusive environment.

However, we observed a variation between departments in implementing central guidelines which leads to inconsistencies in doctoral experiences and quality assurance.

Despite the above-mentioned solid measures toward monitoring and supporting doctoral progression, introducing a mid-journey doctoral survey could perhaps provide tools to intervene where problems arise. The Exit Poll identifies problems only after the fact.

Clinical doctoral students employed by the hospital remain a structurally vulnerable group. The heavy clinical workload and lack of guaranteed research time compromise progress and quality, and the support mechanisms for clinical supervisors vary significantly.

Psychosocial wellbeing and stress are widely recognized concerns but are often handled reactively rather than preventively. While there are channels for reporting misconduct, doctoral students express limited trust in the system and uncertainty about confidentiality and consequences.

Communication and visibility of support structures (HR, study directors) are insufficient. Given the extensive amount of information presented during the introductory course, KI should not assume that mentioning something once is sufficient for all doctoral students to fully comprehend or remember it.

International doctoral students face additional barriers, including restrictive visa and residence regulations, challenges in community integration, and uncertainty regarding possibilities of research visits abroad. Also, career support and post-doctoral phase career planning, particularly to international doctoral students could be paid more attention to, in order to retain the workforce and support doctoral students' futures in Sweden.

Overall, KI offers an impressive and well-intentioned structure for doctoral education. The challenge now lies in ensuring that this structure functions consistently and equitably

across all departments and in addressing the cultural and systemic aspects that affect doctoral wellbeing and research quality.

Recommendations

1. Ensure consistency and accountability across the 21 departments. Strengthen monitoring and follow-up mechanisms to guarantee that central procedures are implemented uniformly. Introduce cross-departmental benchmarking and feedback loops to share best practices and promote equity in doctoral education quality. This could be achieved by an annual Cross-Departmental Benchmarking Review where departments would report on key indicators such as admissions, supervision, progress monitoring, and research environment initiatives. This could identify disparities and highlight good practices.
2. Improve support for clinical doctoral students. Establish formal agreements with the healthcare region to secure protected research time for clinical-doctoral students.
3. Create a safe psychosocial environment. Introduce mandatory resilience, stress management, and bystander training for both doctoral students and supervisors. Integrate regular mental health and wellbeing surveys earlier in the doctoral process (not only at exit). Increase transparency and trust in reporting systems by clearly communicating outcomes of misconduct and harassment cases.
4. Ensure that career development and transferable skills (aligned with EU's ResearchComp framework) are embedded throughout the doctoral curriculum.
5. Strengthen internationalisation and inclusion. Facilitate greater mobility by engaging with national authorities to relax restrictions on non-EU doctoral students. Develop structured peer and mentoring networks for international doctoral students to foster belonging and academic identity. To stimulate outgoing mobility and better align with European funding initiatives such as MSCA-Doctoral Networks and the European Universities initiatives, develop a clear policy for joint doctorates.
6. Modernise research output expectations. Emphasize scientific quality, originality, skills acquisition, and critical thinking rather than the number of publications as a proxy for quality. Formative quality assurance mechanisms are already in place at different stages of the doctorate, which are better indicators if all learning objectives will be obtained. Formative quality assessment safeguards consistency across disciplines and are in line with CoARA guidelines.
7. Reconsider doctoral student salary levels. Competitive and adequate salary levels are essential for ensuring a sustainable and healthy work environment for doctoral students and should be recognised as a critical component of high-quality doctoral education. The current salaries at KI are comparatively low relative to other medical faculties in Sweden, which risks undermining both the attractiveness of the doctoral programmes and causes irritation amongst doctoral students.

Assessment criteria 3: Achievement of intended learning outcomes

Reflections

KI has a long-term investment in raising awareness of learning outcomes and elements of this have been incorporated into the KI general guidelines available, the ISP, doctoral students' introductory course, and supervisory training. Outcomes, on the individual student level, are also closely monitored through the doctoral journey, although not all supervisors and doctoral students perceive the process in exactly these terms. The recent 2024 addition of doctoral students' summative reflection on their own personal professional development during the learning journey seems like an excellent further element that may, in the future, guide the examination board and opponent evaluation focus. The positive here is that such reflection may also guide the doctoral student to orient towards continuous professional development that forms their futures beyond doctoral training.

KI doctoral course evaluation is done on a structured and routine basis, with the mean response rate in 2023 and 2024 as high as 71%. The high number of courses are either freestanding or courses provided via doctoral programmes and Research Schools. Judging the achievement of course learning outcomes and quality on the individual course level is well managed at KI. What is more difficult to evaluate, however, is whether departments have a joint and shared view on the core academic and transferable and career development skills that all KI graduated doctors might share. Another point of concern is whether doctoral students are assisted to make informed, tailored and best choices to support their personal skills development from the extensive course catalogue.

Doctoral students' views on learning achievement is measured via the Exit Poll. We were left wondering whether regular surveys measuring achievement and other key elements like sense of belonging, supervision, and harassment could also be run during the doctoral journey.

The three schematic outcome matrices clearly illustrate how KI's educational structure and research practices contribute to each of the evaluative categories: *Knowledge & Understanding, Proficiency & Ability, and Judgement & Approach*. The activities listed after each matrix provide examples on the means of outcome fulfilment.

In all, we find KI to strongly support the ideal attainment of learning goals through an array of quality assurance mechanisms. The research environments support goal setting according to each learning path according to the individual doctoral project, while signposting key and mandatory training needs and activities.

However, there is always room for improvement and below are our key recommendations on how to do even better.

Recommendations

1. Continue to enforce more systematic use of the ISP across the departments to support outcome-based doctoral education and as a tool to indicate plans for the achievement of the intended learning outcomes. Adopt a generic frame for the assessment of achieving intended learning outcomes and skills acquisition. KI could perhaps adopt a more generic frame to guide individual doctoral students/departments to both identify and test the attainment of relevant core skills developed during the doctoral studies. One possibility here, is the EU Commission's [Research Competence Framework](#), and [the self-assessment tool](#) added in 2025, or the [Researcher Development Framework of Vitae](#). This can be further strengthened by reserving a minimum of e.g. 2 of the 30 HEK for transversal and career development skills. Introduce a more pronounced process-product distinction into supervisory training and secure that notions of personal professional development become an integral part of the public defence.
2. Introduce doctoral student surveys other than the Exit Poll as a means of measuring the attainment of learning outcomes at key junctures during the doctoral journey.
3. Secure better incorporation of learning through broad and supported interaction with the surrounding society.
4. The combination of a full-time clinical appointment in combination with doing a PhD is not sustainable; it jeopardizes the wellbeing and motivation of clinical PhD students and will inevitably lower the standard of the learning outcomes of KI or create a two-tier system. We recommend defining a minimum time of reserved research time.
5. Increase efforts to stay in touch with alumni to help career development of ongoing PhDs and adapt course offer in function of needs indicated by them.

Overall conclusion on the quality of Karolinska Institutet's doctoral education

Karolinska Institutet has built a robust doctoral education environment characterized by ambition and academic excellence. This is reflected in the international reputation as a leader in doctoral education, and several innovative tools are acknowledged as best practices and adapted by other institutes. KI has obtained the ORPHEUS quality label and continues to improve and innovate. The evaluation panel was genuinely impressed by both the self-evaluation and the feedback obtained during the panel discussions with the different stakeholders. The suggestions for improvement should therefore be read in this context. The next step is to ensure that these strengths further translate into a sustainable culture, one that supports academic achievement, researcher wellbeing, and personal development. By doing so, the evaluation panel anticipates that KI should be able to consolidate its position as a leader in Europe for high-quality doctoral education.

The only concern that might become a serious threat for KI is the increasing number of doctoral students with a full-time clinical appointment and no guaranteed research time. The heavy clinical workload is not compatible with a challenging time-consuming doctoral project and jeopardizes the mental health of the doctoral student. The likely consequence is that these doctoral students will be given less challenging projects, lowering the high academic standards of KI. The evaluation panel considers this an undesirable situation and strongly recommends amending this unbalanced trajectory for doctoral education. The random set of 10 recent theses from KI (5 from doctoral students with full-time clinical employment and 5 with full-time KI employment) allowed us to draw some conclusions, with the reservation that 10 theses is a small sample size and considering that medicine is a very broad doctoral study subject with 21 departments. First, all 10 theses were of a sufficiently high academic level to warrant a doctoral degree. Second, it was noticed that the doctorates performed with 100% KI appointment frequently resulted in high-impact publications that are indicative of a top-research institute. The theses arising from doctoral students with 100% clinical employment more commonly contained publications based on questionnaires, national registry analyses, and prospective/retrospective observational studies. These latter studies are certainly valuable and contribute to better and more fine-tuned patient care, but are not breakthrough research leading to major innovations or paradigm shifts. It is the responsibility of KI to define and safeguard the balance between the two types of doctorates.

Other recommendations in this report are meant to update, optimize and fine-tune doctoral education at KI. For instance, a more proactive approach regarding mental health and transgressive behaviour is recommended. Furthermore, career development can be further optimized by implementing e.g. the EU-Research Competence Framework or Vitae's Researcher Development Framework and making skills and career development training more visible and an obligatory part of the ISP. In addition, the shortages in availability of obligatory courses should be solved, and continued efforts need to be made to minimize inconsistencies in the implementation of policies across all departments.

The evaluation panel wishes to thank all stakeholders for the open and constructive discussions, which have led to the recommendations above.