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NATIONELLA CENTRET FÖR UTBILDNINGSUTVÄRDERING
FINNISH EDUCATION EVALUATION CENTRE

AUDIT OF THE UNIVERSITY OF HELSINKI

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2.2 Research, development and innovation activities with impact

- Korkeakoulun itsearviointi

Comprehensive practices of open science and the promotion of research ethics

The UH has pledged to observe national and international principles of open science and research as well as the guidelines of the Finnish National Board on Research Integrity TENK.

The UH's practical measures relating to open science and research are presented on the UH's open science website. According to UH policy, research publications and research data produced within the UH are, as a rule, openly available, while the UH's research infrastructures are in shared use and open. Membership in LERU, EUDAT, OpenAIRE and other similar European organisations and infrastructures requires commitment to the principles of open science and research.

The University's open science and research services include services for open access publishing, research data services, metrics services, as well as instructions for making learning materials openly available. Helsinki University Library monitors the visibility of research, the number of open access publications and related channels. Each year, the UH presents the Open Science Award in recognition of significant work to promote open science.

At the UH, the chancellor carries the overall responsibility for research ethics and the responsible

conduct of research. The chancellor is also in charge of inquiries concerning alleged violations of the latter. The research integrity advisor scheme introduced in 2017 is aimed at promoting the responsible conduct of research, identifying research misconduct and improving preventive measures.

Research ethics are assessed in the UH's own research ethics committees: the Ethical Review Board in the Humanities and Social and Behavioural Sciences, the research ethics committee of the Faculty of Medicine and the Viikki Campus Research Ethics Committee. Medical research projects which require a statutory statement from an ethics committee of a hospital district are assessed by the four regional ethics committees of the Hospital District of Helsinki and Uusimaa (HUS). Besides conducting reviews, the committees offer guidance to UH researchers in questions concerning research ethics and assist in resolving related problems. In addition to research ethics, matters related to research data management and data protection are reviewed in conjunction with ethics reviews.

Comprehensive services for open access publishing and advanced research data services provided in multidisciplinary collaboration with Helsinki University Library, the IT Centre and Research Services are a strength of the UH. Clear responsibilities and operating models have been designed for self-regulation associated with research ethics. In addition, a compulsory course on research ethics has been part of doctoral education since 2017, with about 600 doctoral students taking part every year.

Key enhancement areas for research integrity are related to making data open, earning credit in the field of open science, increasing training offerings and promoting cooperation between different sectors (e.g., research ethics, data support and legal counsels for research). At the moment, the number of open research datasets and their use cannot be comprehensively monitored. Training in research integrity for postdoctoral researchers, thesis supervisors and international researchers active at the UH should be developed, as should services with a more researcher-oriented approach. Another goal is to intensify cooperation related to promoting research integrity between sectors (research ethics, data support and legal counsels for research) to ensure the provision of more researcher-oriented services.

Figure 8. Key figures for research, 2020

Impact assessed as part of research assessment

The research conducted at the UH was assessed in 2018 and 2019. The assessment was conducted by four international panels, and the process encompassed all research at the UH, including its societal impact. The research assessment results have been systematically applied to the development efforts of faculties as well as to the preparation and implementation of the UH's strategic plan. The assessment was planned with regard to field-specific differences and carried out in an engaging and dialogue-based manner, which was considered important and challenging as well as, according to feedback, a successful method of assessment. A decision was made to carry out the next assessment, in 2025–2026, using the same framework.

Assessment results indicate that the scientific quality of research at the UH is of a high international standard: top-level research can be found on every campus. The societal impact and public engagement of the units assessed was also considered mainly excellent or very good. The UH's open and shared infrastructures are of a high international standard, and they are developed in a systematic manner.

The enhancement areas revolve around themes associated with leading and managing individuals and activities: fostering multidisciplinary research based on curiosity, ensuring access to an attractive research environment, agreeing on shared operating models, and focusing on

matters related to equality. In the field of societal engagement and impact, further enhancing the systematic nature of activities, strengthening collective ownership and ensuring sufficient support were identified as key enhancement areas. The Council for Societal Interaction, which has consolidated its role after the assessment, constitutes a systematic measure used to engender a shared understanding of interpretations of impact and build bridges between services and the academic community.

Innovation at the UH – Impact from openness

Innovation stems from the efforts of the academic community supported by a number of parties within the UH and in its immediate sphere. The UH has identified the applicability of research results and the strengthening of the impact generated through such activity as one of its enhancement areas.

A diverse service structure supports the achievement of the strategic goal of making research results increasingly available to different sectors of society through business collaboration and innovation. University communications serves researchers, for example, by supporting the development of visibility (training, websites, conventional and social media). The altmetrics tools introduced by Helsinki University Library efficiently measure the visibility of publications. Grant coaches from Research Services guide researchers in describing the impact of their work in applications targeted at funders. With the support of Teaching and Learning Services, project-based courses where students solve challenges posed by businesses are organised in cooperation with businesses and communities. Invention disclosures by researchers are submitted to the UH-owned HIS, which offers assistance in acquiring patents and establishing spin-offs. Other actors supporting innovation work are Think Company, Terkko, the SPARK Finland programme and Demola.

At the same time, obtaining a clear overview on the scope, performance and diversity of innovation activities is challenging due to discontinuities in their monitoring. There are several operators involved in RDI who do not necessarily always act in concert. Such heterogeneity is a challenge also from the perspective of business partners. Cooperation is considered meaningful and smooth, provided that the right academic individuals and support services are successfully matched. A partnership pilot joining different service branches (2019–2020) demonstrated that businesses are looking for broad-based and multidisciplinary collaboration but are unable to find everything they are looking for from the UH. In the future, the pilot will be used to strengthen the management of partnerships by making the utilisation of the Customer Relationship Management (CRM) tool increasingly systematic.

Strengths	**Enhancement areas**
The practices of research integrity are developed as a whole	Use of feedback and assessment data pertaining to research, development and innovation on different levels of management

High-quality research and skills base, including available research infrastructures	Mechanisms of monitoring open science; determination of the quantity of data made open
The practices of research assessment are based on a broad interpretation of impact, and they cover all of the UH's academic units	The heterogeneity of RDI operators hinders the initiation of collaboration as well as the utilisation of innovation and commercial potential
University communications, Helsinki University Library and innovation services provide comprehensive support for promoting the application of research results	Systematisation of partnership management and comprehensiveness of knowledge

2.2 Research, development and innovation activities with impact

- Auditointiryhmän arvio

Research at the core of the strategy and driver of societal engagement

The University of Helsinki positions itself as a research-intensive university and research is placed, along with teaching, at the core of its strategy. The ambition to contribute to reforming society is central to the strategy, and this is particularly present in the selection of the four interdisciplinary themes. The targets are also clearly defined in the 'Where will we be in 2030?' statement and specified in the four-year implementation plans.

As described in the previous section, there is a clear process in place which very much relies on the faculties/units setting their own strategy-related targets and actions. The process takes disciplinary differences in research well into account. However, as already noted, both the follow-up and using the information collected for further improvement needs to be strengthened. Currently, the only research-linked university-level strategic follow-up indicator is 'High-quality and international open-access publications'.

On the other hand, as noted in the SAR, the impact of the university's research is evaluated externally as part of the Research Assessment. The Research Assessment 2018–2019 evaluated all units on three criteria: scientific quality, research environment and unit viability, and societal impact. The coherence of the approach, placing societal impact in the evaluation and in the strategy, is to be commended. The systematic collection of information on impact at six-year intervals is rather slow. A more frequent and systematic way of collecting information on the societal impact of research activities would reinforce the societal engagement and impact policy of the university.

Research ethics and responsible conduct of research are central

The University of Helsinki is committed to the Finnish National Board on Research Integrity (TENK) guidelines. The university has also issued ethical guidelines for all its members and for all activities, to which are added ethical principles specific to the activities, including research. Research ethics are assessed by the university's own three research ethics committees, and ethical research matters are coordinated by a specialist in University Services. Training on research ethics and integrity is part of the formation of doctoral students, provided by the doctoral schools. The university could try to make sure that all doctoral students take this training at the beginning of their doctoral education.

Openness is listed as one the university's strategic choices and priorities, and open science is firmly encouraged at the university and supported through various initiatives and services. Among these, one can point to the open science website, the open science services offered by the University Library and by University Services, the Think Open blog about open science for researchers, as well as the annual open science award since 2017. University researchers can also apply for funding from the University Library to cover publication fees. A member of the university is also leading the open science group of LERU (League of European Research Universities). The policy is monitored in the integrated management system, and the current rate of open science publication is at 80%. The audit team commends the university for these achievements. A course on open science is available for doctoral students, although not compulsory. Based on audit interviews, the priority in publishing still goes to journals with high-ranking factors that are usually not open science journals. The audit team therefore recommends the university to continue its efforts in supporting the open science policy.

Great improvements have been made at the university in supporting innovation activities and business collaboration

Partnerships with companies and external stakeholders are diverse and offer a good image of the dynamics of research at the university. The university supports them to enhance the societal impact of research, in line with its strategy. Substantial progresses have been achieved in the organisation of an innovation chain that includes several structures, such as websites for the members of the university and for external partners, Business Collaboration Services with a commercialisation unit, among others, Helsinki Innovation Services, a preincubator, and services for each campus. The university actively takes part in initiatives such as Slush to promote research-based innovations. Moreover, the university is a partner with other actors in the field of innovation such as Think Company and the SPARK Finland programme. These are remarkable achievements the university is to be commended for. Several of the staff members recognised the great improvements made at the university in terms of its innovation and commercialisation services and support available. On the other, there are still things that can be improved at the university for supporting company collaboration. According to some staff members, some internal

obstacles still exist, and the overall mindset should be more open towards company collaboration.