

ORGANISING INTERNATIONALISATION AT STANFORD UNIVERSITY: MANAGING TOP-DOWN AND BOTTOM-UP INITIATIVES

CALIE PAPERS #5

This paper describes and discusses how internationalisation is organised and managed at Stanford. Stanford's approach to internationalisation is to a large extent a bottom-up process, which is managed by faculty at lower levels in the organisation. However, there are also institution-wide policies which could be interpreted as typical examples of comprehensive internationalisation. This paper was co-funded by the CALIE Project and RISE Research Institutes of Sweden AB.

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Preface

The purpose of this study is to document and discuss how internationalisation is organised and managed at Stanford. The focus is on the balance between bottom-up and top-down initiatives.

The study was conducted by Dr Hans Pohl, Programme Director at the Swedish Foundation for International Cooperation in Research and Higher Education (STINT). Besides STINT, the CALIE project was also involved in the organisation and funding of this study. CALIE is a Sweden–USA project for collaboration, academic leadership and innovation in higher education, which involves seven comprehensive universities.

The main part of the study was carried out during July–August 2019 at Stanford.

Introduction

Globally, the higher education system has over a long period become increasingly international. Internationalisation has many benefits for education and research and contributes to the national economy and development, not least to reduce the risk of conflicts. Unfortunately, the value of internationalisation and globalisation is currently being questioned. This will likely influence higher education as well. In this landscape, it becomes more difficult to manage international relations. Therefore, additional efforts to promote and manage internationalisation will probably be needed.

According to world rankings, Stanford is one of the best universities globally. Consequently, other universities and actors in the higher education system are interested in learning from Stanford. This study was carried out with a focus on the organisation and management of internationalisation at Stanford.

Several of the institutions at the absolute top of world rankings are not very active at internationalisation conferences such as AIEA, EAIE, APAIE, Going Global or NAFSA. Accordingly, there is a lack of information about how they approach internationalisation. So even though this study is limited in scope, it might be of interest.

Internationalisation is one of many tools available to improve a university's capacity to deliver in line with its mission and vision. Typically, international collaboration and other types of internationalisation activities are initiated and carried out in a bottom-up process. But some internationalisation activities rather result from of a top-down process.

The study was conducted by Dr Hans Pohl, Programme Director at the Swedish Foundation for International Cooperation in Research and Higher Education (STINT). At STINT, Dr Pohl manages STINT's programme portfolio and carries out research about internationalisation. His research interests include ways of measuring internationalisation.

Besides STINT, the CALIE project was also involved in the organisation and funding of this study. CALIE is a Sweden–USA project for collaboration, academic leadership and innovation in higher education, which involves seven comprehensive universities: the universities in Gothenburg, Lund, Stockholm and Uppsala in Sweden, and Stanford University, the University of California at Berkeley and the University of Washington in the USA. Lund University heads the project, which is co-funded by the Swedish Innovation Agency, Vinnova.

Purpose and method

The purpose of this study is to document and discuss how internationalisation is organised and managed at Stanford. The focus is on the balance between bottom-up and top-down initiatives.

Data was mainly collected using interviews. A couple of key persons with different positions and perspectives were interviewed. The following topics were covered in the interviews (when applicable):

- How is internationalisation managed at Stanford/your organisational unit?
- Organisational aspects at Stanford supporting or hindering internationalisation.
- What is the balance between bottom-up and top-down internationalisation initiatives?
- When do internationalisation initiatives require or benefit from support from the leadership?
- Examples of important internationalisation initiatives.
- Changes over time in the way internationalisation has been/is used at Stanford/your organisational unit.

In addition to the interviews, a search for internal documents outlining the role of internationalisation was conducted. A limited study of Scopus publications was also conducted to position Stanford in relation to other universities in the CALIE project.

In Table 1, the informants in this study are listed. All interviews were conducted in July or August 2019 at Stanford and all informants have been given an opportunity to read and comment on the draft final report.

Table 1: Informants

Name(s)	Function
Ms. Kathy Burke, Ms. Shereen Bhan et al.	Leaders of the Women Leaders in Global Health Initiative (WLGHI)
Prof. Mark Cullen	Leader of a Stanford initiative addressing health-related data in India
Dr. Heideh Fattaey	Executive Director of Operations & Programs Stanford Bio-X
Prof. John Etchemendey and Dr. Michael Sellitto	Leaders of the Stanford Human-Centered Artificial Intelligence Institute
Dr. Brendan Walsh et al.	Director of the Office of International Affairs (OIA) (+ co-workers)
Prof. Francisco Ramirez	Director of the Scancor program at Stanford (and involved in the CALIE project)
Prof. Arthur Bienenstock	Emeritus at Stanford (involved in the Wallenberg Network Initiative and the CALIE project)

Publication study

A study of Scopus publications was conducted to obtain one perspective on the role of international collaboration in Stanford’s research.¹ One indicator for international research collaboration is the share of international co-publications. Such co-publications include at least two researchers with at least one affiliation abroad. The field-weighted internationalisation score (FWIS) is based on international co-publications and is normalised with respect to the academic discipline, the type of publication, and the year of publication. Overall, Stanford has a FWIS of around 1, which means that it is on par with all institutions globally. Stanford’s publications are slightly more international than all publications with US-based authors, see Figure 1.

The other CALIE universities and overall data for Sweden and the United States are also included in Figure 1. All four Swedish universities have had a very similar FWIS since 2015, slightly lower the Swedish national average. Among the US universities, research publications at UC Berkeley has most of the time since 1996 been the most international.

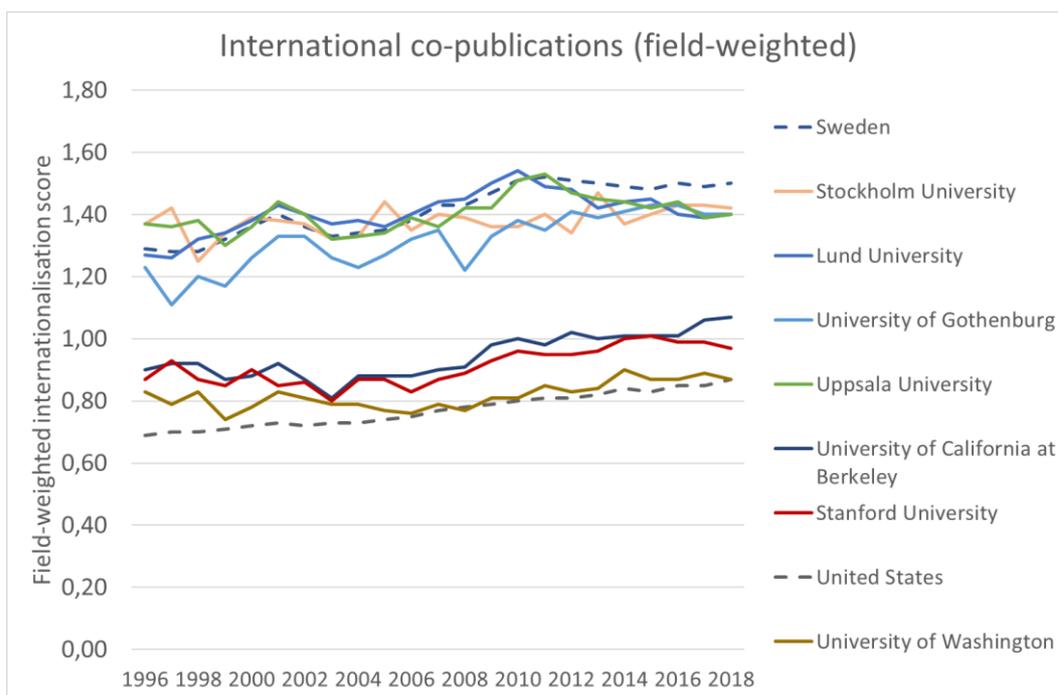


Figure 1: International co-publications

The field-weighted citation impact (FWCI) normalises the number of citations a publication receives in its scientific discipline, the type of publication and the year it was published. The global average is 1, which means that a citation impact of 2.5 indicates that publications are 150% more cited than on average. If an institution’s publications are divided into four groups

¹ Publication data is from October 2019

(single authorship, only institutional collaboration, only national collaboration and international collaboration), the FWCI typically varies according to the pattern shown in Figure 2. The position of the circle along the y-axis shows the FWCI for each of the four groups and the size of the circle relates to the number of publications in each group. The citation impact of the publications including Stanford varies with the type of collaboration in the same way as for most institutions.

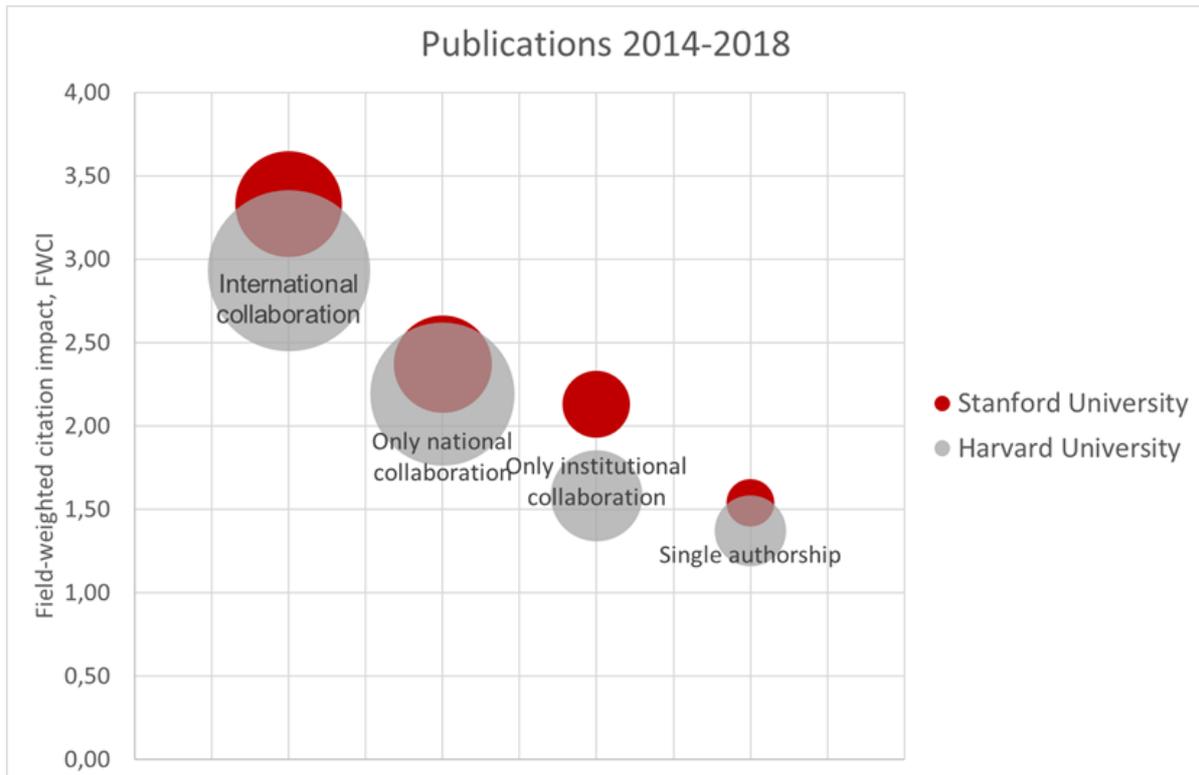


Figure 2: Citation impact for different types of publications

Stanford tends to use Harvard as a benchmark. Figure 2 shows that Harvard has larger volumes of publications and slightly lower citation impact for all types of publications.

Using the same four groups of publication types and the FWCI for all seven CALIE universities, the same pattern appears in Figure 3. However, there is one exception: the publications in the group ‘Only national collaboration’ at UC Berkeley receive a slightly lower FWCI than the publications in the group ‘Only institutional collaboration’. The FWCI for internationally co-authored publications at the University of Gothenburg is clearly higher than for the other Swedish universities.

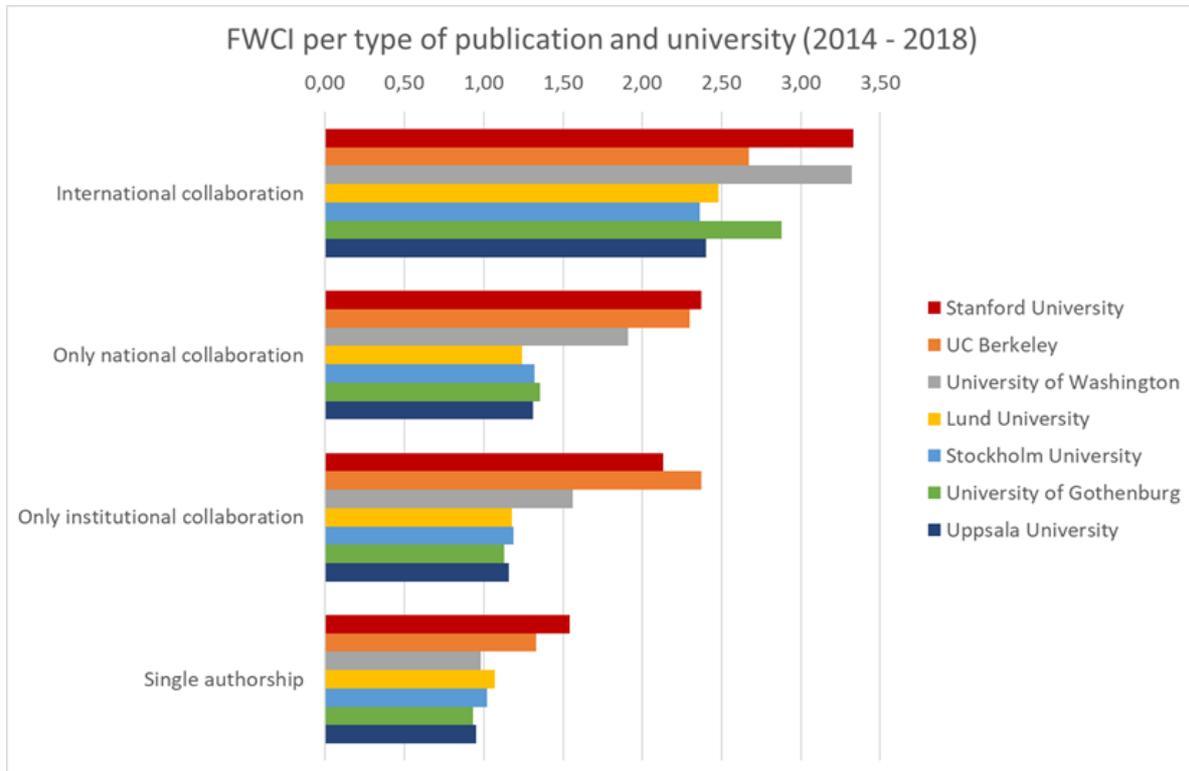


Figure 3: FWCI per type of publication at CALIE universities

To conclude, this publication study indicates that Stanford’s research is slightly more international than research in the United States in general. The citation impact for Stanford’s publications is high and its internationally co-authored publications receive an even higher citation impact.

Management of internationalisation

The Director of the Office of International Affairs (OIA), **Dr Brendan Walsh**, explains that their role is not to manage internationalisation. They instead work responsively and opportunistically in supporting the process. Faculty have a high degree of freedom and the OIA supports them directly. Higher-level involvement slows down the process.

There is an ambition to start drawing up a globalisation strategy in the fall of 2019. Dr Walsh submitted a proposal including this to the long-term planning process. In the beginning of August 2019, it was not yet decided, but his interpretation of recent communications was that it will not be approved.

Dr Walsh is worried that Stanford (and other universities in the United States) will fall behind unless they invest more strategically in internationalisation. As examples, he mentions that:

- postdocs should be recruited more strategically from the right countries,

- international collaboration on another scale will be needed to retain younger faculty, and
- international research funding will become more important.

The current development in the USA is that funding organisations ask for less rather than more international collaboration. He mentions that the National Institutes of Health (NIH) published a notice about “Foreign components” in research in July 2019, which hinders the development of international collaboration.² The National Science Foundation (NSF) might follow suit.

According to Dr Walsh, Stanford must be more proactive and develop relations with academically developing countries, such as Mexico and Indonesia. There is also a need to manage the step from capacity building to academic partnering. Part of the proactive role is to involve younger faculty with support from senior faculty in international relationships.

Obviously, many collaborations exist between Stanford researchers and the same individual countries, universities or even researchers. There are no mechanisms in place to share experiences of collaboration with a specific country or university. In some cases, informal networks develop at Stanford, but there is often a complete lack of sharing and systematic knowledge development.

To support the development of such coordination, the OIA has a co-author project that intends to create links between researchers with co-publications. An AI tool developed locally (by Yewno) is used to classify and present the information. Data is taken from Stanford faculty’s Profiles available on the internal web and partly also externally.

The Stanford Profiles and other digital tools have been developed and introduced by the OIA, thus supporting reporting and information sharing within Stanford, without making it mandatory. Through the interconnection of different services based on the same data, from the Profiles, for example, faculty save time when they apply for seed funding in internal programmes. Other services include the university-wide collection of overseas study programmes offered internally to students. Thanks to the improved communication of such programmes, the number of applications and the admission rates in the programmes have adjusted to becoming more equal. The centralisation also makes it easy to offer a pre-departure course to all participants.

As Stanford receives many requests for meetings, the OIA tries to help faculty to focus on academically rewarding meetings. Faculty tend to be too generous with their time, according to Dr Walsh. Through an emphasis on mutually beneficial meetings, the number has been reduced from 300 to 100 meetings last year.

Professor Francisco Ramirez is Associate Dean for Faculty Affairs in the Graduate School of Education. He argues that Stanford has become more international. One example is that international undergraduate students (5%) are now treated the same way as other students

² <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-114.html>

when it comes to tuition fees and scholarships. In contrast, public universities' internationalisation processes have slowed down due to the current government.

Professor Arthur Bienenstock, emeritus at Stanford and involved in the Wallenberg Network Initiative, argues that Stanford to a large extent is organised properly to manage internationalisation. Stanford recruits students worldwide. Admitted students also have very good opportunities to spend a period abroad, either at one of the universities in Stanford's network or elsewhere.

Faculty are also recruited internationally. The search process for faculty was formalised by Professor Bienenstock and colleagues in 1977. Before that, some schools occasionally employed people who were educated at Stanford. The recruitment process is the collective responsibility of faculty.³

Faculty are viewed as the leaders in research internationalisation. They do not need or want someone who tells them how to collaborate internationally. Who could know better which partnerships to develop? Nevertheless, it might be relevant for the leadership to work proactively with the development of new relationships.

Professor Bienenstock agrees that there could be a need to develop one aspect of Stanford's management of internationalisation, and that is the coordination of the portfolio of collaborations. Better coordination would be beneficial, and it would also allow for improved learning. Recently, he has made presentations about academic relationships with China, arguing for the value of such collaboration and exchange. Not least in the case of China, improved coordination would be valuable.

Four Stanford initiatives

The Internationalisation Director at Stanford recommended interviews with two leaders of outstanding international initiatives. In addition, two large initiatives, Bio-X and the Stanford Institute for Human-Centered Artificial Intelligence (HAI) were suggested by Vinnova as interesting cases from a Swedish perspective. These initiatives were not selected based on their internationalisation profile, but rather as examples of high-profile initiatives encompassing research, education and innovation in highly relevant topics.

The Women Leaders in Global Health Initiative

The Women Leaders in Global Health Initiative (WLGHI) started as a conference with a similar title held at Stanford in 2017. The mission of the initiative is to "unleash and elevate talented mid-career women to become global health leaders". It is still in a formative phase, ramping up the organisation in close interaction with the main financial supporter, the Bill and Melinda Gates Foundation.

³ For a more detailed description of the recruitment process, see Bienenstock, Schwaag-Serger, Benner and Lidgard (2014) *Utbildning, forskning, samverkan...* (pp. 33-35)

WLGHI focuses on short- and medium-term impact and thus the research perspective is not dominant. At Stanford, centres are often created with the mission to translate research into practice. The current phase is four years and the operations are to a large extent carried out in annual cycles, with different interventions supporting women.

The conference was very international and it gave WLGHI its network. In the first phase, country hubs will be developed in the US diaspora, India, Ethiopia and Kenya. Thereafter an expansion to cover 12 countries is planned. Partners in the countries have not yet been officially selected, but they will probably not be universities.

International collaboration with universities takes place in networks such as the Consortium of Universities for Global Health (see www.cugh.org). Karolinska Institutet is a member of this consortium.

WLGHI was initiated in a bottom-up process with clear support from the dean. At a recent meeting with the Gates Foundation, the foundation asked how Stanford will support it. A letter to the leadership is now being written to ask for such support.

Health in India

Professor Mark Cullen is interested in the social and environmental determinants of health. He was invited by the NIH's equivalent in India to establish a centre there to manage health-related data. When searching for other collaborations with India at Stanford, he found many ongoing projects. One reason is that 15–20% of people on campus have South-Asian origins.

Stanford has a corporation in India, otherwise, it has no physical representation outside Silicon Valley. It submitted a bid to establish a campus in New York City but lost it to Cornell-Technion. Professor Cullen has seen the University of Columbia's large facilities in Mumbai, for example. However, they do not appear to focus on academic activities, but more on alumni and student recruitment. Stanford has a small footprint in India as it only conducts research there.

The business school provides entrepreneurship training and, in the future, Professor Cullen's centre will also provide local training:

All resources must be developed by ourselves. The leadership says that the initiative is exciting, but they do not take ownership. It is thus important that you have a good network at Stanford to be able to navigate. However, you get good support when it comes to branding, global business services and some other legal aspects.

Professor Cullen says that Stanford surprisingly late recognised how big the world is. It was a regional university until 30–40 years ago. The key element in the development of Stanford into a top university is the recruitment process. The high numbers of candidates and extensive interviews are almost ridiculous. It is, for example, impossible to bring in a star researcher,

including a team of seven colleagues. Moreover, any internal candidate is disadvantaged by the design of the process.

Plans for international collaboration are made in the faculty laboratories, not in the office. This bottom-up process is driven by faculty. As Professor Cullen noted when searching for collaborations with India, the coordination is limited. Now Stanford has some informal regional groups providing possibilities to exchange ideas and experiences.

Stanford Bio-X

Stanford Bio-X started 20 years ago and now involves almost 1,000 faculty, all of them with Bio-X as their second affiliation and their home affiliations at one of the schools at Stanford. It is in the Norman Foster-designed James H. Clark building, which was erected a few years after the start of Bio-X:

The Mission of Bio-X is to catalyse discovery by crossing the boundaries between disciplines, to bring interdisciplinary solutions and to create new knowledge of biological systems, in benefit of human health.⁴

The international dimensions of Bio-X are not so pronounced. There is an existing connection with Aarhus University, which with the support of the Danish government has established an activity mirroring that of Bio-X. A visiting Scholar program is also in place with Denmark through NNF (please see our web site). Visiting researchers are otherwise typically not affiliated with Bio-X, but rather with the home school of the host.

Other international dimensions include the collaborations with multinational corporations. Novo Nordisk, Sanofi, Novartis and others are involved, for example as funders of seed grant projects.

Stanford HAI

The Stanford Institute for Human-Centered Artificial Intelligence (HAI) was one of the proposals submitted in the new president's long-term planning process. The idea of bringing in the humanities into AI had been promoted by Professor Fei-Fei Lee (co-director of HAI) a few years earlier. Now Stanford has been working with HAI for 18 months and the official launch was with a conference at Stanford in March 2019.

The goal of Stanford HAI is "to become an interdisciplinary, global hub for AI thinkers, learners, researchers, developers, builders and users from academia, government and industry, as well as leaders and policymakers who want to understand and leverage AI's impact and potential."⁵

Money is being raised and eventually, a HAI building will be built. Physically HAI will be based on the Stanford campus but there might also be an office in Washington D.C.

⁴ <https://biox.stanford.edu/about>

⁵ <https://hai.stanford.edu/>

As the goal statement indicates, HAI is to become a global hub. So far, governments all around the world have contacted HAI to obtain advice or discuss collaboration opportunities. The process of involving other universities in HAI has not yet started.

Discussion

Characteristics of internationalisation at Stanford

Stanford's bold initiatives such as Bio-X and HAI focus predominantly on internal collaboration at Stanford. Researchers from different disciplines at Stanford are encouraged to collaborate with these organisations. Still, of course, many researchers linked to Bio-X and HAI have extensive international collaboration. One potential rationale for limited international collaboration at Bio-X-level is that the initiative was created to be unique in its focus and there are thus probably not so many similar organisations elsewhere.

This might not be so different from the situation in Sweden, but in Sweden, most initiatives of this type would probably involve at least collaboration between different Swedish universities and the focus would thus be on combining the resources from different universities and potentially also other actors. In many of the publicly funded initiatives by Vinnova and similar organisations, this is often a requirement stated in the call for proposals. The link to public funding opportunities is probably more important when a new initiative is outlined in Sweden than at Stanford. At Stanford, there is also an emphasis on projects that have the potential to attract external funding.

Stanford is rather decentralised, giving a lot of power to faculty in many questions including internationalisation. But there are also some strict central policies, such as those on student and faculty recruitment. Stanford uses 'seed funding' as one important tool to encourage interdisciplinary collaboration.

Stanford does not have an internationalisation strategy, at least not at the institutional level. The Office of International Affairs has a supporting role and has no power to directly influence the internationalisation processes across campus. However, it has a smart strategy to develop IT tools, which led to some coordination of internationalisation activities as well as some oversights.

The publication study shows that Stanford publications on average have a high citation impact and the internationally co-authored publications are rewarded with a clearly higher impact. Consequently, there is no reason to question the value of international collaboration when it comes to research. Given Stanford's recruitment policy, with its clear global perspective, it is interesting that Stanford's international co-publications are only around the world average. One part of the explanation is that the United States has been and is a very strong and dominant research actor and it is thus not always necessary to cross the border to find relevant collaborators. This is supported by the fact that average publications in the United States are less international than the global average.

Strategic internationalisation at Stanford

STINT has a specific programme supporting strategic internationalisation and it is thus of interest to increase the understanding of how different universities address this issue. Strategic internationalisation is not clearly defined in the literature, but it could be defined as follows:

Strategic internationalisation is the longer-term process guiding internationalisation activities at the higher education institution towards common goals. It includes the monitoring and coordination of internationalisation efforts with the aim to systematically improve the internationalisation efforts.

Stanford's lean and decentralised approach to internationalisation challenges the concept of strategic internationalisation.

Whereas Stanford's strict recruitment policies, its emphasis on interdisciplinarity, and the close links between research and education might be interpreted as an illustration of comprehensive internationalisation, activities relating to the latter part of the definition, including 'monitoring and coordination', appear to be less prominent.

One change that most interviewees called for is directly related to this part of the definition: they wanted additional efforts to be made at Stanford to coordinate international collaborations. Such coordination could lead to a better sharing of experiences and a more systematic development of knowledge and competencies related to international collaboration. It could also help younger faculty to avoid mistakes and join networks.

The decentralised approach having a lot of power and responsibility at lower levels of the organisation is not only used for internationalisation. As argued by Professor Bienenstock, individual faculty know their needs best. It is often argued that it is difficult to lead or control professors. Such attempts may lead to unexpected and unwanted outcomes. A lack of resources appears difficult to claim as a motive for the lean internationalisation approach.

Given the fact that several of the highest-ranked universities in the world appear to have an approach to internationalisation similar to Stanford's, the question arises if the need for strategic internationalisation is different at these institutions? At the institutional level, one obvious difference is that the otherwise popular idea that "we prefer to collaborate with universities above us in the world rankings" is not valid. However, collaboration is seldom at the institutional level and rather takes place between researchers or groups of researchers. At these levels, all universities can easily find complementary resources adding value to research or education. Moreover, international academic collaboration has many more facets than research excellence, which bring benefits to the university and the surrounding society.

Conclusions

The purpose of this study is to describe and discuss how internationalisation is organised and managed at Stanford. Based on interviews, literature and publication data, a brief and far from comprehensive description was produced. Stanford's approach to internationalisation is to a large extent a bottom-up process, which is managed by faculty at lower levels of the organisation. However, there are also institution-wide policies such as those on student and faculty recruitment, which could be interpreted as typical examples of comprehensive internationalisation. These policies are global in their approach and integrated in the organisation and thus easy to miss when looking for typical internationalisation processes.

Publication data shows that international research collaboration is important for the overall citation impact of Stanford's publications. Bold initiatives such as Bio-X focus on Stanford-internal interdisciplinary collaboration and have no explicit internationalisation dimension.

When relating Stanford's approach to the strategic internationalisation concept, there appears to be little emphasis on the monitoring and coordination of internationalisation. The small sample of informants in this study who work with internationalisation in different roles argued that this aspect would benefit from more attention from the university.