EMERGING MODELS OF COLLABORATIONS WITH INDIAN HIGHER EDUCATION INSTITUTIONS





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swissnex India

swissnex India, Consulate General of Switzerland, connects the dots in research, innovation, and education between Switzerland and India. swissnex's mission is to actively engage its partners in the global exchange of innovation, knowledge, ideas and talent and support such outreach. By crossing conventional boundaries, swissnex India offers a platform to foster collaboration and creativity for inspiring research and ground-breaking innovation.

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Foreword



Dear reader,

Did you know that it has been 10 years since swissnex India started connecting the dots between India and Switzerland in education, research and innovation? At that time, the decision of opening a swissnex in Asia's Silicon Valley – Bangalore, reflected the important transition the Indian sub-continent had undergone. The transition is on-going and India is ever-evolving, providing swissnex newer avenues for collaboration.

By 2003, both countries had signed a memorandum in which they had committed themselves to strengthening the S&T relations as equal partners, and initiated the first call for Indo-Swiss Joint Research Projects. In 2019, during the State visit of the Indian President, Shri Ram Nath Kovind, this commitment to make research and innovation a key pillar of the Swiss-Indian friendship was renewed.

While strong bilateral relations and political support from both governments will facilitate the internationalization activities of universities and research institutions, finding the right partner and mutually beneficial collaboration models need expert intervention.

And this is precisely where swissnex comes into play. With a decade of collaborations, a strong Indiawide network and an experienced team, swissnex acts as your advisor, guide, connector and co-creator. We are the go-to platform for Swiss higher education and research institutions to engage meaningfully with this vast Indian university and innovation landscape.

This report will give you an overview of possible collaboration models, of currents trends in Indian higher education, and shall hopefully spark new ideas on how your institution could reach out to India. Rest assured, swissnex will help you translate your ideas into new initiatives.

Yours sincerely,

Ambassador Mauro Moruzzi State Secretariat for Education, Research and Innovation

Executive summary



Higher education landscape and trends in India

Navigating the Indian higher education landscape

With nearly a 1000 universities, India's higher education landscape is vast and diverse. A good starting point to have a better understanding and to identify potential partners, is the National Institutional Ranking Framework (NIRF), which features category-wise ranking (e.g. engineering, medical, pharmacy, law, etc.). It is equally important to understand the status and the accreditation of the college or institute (see ch. 2.2).

E-learning as an opportunity for international collaboration

An interesting trend and opportunity for Swiss universities are the reforms regarding e-learning since 2015. Regulators have opened up channels for top institutions to offer different online formats, and Indian universities are on track to explore innovative teaching approaches with global partners. Primarily, private universities and edtech companies have pushed for hybrid models of learning - both asynchronous and synchronous learning, with digital peer interactions, discussion forums and simulated case studies.

Motivation of Indian students to go abroad

Over the last 15 years, many of the Indian premier universities and institutions have built strategic relations with one or more Swiss universities. Key factors that prospective students and their family take into consideration are a safe environment, affordability and career support, scholarships, diversity of courses, reviews from fellow Indians, and post-study work permit.

Impacts of the COVID-19 pandemic

Worldwide, the higher education sector has been challenged to innovate and transform due to the COVID-19 pandemic. Many universities have switched some of their scheduled courses to online formats, leading to more Indian students participating in online summer schools, for instance. In the future, collaboration on joint virtual courses or joint seminars on cutting-edge technologies can be foreseen and will present an opportunity for new kinds of international education collaborations, while reducing carbon footprint.

Criteria to identify the right university

In order to engage with Indian academic and training institutes, or with the booming startup and innovation ecosystem, we suggest looking at their accreditation and categorization, their current international partners, research priorities, complementarity of programs, and the infrastructure in place.

Executive summary



Expectations from Indian institutions

Premier Indian academic institutions do keep a tab on international rankings, scientific discoveries and sector-specific competence centres emerging in leading universities abroad. Over the last 15 years, many of the Indian premier universities and institutions have built strategic relations with one or more Swiss universities. We have observed the following 4 key expectations from the leading Indian universities and institutes: 1) Partnerships only with institutions of good reputation; 2) Preference for mutual student exchange programs of 2 – 5 weeks rather than entire semesters, joint activity plans, collaboration in new frontiers, in government-driven priority areas such as artificial intelligence, energy, mobility or biotech.

How to engage with government and non-governmental organisations

Continuing education in India is a rapidly growing market, with increasing demand not only from the corporate sector, but also from the government. For instance, top government officials are offered training opportunities under the Domestic Funding of Foreign Training (DFFT) from high-ranked foreign universities in the UK, US, Australia and Singapore. Collaborations with NGOs are particularly interesting for survey or field studies, international summer/ winter schools or even problem-solving focused, mutually beneficial programs with immersive learning opportunities for Swiss students.

Accessing the Indian innovation ecosystem

Having one of the largest startup ecosystem worldwide, India counts over 140 incubator or acceleration programs, many of which are located in universities or Indian institutes (IITs, IIMs, etc.). Many of them are looking for international partners for soft-landing pads, and alternate of international startup support measures. Sectors of particular interest for bilateral innovation collaborations are health science, IoT, AI/ deep learning or social impact solutions.

Student mobility

While there are a few well-established semester exchange programs run between Indian and Swiss institutions (e.g. ETH Zurich and IIT Bombay), many other MoUs on semester exchanges did not remain valid, or expired due to lack of application from students. For Indo-Swiss student mobility we foresee the following major models in coming years: short physical mobility programs, research internship programs, industry internship programs, global transfer programs, preferential student enrolment agreements, or online and blended student mobility.

Joint research

There are a number of 'partnership models'¹ between researchers worldwide. This report briefly looks into some of the models, such as parachute, capacity building or North-South/ South-North Model. An interesting observation is that the Government of India is increasingly taking initiatives to become a member of global networks. For example, in 2017, India became an associate member of EMBO (European Molecular Biology Organization). Researchers at leading Indian institutions are also becoming more proactive in applying for global or EU funds. This has been made possible with Government of India's effort to put in matching funding for EU and other global calls.

Executive summary



New partnership models

The focus of international university collaborations in India is shifting more towards filling the skill gap and building brand visibility. Some of the emerging private universities and new Institutes of National Importance (IITs, IISERs) want to collaborate with placement offices/ student associations via international offices of leading Swiss universities to attract the return of Indian PhD and Post-docs as faculty. The Government of India has also launched various funding mechanisms to invite foreign scientists or co-host international conferences. Yet another interesting development for international partnerships, in particular for Indian or Indian-origin faculty members of the Swiss universities, is to act as an advisor to Indian premier institutions with regards to questions of academic management.

Online and blended learning

Online education ecosystem in India is dominated by private players. It also offers ease of collaboration as the decision-making process is less bureaucratic. However, while planning to launch an online course, it is important to identify the right partner, else it is easy to lose credibility in this segment. Also, pricing has to be in line with what other global universities are offering. Popular collaboration models include content partnerships, portal partnerships, collaboration with edtech companies and with corporates for upskilling programs.

The role of swissnex >>

swissnex India offers its services to all Swiss university and institution stakeholders as a strategic advisor and partner. Our collaboration models include support in identifying and fostering new partnerships, co-creating mobility and exchange programs, coaching Swiss university spin-offs and enabling innovation ecosystem alliances.

1 Introduction



Over 80 percent of our Swiss university stakeholders approach us with one question – how do we identify the right academic or university partner in India?

This is quite understandable given that currently, India has 935 universities² and 95 institutions of national importance³. Understanding this context can be quite overwhelming for our Swiss partners.

The University Partnerships team at swissnex India, with 10 years of experience in connecting Swiss universities with Indian institutions, can confidently say that the answer lies in '**the purpose of the partnership**'. The vast number of Indian universities and premier institutes offer multiple collaboration possibilities. A step-by-step approach is essential to build effective partnerships in India.

With the National Institutional Ranking Framework (NIRF) in place, the Government of India, led by the Ministry of Human Resource Development (MHRD) are putting together a number of initiatives for the top 100 institutions to make them more competitive, globally. The two recent initiatives are: a) Scheme for Promotion of Academic and Research Collaboration (SPARC) for academic and research collaborations with globally ranked foreign institutions, and b) the recent approval to launch fully online degrees to widen access to higher education and raise the profile of Indian institutions, globally. These initiatives give an indication of the government's long-term ambitions to see Indian educational institutions score higher in global rankings. This strategy will have a direct impact on the high-ranked Indian universities' and institutes' motivation to collaborate. They will seek a more two-way exchange with aligned objectives and propose innovative partnership models to build a stronger global network.

India sends a large number of students abroad every year. According to the data of the Ministry of External Affairs, Government of India⁴, approx.1.09 million Indian students are studying abroad as of July 2019. As of February 2020, there are about 1000 Indian students⁵ enrolled in Swiss universities. With a growing number of master and professional courses in English at the Swiss universities, a larger number of talented Indian students can be attracted to Switzerland via strategic institutional partnerships.

This report aims to provide Swiss universities with insights on emerging university partnership trends and newer collaboration models. Based on swissnex India's experience, we will provide a set of criteria/ guidelines to identify an Indian institutional partner. Finally, we will talk about different collaboration frameworks that can put forward new-age collaborations including in the sphere of online and blended learning.

We expect the COVID-19 pandemic in 2020 to bring some significant transformation in the functioning of premier institutions around the world. University partnerships will be geared to move beyond physical presence with newer propositions of online learning and exchanges.

2 Higher education trends in India



2.1 | Higher education landscape and trends in India

Till 2015, India did not have a unified ranking system for its enormous number of universities and institutes. This posed a challenge for international partners, as it needed some benchmarking to select partners from India.

The National Institutional Ranking Framework (NIRF) was accepted by the Ministry of Human Resource Development (MHRD), Government of India in September 2015. Since then, it has managed to bring in almost all categories of universities and institutions under its purview. The category-wise ranking (e.g. engineering, medical, pharmacy, law, management and architecture), along with the overall ranking of universities and colleges, provides a good overview.

swissnex India, thus recommends its Swiss partners to take into consideration, the <u>NIRF</u> ranking framework, for potential Indian partners.

The NIRF follows these parameters⁶ to rank Indian institutions:

- Teaching, learning and resources
- Research and professional practice
- Graduation outcome
- Outreach and inclusivity
- Perception

One can argue that the parameters are different from other global rankings, that put importance on international research networks, publications, faculty to student ratio, exchange students, etc., but miss out on points like outreach and inclusivity. Most of India's premier institutes put emphasis on teaching & learning, and the entry is strictly by merit, thus inclusive to all sectors of the society.

The NIRF does not replace the accreditation by the **National Assessment and Accreditation Council** (NAAC)⁷ which is a 5-year comprehensive assessment of the institution as a whole. Any Indian university or institution with A or A+ grade from NAAC ensures good teaching and learning atmosphere with adequate resources, and thus can be considered for partnership.

2.2 Classification of Indian universities and institutes

Before we go further, it is important to give a classification of the 935 universities⁸ and 95 institutions of national importance⁹.

Knowing the status and accreditation of the college or institute is one of the primary criteria of an international partner. It is important to know the kinds of universities and degrees conferred by the higher education institutes. In India, universities are recognised by the University Grants Commission¹⁰ (UGC). Apart from the UGC, there are 15 Professional Councils¹¹, which control various aspects of accreditation.

Universities/ Institutes	Salient features
 Institutes of National Importance¹² Most famous Indian premier institutes fall under this category: Indian Institutes of Technology (IITs) Indian Institutes of Management (IIMs) National Institutes of Technology (NITs) Indian Institutes of Information Technology (IIITs) Indian Institutes of Science Education and Research (IISERs) National Institutes of Design (NIDs) National Law Schools (NLSs) All India Medical Institutes Allied institutes 	 Under the direct purview of the Department of Higher Education (DHE) under Ministry of Human Resource Development (MHRD), Government of India Admission for bachelor and master courses are through scores of different national level competitive examinations run by IITs, IIMs, IISERs, NITs, NIDs, law and medical schools Admission for PhD & Post-doc follows similar pattern of central & state universities Can decide their own syllabus Conduct their own exams Grants degrees to the students Fully funded by the Central Government via different entities
Numbers (as of 01.02.2020)	â) 95

 Central Universities
 Under the direct purview of the Department of Higher Education (DHE) under Ministry of Human Resource Development (MHRD), Government of India

 • Conducts own admission procedure
 • Conducts own admission procedure

 • Can decide their own syllabus
 • Conduct their own exams

 • Grants degrees to the students
 • Fully funded by the Central Government via different entities

Numbers (as of 01.02.2020)



Universities/ Institutes	Salient features
State Universities	State universities are established, run and funded by the state government
	Conduct own admission procedure
	Can decide their own syllabus
	Conduct their own exams
	Grant degrees to the students
	 Receive competitive Central Government funds for research projects and setting up competence centres
	 Receive funding from UGC via Development (Plan) Grants and Maintenance (Non-plan) Grants
Numbers (as of 01.02.2020) 🟦 🔪 409
Deemed to be Universities	"Deemed" is a status of autonomy granted to a university by the Department of Higher Education (DHE) under MHRD, on the advice of UGC.
	Conduct own admission procedure
	Can decide their own syllabus and fees
	Conduct their own exams
	May or may not grant degrees
	 Receive need-based funding from UGC via Development (Plan Grants and Maintenance (Non-plan) Grants
	 Deemed-to-be Universities, which continue to perform well, can get the status of a full-fledged University
Numbers (as of 01.02.2020) 🗎 🗎 🕺 127
Private Universities	Do not run on Central or State funds. Private universities need to adhere to UGC rules and regulations for operations.
	Conduct own admission procedure
	Can decide their own syllabus and fees
	Conduct their own exams
	Can grant degrees to the students
	 Can set-up off-campus centre(s) after 5 years of existence with prior approval of the UGC
	Cannot have affiliated colleges
Numbers (as of 01.02.2020) 🟦 💓 349

Universities/ Institutes	Salient features
Autonomous colleges	Though not a university, often highlights its independent status, thus included as a category
	 Need to be affiliated to a certain university (non-private)
	Conducts own admission procedure
	 Can decide fees of their courses following affiliated university guidelines
	Can decide their own syllabus
	Conduct their own exams
	 Final degree or diploma is awarded by the affiliated university

Numbers (as of 01.02.2020)



Source: Ministry of Human Resource Development¹⁴ and Shiksha.com¹⁵article

2.3 How Indian universities are adopting online teaching and learning

The concept of open and distance learning is existent in India since the late 90s, but e-learning has not been favoured by regulators and public universities. E-learning adoption in India primarily had three issues:

1) public institutes catered to all strata of students and many of them had no access to internet or a suitable device;

2) quality assurance and student evaluation models were missing, and

3) employers showed less confidence in employing students trained via e-learning.

E-learning in India got a new direction after the launch of <u>Digital India</u>¹⁶ campaign in 2015. Since then, the Ministry of Human Resources and Development launched various <u>digital initiatives in higher education</u>¹⁷ such as <u>SWAYAM</u> (MOOC platform), <u>National Digital Library of India; Virtual labs; SMARTH</u> (e-governance for institutions/ universities); <u>VIDWAN</u> & <u>IRINS</u> research information portal and <u>ShodhShudhi</u> (plagiarism detection software).

In 2018, the regulator of higher education in India (University Grants Commission) gave an opportunity to top 100 institutes in India as per NIRF ranking to offer online programs with <u>new guidelines</u>¹⁸. In this case, institutes should have been in top 100 for two consecutive years and should be accredited by the National Assessment and Accreditation Council (NAAC) with a minimum score of 3.26 on a 4-point scale. Courses in management, finance, natural science and social sciences can be offered by the universities. However, engineering, law, medicine, dental, pharmacy, nursing, architecture, physiotherapy, applied arts and such other courses or programmes are not permitted to be offered through online, open and distance learning modes.

In 2020, regulators have proposed to start degree level full-fledged online education programs. Initially, only a few such institutions will offer such programs but eventually more universities will be aligned to this initiative¹⁹. The main mission of the initiative is to bring the deprived section of the society under higher education purview. We hope that regulators will announce subsequent schemes to ensure that these students can have access to technologies which will allow them to go online and have a proper learning environment.

Online learning foraying into Indian higher education system

Regulatory reform: Regulators are bringing new reforms in the education sector and opening channels for public and private institutes to offer online courses. Seven Indian universities, including two major private education leaders, Amity University and Manipal Academy of Higher Education, have come forward to adopt online education²⁰. This reform will open a channel for global partners to enter into content partnerships with these universities, as online content development and pedagogy need different approaches across e-learning quadrants than classroom teaching.

Blended learning: Given the current scenario where interdisciplinary skills are much in demand, Indian universities are on track to explore innovative teaching approaches with global partners. In 2018-19, the <u>University of Melbourne</u> launched a B.Sc blended program in association with Savitribai Phule Pune University and Gandhi Institute of Technology and Management (GITAM)²¹. This course aims to give students a comprehensive background in basic sciences and prepare them well for taking up higher studies in any discipline at reputed institutes in India, Australia and other countries. This learning format will also see wider adoption in the coming years due to improvement in edtech, need for capacity building, and introduction of more interdisciplinary programs.

Traditionally, blended learning was used for masters and professional programs by institutes/ universities in addition to the open and distance programs. This is also a preferred model for collaborations with global institutes for offering integrated master degrees.

Besides, the Indian business schools and other executive education schools have been offering courses in blended model to cater to the need of working executives and helping organisations to skill/ upskill their employees without impacting their work hours. E.g. Indian Institute of Management and Indian School of Business, Hyderabad.

Role of MOOCS: SWAYAM's (MOOC portal) most distinctive feature is its integration into India's education system. Indeed, public higher education institutions in India allow their students to complete up to 20% of their degree online, by taking courses on SWAYAM²². About 92 universities in India accept MOOC credits of courses completed on SWAYAM. This may be a very insignificant number considering the number of institutes in India, but this has widely impacted the acceptance of MOOCs by students and faculty, thereby, finding a permanent spot in India's higher education system. As an example, take the faculty of Engineering and Technology from Annamalai University, a prominent university in Chennai, India. For every 3 credits earned from a MOOC course through the SWAYAM portal, a student is exempted from an elective course of the department. This encourages students to register for as many courses under MOOCs as possible²³.

Although SWAYAM offers credits and is popular for offering courses from India's top ranked institutes like IITs, IIMs and IISc, non-Indian MOOC providers such as edx, coursera, futurelearn, udacity found a large audience in India, primarily because they offer content from global universities and cover topics across domains. Students not only use these platforms to gain knowledge or credit, these courses play a significant role in influencing a student's choice of institute in India or abroad, and the field of study.

Adoption of hybrid models of learning, with components of both asynchronous and synchronous learning: Evolution of education technology in India and more private players investing in this space have enabled better student experience through hybrid models of synchronous learning and asynchronous learning. Peer interactions, live lectures with Q&A, discussion forums, simulated case studies and enabling students to form communities have proven to be effective online learning methodologies. This space is dominaned by private universities and edtech companies in India. Industry has also joined hands with these platforms by providing live projects to students and offering to absorb them into the workforce.

Affordable programs: Online programs are more affordable than on-campus modules. For e.g. Bachelor of Computer Applications offered online by a private Indian university will cost approx. CHF 2300, whereas the on-campus course at the same university will cost approx. CHF 8000. This difference in pricing is primarily due to the fact that larger number of students are enrolled for the online course with almost the same resources, whereas in classrooms, teacher-student ratio has to be maintained.

2.4 What motivates Indian students to study abroad?

According to the data of the Ministry of External Affairs, Government of India²⁴ approx. 1,090,000 Indian are studying abroad as of July 2019. Top 5 countries chosen by majority of the students are United States, Canada, Australia, UK and United Arab Emirates.

Here are some key factors that prospective students and their families take into consideration while deciding the location:



Table 1: Factors considered by Indian students

Safe environment: For Indian parents, this is always a deciding factor for sending their children to a foreign country. Switzerland always ranks high in this criteria. Post COVID-19, this criteria will rank much higher in the coming 2-3 years.

Affordability and career support: This criteria applies to all Indian students, including those who are going for their PhD studies and for professional courses. Affordability is calculated in terms of tuition fees and cost of living together. While prospective students are aware that campus placement is not a norm in Europe, they expect career offices to keep them updated on industry internships and share job opportunities.

Scholarships: Indian Institutes of National Importance and the top 100 universities (NIRF) attract the best quality of Indian students coming from different socio-economic backgrounds. For attracting these high quality students, scholarships (full or partial) becomes a crucial factor. The swissnex network launched the <u>ThinkSwiss Research Scholarships</u> to attract this talented pool of Indian students to Switzerland. The popularity of the scholarship has definitely increased the visibility of Swiss universities within Indian premier institutes. Additionally, the positive experience of the students creates a ripple effect among faculty and fellow students.

Testimonials



A big thank you to ThinkSwiss, for this international experience which helped me grow both professionally and personally. Not only was I able to carry out my research, which is relatively new in India, but it also enabled me to gain a deeper understanding of Swiss culture, which I loved immensely.

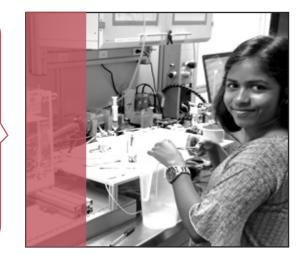
Anant Jain

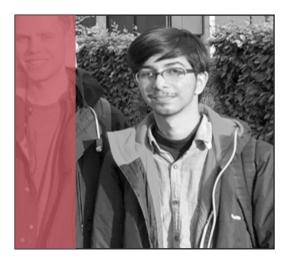
IIT (BHU), Varanasi Research Intern - University of Neuchâtel

Right from my very first day, I was very impressed by the level of organisation in my research group. Each individual project in the lab was somehow contorted to fit the larger vision of the team. I highly recommend Switzerland, in particular for biomedical research, from my experience.

Sharika Mahadevan

IIT Madras Research Intern - University of Bern





ThinkSwiss gave me the outstanding opportunity to do a research internship at the University of Zurich. The experience of working with some of the best minds in the world and the innovative ambience of Switzerland have radically transformed my way of thinking, and my career.

Arjun Dey

IISc Bangalore Research Intern - University of Zurich **Diversity of courses:** With a highly competitive domestic market, Indian students (top & mid-level) are showing more and more interest in studying new-age courses that are not available in India. For example, the Master in Robotics in ETHZ & EPFL, Embedded System at SUPSI or International Affairs at the Graduate Institute Geneva are very popular among Indian students. Specialised courses in artificial intelligence (AI), industrial automation and data science are high in demand, along with continued focus on robotics, mechatronics and machine learning.

Peer review: Both prospective Indian students and their parents prefer a location where they have heard good reviews from fellow Indians. Thus Indian alumni of foreign universities are important ambassadors and play an indirect role in attracting more students to that particular university.

Post-study work permit: Majority of the Indian students opt for a foreign degree which offers potential for employment abroad. India has a challenging job market, so moving where opportunities are more becomes a top criteria for students. Returning to India with an international degree and work experience gives their career a strong boost.

For decades, USA has remained the top destination for Indian students for this specific reason. However, recent strict visa requirements along with depreciation of Indian rupee and growing intolerance towards foreigners studying in the USA has had a negative impact on this trend. It is still the top study-abroad location for Indians, but the growth rate has declined sharply.

The new favourite locations are Canada and Australia, where Indian students can apply for a post-study work permit, along with a simpler process for permanent residency application with work experience.

Students who have studied for two years in Australia can apply for a post-study work visa and the process is quite simple. In Canada, students are eligible for a work permit for three years if they have finished their master's degree from a Canadian university. The inflow of Indian students to Canada has further gone up after it introduced the SDS (Study Direct Stream) Programme in 2018²⁵.

United Kingdom (UK) slipped to 4th position among preferred countries due to withdrawal of Post Study Work Visa in 2010-11. In 2019, with Brexit, a 2-year post study work permit (PSW) has been reintroduced for international students graduating in 2021, this will see again a rise of demand for studying in the UK.

This also explains why countries that restricts work visas automatically become less attractive to Indian students²⁶.

As the PSW decisions are taken by the Federal Government, and not by the universities, Swiss universities should promote and highlight the safe environment, affordability and career support, diversity of courses and offer more scholarship options for their master and professional courses to attract talented Indian students.

2.5 | Impact of the COVID-19 pandemic on higher education

Worldwide, the higher education sector has been challenged to innovate and transform due to the COVID-19 pandemic. Recently, QS has published a comprehensive report on the 'Impact of coronavirus on Global Higher Education'²⁷

With the current pandemic situation, it is quite natural that some students defer overseas study plans to next year, opt for safer locations, or even a small percentage canceling their study plans. We expect it to change further and a clearer picture to emerge only by Q3-Q4 2020.

The QS report summarises the measures taken by higher education institutions worldwide to deal with the pandemic, and its subsequent impact on international collaborations. Some of the key measures discussed are:

- Switching some of their scheduled courses online (50%)
- Delaying the start dates for some of their courses until the following semester (19%)
- Changing application deadlines for their next intake (17%)
- Changing offer acceptance deadlines for their next intake (16%)
- Deferring some of their 2020 offers to 2021 (13%)
- Starting to conduct their own English language tests (8%)

Trends to observe

Exchanges with safer environment: It is important to note that the United States (USA) and the United Kingdom, two of the top five locations preferred by Indian students and having the largest number of institutional partnerships with India, are among the worst affected with the COVID-19 pandemic.

It adds on to the pressure on Indian universities to keep their collaborations active and provide exposure to their students and researchers in a safer environment. Countries less affected or those who managed the pandemic better, will be preferred locations for near future collaborations.

Online courses: Foreign universities who have well-developed online courses, even summer schools will receive more publicity among others within Indian universities. We expect a larger number of Indian students participating in online summer schools and short courses encouraged by their universities. In the future, collaboration on joint virtual courses on cutting-edge technologies are foreseen.

Virtual classrooms: As universities worldwide have setup virtual classrooms, we expect that to continue beyond the COVID-19 pandemic. This will enable international guest lectures and seminars virtually; reducing staff travel needs and adding to carbon footprint reduction targets of the universities.

Guidelines for Swiss universities for Indian partnerships



To answer the question of Swiss university stakeholders on 'how to find my right academic or university partner' in India, we will focus on a set of criteria/ guidelines on shortlisting potential institutional partners in this section. We will also explore tips on how to engage with government or non-government academic and training institutes (non-universities), and finally, on how to engage with India's booming startup ecosystem via institutional partnerships.

Academia-industry partnerships are gaining pace in India, but as they are sector specific (E.g. energy, life sciences, etc.) with different modalities, we are not addressing such partnership guidelines in this report.

3.1 Criteria for university and institutional partnerships

Here are our broad suggestions to identify the right set of potential partners in India:

Accreditation of NAAC A or A+ and/or NIRF Top 100 (in any segment); for business schools global certifications (AACSB, EQUIS, AMBA) can be considered.

Complimentary programs: Do the study programs offered at the possible partner match or compliment your programs?

Existing international collaborations: Does the university have international partners with active programs? Shows the ability to manage exchanges.

Category of university/ institute: Critical for student exchange programs, as students of deemed-to-be universities and private universities can afford to go for short study-abroad programs, whereas Institutes of National Importance/ Central/ State university students may require full or partial scholarship support.

Research program: If research collaborations are in focus, its good to verify whether the university has research programs under any competence centre. The most recently published list of the full or associate/ assistant professors of respective department/ centre are added indicators.

Infrastructure: Every year, there are new universities and institutions opening up in India. Some of the Institutes of National Importance are still in their building or expansion phase. It is important to check if they are operating from their own campus or a temporary one and the status of laboratory and accommodation facilities.

swissnex India is best positioned to act as a strategic advisor to the Swiss public-funded universities to identify right partners and enable collaborations. Therefore, we encourage you to connect with the University Partnerships team at an early stage of preparation.

3.2 What Indian universities are expecting from their international partners

Premier Indian academic institutions keep a tab on international rankings, scientific discoveries and sector specific competence centres emerging in leading universities abroad. Most established Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), National Law Schools (NLS) and leading universities have, over the years, built partnerships around the world primarily with American, British, German and French institutions. More recent aggressive partnerships are built with Canadian and Australian universities.

Over the last 15 years, many of the Indian premier universities and institutions have built strategic relations with one or more Swiss universities. swissnex India has been instrumental in either enabling or strengthening many of the collaborations over the last 10 years. The Indo-Swiss bilateral Joint Research



Table 2: Expectations from Indian universities

Program and SNSF projects with international partners have definitely helped to build long-lasting research partnerships between Indian and Swiss institutions.

Moving ahead in international rankings and building quality partnerships have now become the focus of leading Indian universities and institutes across sectors. We observe the following 4 key expectations from their side:

Brand visibility: Partnership only with institutions of good repute (high accreditations/ ranking/ offering courses on cutting-edge subjects). Innovative partnership models are on offer to match expectations. See further details in the collaborations section. Some of the more established institutes like IITs and IIMs are quite selective in adding new institutional partners and rather prefer to have informal collaborations between researchers and faculty.

Student exchange programs: This is a key feature in most international institutional partnerships. Indian universities are increasingly preferring mutual exchange possibilities for 2-5 weeks study-abroad programs instead of semester exchanges. These programs can be summer schools, entrepreneurship bootcamps or a part of an exposure trip for their executive students. Indian universities strongly expect to have similar conditions of fee waiver, accommodation facilities in student housing/ dedicated housing and a well-defined program for exchange weeks.

Joint activity plan: Over the years, Indian universities have learnt that without a joint activity plan with dedicated resources (staff & finances), many of the collaboration agreements remain only on paper. Additionally, an activity plan provides faculty and students new offers for international exposure. Alongside an MoU, Indian universities are keen on dedicating time and resources to develop joint activities via workshops and roundtables (face-to-face or virtual).

Collaboration in new frontiers: The Government of India, through its various departments, is setting up competence centres and facilities in cutting-edge subjects like artificial intelligence, energy & mobility, nanotechnology, biotechnology as well as interdisciplinary subjects like climate change, health sciences, agritech and digital learning. Strategic international partnerships in these domains are important for leading Indian institutions. Additionally as mentioned above, the top 100 NIRF universities will now launch online courses, where there is a vast opportunity for partnerships in curriculum development, joint courses and content licensing. Indian universities will have to forge new collaborations with their peers internationally.

3.3 How to engage with government and non-governmental organisations

Engagement with government organisations

Degree & certification programs: The Government of India provides various opportunities to its employees to pursue further education. They can opt for long term programs (more than 6 months), short term programs (less than 6 months) and short executive/ customised programs in India and abroad.

Officials are offered training opportunities under Domestic Funding of Foreign Training (DFFT) policy from high ranked foreign universities in the UK, US, Australia and Singapore. Under the DFFT scheme so far, officers have been sent to attend management courses at universities like Harvard, Chicago, Berkeley (California), Cambridge and ANZSOG (Australia). However, in the future, the Department of Personal & Training (DOPT) would consider getting foreign trainers from the top universities to India or sending a few officers for foreign training and using them to train others in India²⁸. The Government also launched Integrated Government Online Training (iGOT) programme – an online training module for central and state-level civil servants earlier this year²⁹.

Capacity building programs: Various capacity building programs are organised across different domains through institutes like Institute of Secretariat Training and Management – JNU campus, Indian Institute of Public Administration, IIMs and selected private institutes. These institutes are open for collaboration for workshops and short programs with foreign universities for niche training programs.

If any Swiss institution would like to build partnerships in this segment, it is advisable to leverage the expertise of swissnex India to identify right engagement channels.

Engagement with non-government organisations

Survey or field studies: Research oriented NGOs can be excellent partners for field studies, for example in the areas of biodiversity & natural resources, urban infrastructure or socio-economic studies. They work with grassroot organisations and have the trust of the community. It is advisable to have a collaboration/ grant agreement in place prior to starting the studies.

International summer/ winter schools: NGOs can be a strategic partner in implementing summer/ winter schools or experimental learning in India as they have vast experience in working with communities and the ecosystem. Students can gain knowledge from first-hand experience of NGO representatives and through field visits. Often, Indian universities have partner NGOs. In such cases, it is advisable to include the NGO partner/s in the design and execution of the program. A partnership with an NGO is mutually beneficial to organise international summer/ winter schools or even problem-solving focused, mutually beneficial programs with immersive learning opportunities for Swiss students. For example, swissnex India and EPFL partnered with SELCO foundation to create the India Switzerland Social Innovation CAMP (INSSINC) in 2019.

India Switzerland Social Innovation Camp (INSSINC)



A group of young enthusiasts from EPFL, EPFL+ECAL Lab and UNIL tackled social innovation challenges on-field in Bangalore through a two-week-long immersion program called '<u>INSSINC</u>' organised by SELCO Foundation in partnership with swissnex India.

Watch the videos: 2019 | 2020

University of Geneva



swissnex India is the strategic advisor for the University of Geneva and has explored avenues to further strengthen their ties with Indian institutions. A curated <u>India immersion program</u> for the UNIGE delegation was led by Vice-rector Prof. Stéphane Berthet in January 2020. swissnex mapped collaboration opportunities in science, combined with social sciences and humanities – staying on par with the transdisciplinary approach in academic trends in recent years. During the India immersion week, Prof. Jérôme, Dean of Faculty of Science, proposed a collaboration with IISc to facilitate joint activities. Read more about the collaboration <u>here</u>.

3.3 Accessing the Indian innovation ecosystem

According to a recent report³⁰ by India's leading IT industry association, NASSCOM, India is the third largest startup ecosystem in the world and is expanding to become more global.

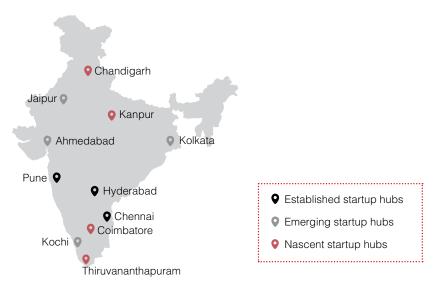


Figure 1: Indian startup ecosystem Source: NASSCOM

The rise of startups has paved the way for the birth of support systems focusing on mentoring, driving innovation and boosting scale and commercial success in the form of incubators and accelerators. As per 2019 data, India currently has 140 such entities.³¹ Out of these 140 incubators and accelerators, a good number of them are located within a university or institutional setup such as IITs, IIMs and leading private universities. Additionally, many of the leading hospitals in India have now set up their own innovation centres and act as incubators. A detailed list of such innovation centres is summarised in a recent report by the Swiss Business Hub India titled 'Startup Ecosystem in India: Incubators and Accelerators'³² as well as in the ranking of BioSpectrum India³³ for life sciences incubators.

These institution led incubators and accelerators can be excellent partners for Swiss university spinoffs. Apart from making their startups successful in the domestic markets, Indian institutions want their startups to receive global facilities along with access to larger investments. A collaboration between a Swiss university and an Indian institution/ university can provide a soft-landing pad for Swiss startups and innovators expanding in Indian markets and vice versa.

Some sectoral focus for such collaborations would be:

Health sciences and biotechnology: India now has strong biotech and health sciences clusters championed by biotech parks, industry, hospitals, CROs and research institutions. Partnerships with incubators of institutions or hospitals in these clusters could be strategic for long-term collaborations.

University of Basel's innovation network in India

swissnex India guided the University of Basel's innovation office to build its India collaborations in the startup hubs of Bangalore and Hyderabad. Uni Basel entered into institutional partnerships with the <u>Centre for Cellular and Molecular Platforms (C-CAMP)</u> a renowned life sciences enabling platform, and <u>WeHub</u>, a state run platform by the Government of Telangana for women entrepreneurs, in 2020. Learn more about the collaboration <u>here</u>.

"Science-based innovations are key to break new ground in healthcare. Basel and C-CAMP are two leading research and innovation ecosystems in the life sciences domain. This new Bangalore Basel Corridor will intensify links between these two powerhouses and facilitate greater exchange of knowledge and expertise."

Mr. Christian Elias Schneider Head, Innovation & Entrepreneurship, University of Basel



Internet of Things (IoT): IoT will play a key role in Industry 5.0 in the next few years globally. The Government of India has been proactive in investing in and developing new IoT technologies to improve industrial efficiency and develop smart infrastructure in public utilities. The government has itself budgeted over CHF 30 billion for its 'Smart Cities Initiative'. Some of the key IoT driven features of a smart city will be smart parking, intelligent transport systems, smart grids, smart urban lighting, waste management, smart city maintenance and water management. This provides immense opportunity for Swiss spin-offs to do joint pilots, find partners to white label their products, and eventually manufacture their products via joint ventures (JV).

Al/ deep learning/ machine learning: India is currently building its own unique brand of leadership in the global Al industry (with 400+ startups), as India provides a perfect "testing ground" for business enterprises and research institutions globally, to develop scalable solutions which can be easily implemented in other developing and emerging economies. In other words, an Al solution developed for India is likely to be relevant for around 40-50% of the global market. Artificial intelligence is likely to revolutionize various industries in India, particularly healthcare, agriculture, education and mobility³⁴.

Social impact solutions: In Switzerland, universities play a leading role in motivating students to develop technologies with social impact applications. However, there is limited scope for such technologies in the domestic market. India acts as a testing and re-engineering ground for such technologies. Social impact incubators and accelerators can provide Swiss startups mentoring to tweak their products for emerging markets, and support in raising funds to scale up such technologies. Investments from private impact capital as well as venture capital is gaining prominence in sectors such as public health services, education, water management, clean energy and consumer goods.

Other sectors: Enterprise, fintech, data analytics and retailtech have been the strength of Indian startups. Early-stage Swiss startups will face a strong competition and will need to find a collaborative partner as a launchpad; the technology has to be unique and non-existent in Indian market.

4 Collaboration models



4.1 | Student mobility

The recent report³⁵ of the European Association of Distance Teaching Universities (EADTU) has focussed on many facets of student mobility in coming decades. In the report it is pointed out that International collaboration and mobility are affected by the changing pedagogical landscape, characterized by increasingly innovative ICT-based modes of teaching and learning, evolving from traditional face-to-face to new forms of blended and online education. This will lead to new education and mobility formats. The following 3 types of mobility and related collaboration models will be common in the coming years.

A variety of international education and mobility formats

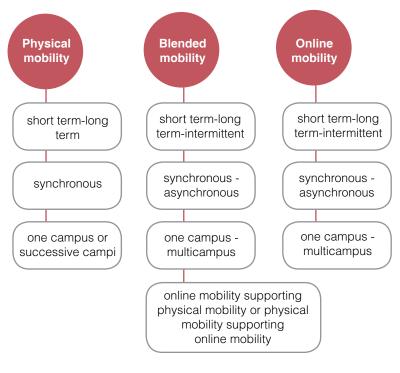


Figure 2: International educational and mobility formats Source: EADTU

While there are a few well-established semester exchange programs run between Indian and Swiss institutions (e.g. ETH Zurich and IIT Bombay), many other MoUs on semester exchanges did not remain valid, or expired due to lack of application from students. For Indo-Swiss student mobility, we foresee the following major models in the coming years.

Short physical mobility programs: The recent trend is to offer students short physical mobility programs with international partners. The duration of physical programs ranges from 2-5 weeks. For example, ZHAW School of Social Work, Switzerland and Christ University, Bangalore are running the mutual 2-week exchange programs since 2014 with new content and theme every year. Similarly, EPFL has been running the India Switzerland Social Innovation Camp with swissnex India and SELCO Foundation since 2019.

While Swiss universities develop such programs as summer/ winter schools or specific modules within a course curriculum, Indian universities are developing 'India immersion week' programs for their international partners as a complementary offer.

ZHAW's long-standing partnership with Christ University



Building academic collaborations across diverse countries calls for both connections and community building over time. A point in case is the long-standing partnership between ZHAW's School of Applied Sciences in Zurich and Christ University in Bangalore. Their MoU builds on various collaborations and exchanges since 2012 facilitated by swissnex India, envisioning a more formalized framework to engage into further faculty and student exchanges, as well as joint research projects. Read about their journey <u>here</u>.

Research internships programs: Every year, ETH Domain institutes (ETH Zurich, EPFL as well as EMPA, PSI and EAWAG) receive 200+ Indian students doing internships in different labs, especially for their bachelor or master thesis work, most exchanges happen without any formal institutional agreements. Such programs are for 3-6 months.

In 2019, swissnex India launched the 'ThinkSwiss Research Scholarships' program, funded by the State Secretariat for Education, Research and Innovation, which offers scholarships for 3-month research internships to any public-funded university, university of applied sciences and research institutes. While swissnex can only provide a limited number of scholarships, we receive a 100+ applications and are happy to see the efforts from the Swiss faculty to accommodate some of the applicants from their own project funds.

Industry internship programs: This is a one-way model for Swiss institutions. It provides their students the opportunity to get exposure to the emerging Indian economy with a booming startup ecosystem, in cutting-edge technologies like AI, robotics, mechatronics, digital health, etc. For example, based on the positive experience of <u>India Industry Internships program</u>, ETH Zurich launched its 'ETH Studio Bangalore' in 2019.

Global Transfer Program (GTP) or International Transfer Program: This is different from dual-degree programs. In such programs, students pursue a degree with the initial part of their study at an Indian university, and the next part at a premium foriegn partner university of their choice - through a carefully mapped transfer of credits. On completion of the program, a globally recognized degree from the chosen foreign university is conferred. Some of the leading Indian private universities have developed such partnerships with USA, UK or Australia. Gradually such partnerships are being built with universities in Continental Europe.

Preferential student enrolment agreements: Many emerging private universities are interested in finding placements for their students in foreign universities for master courses on emerging topics like liberal arts, governance and visual studies. While students are enrolling for bachelor studies in India, for masters they would prefer to earn a degree from a foreign university. This is prompting Indian private universities to have an agreement with foreign partners for preferential hiring of their students, with or without a discount in fees.

Online and blended student mobility: This is still in a nascent stage and dominated by private universities. Details of collaborations models are mentioned in the subsequent chapter.

ETH Studio Bangalore



Thanks to Bangalore's traffic, the very idea of what we call today the "India Industry Internships (III) program" was born. This mobility program enables Swiss students to work with the best-in-class automation and robotics experts in India. The support from ETH Global and the Pors & Rao team in Wyss Zurich gave the III program a lot of visibility among the ETHZ students. Over the years, the growing number of applications from Swiss students aspiring to work in Bangalore demanded a wider platform. Thus, the ETH Studio Bangalore was launched in 2019. Know more about ETH Studio Bangalore <u>here</u>.

4.2 | Joint research

There are a number of '**partnership models**'³⁶ between researchers worldwide. Defining models of partnership undermines the complexity that exists. However, these models may be useful in thinking conceptually about it.

In this section, we present the following models for partnerships relevant for Swiss stakeholders:

Parachute model: is a situation in which researchers from Switzerland come to India with their own

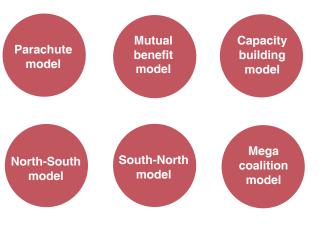


Figure 3: Partnership models³⁷ relevant for Swiss stakeholders

research interests, obtain the data, then return to their labs and offices to write their findings for publication. We primarily see such research conducted by Swiss PhD and Post-docs under a larger project framework. Such a model succeeds where the Swiss lab principal investigator has existing connections and/or collaborations with Indian scientists/ PIs.

Mutual benefit model: India and Switzerland have a bilateral equally funded research program titled '**Indo-Swiss Joint Research Program**' (ISJRP) since 2003. Research partnerships that have taken place through this program are of mutual benefit and have built long-standing collaborations between researchers of both countries.

Capacity building model: Such partnerships are initiated by the Swiss Agency for Development and Cooperation (SDC) in collaboration with the Indian government ministries/ departments where institutions or research groups in India are primarily responsible for the direction and management of the program or project. Inputs from Switzerland are mainly technical (trainings) and advisory. The outcomes of the projects are primarily for India. Current focus of SDC in India is on capacity building projects on 'climate change actions'.

North-South model: This category includes a variety of arrangements where the main influence in the program (for example, the initial proposal, the research design, the scientific and financial management) is with Swiss partners. We can see a number of Swiss National Science Foundation projects having Indian partners, which are outside the scope of the Indo-Swiss Joint Research Program. SNSF allows 20% of any project fund to be allocated to an international partner. Whereas funding mechanisms like SINERGIA, SUDAC and R4D allow more active participation of international partners. Additionally, discretionary grants of Swiss research institutions (for example of EAWAG) and universities can enable such North-South projects, where Indian partners (academic and non-academic) take a more active role.

South-North model: These are partnerships that are initiated by institutions or research groups in India, who are primarily responsible for the direction and management of the program or project. For example, the Snow and Avalanche Research Institute (SASE), Chandigarh had a collaboration with SLF, Davos for joint field studies and training of rockfall simulation models of SASE scientists till 2015.

Mega coalition model: As international rankings puts a higher weight on international research exchanges and publications, the Government of India is taking initiatives to become a member of global networks, for example India is an associate member of EMBO (European Molecular Biology Organisation) since 2017, the only member outside Europe. This allows India to access the EMBO network for joint research and funding instruments. Similarly, India is an associate member of CERN connecting its strong Physics community to the global network. As of June 2020, 40 Indian universities and institutes are a part of the International Association of Universities. In the coming years, we foresee more such initiatives by the Government of India as well as by leading institutions. India is also starting to create their own network, such as the AI for All Alliance, or the International Solar Alliance, that encourages science and technology collaborations.

Researchers at leading Indian institutions are becoming proactive in applying for global or EU funds. This has been made possible with the Government of India's effort to put in matching funding for EU and other global calls. There will be more coordinated efforts from Indian universities to partner with research consortiums of foreign universities with experience in managing EU or global projects. Many of the leading IITs, IISERs and research institutions are already participating in such calls and can be approached by Swiss partners to form coalitions along with other EU/ global partners.

4.3 | New partnership models

The focus of international university collaborations in India is shifting towards filling the skill gap and building brand visibility. In this section we are zooming in on some of the new partnership models proposed by Indian universities for their foreign partners

Faculty recruitment partnerships: One such innovative partnership model is to collaborate on faculty recruitment for the Indian side. Some of the emerging private universities and new institutes of national importance (IITs, IISERs) want to collaborate with placement offices/ student associations via international offices of leading Swiss universities, to attract the return of Indian PhD and Post-docs as faculty. These new universities are putting in place good infrastructure and flexible working models for its assistant professors (entry level), so that they can remain in touch with their PhD/ Post-doc labs and forge research collaborations in near future.

Government of India funded schemes for international partnerships: The Government of India is enabling its funded universities the possibility of inviting faculty from foreign partners for teaching courses/ modules, hosting training or research workshops, etc. Leading Indian institutions now offer matching remuneration to foreign faculty. Three specific funding mechanisms are

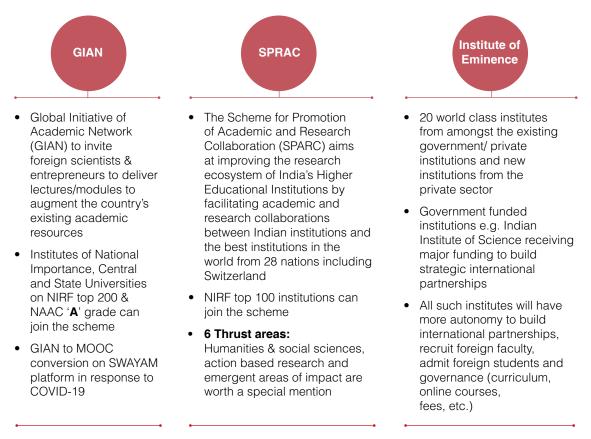


Figure 4: Government of India funding mechanisms

Co-host international conferences: Leading Indian universities do have facilities as well as financial support from the Government to host international conferences, thus they are quite glad to accept such propositions from foreign partners, and in turn, get added to the respective subject domain global network. For research focused universities, it also allows their PhD students to find Post-doc positions abroad.

Support in academic excellence of global scale: Advisory support (could include a fee) to Indian premier institutions are highly appreciated and offers close collaborations at the management level. For example, the Ashoka University, a leading private university of India for liberal arts & sciences, has an international academic advisory committee³⁹ to guide the institution in achieving academic excellence. This opportunity is still not explored by the Swiss universities for their Indian partners. Indian-origin faculty or Swiss universities' faculty with a long research collaboration with India can be flag-bearers of the initiative.

Indo-Swiss Partnerships in COVID-19 times

Lucerne School of Business and Amity University sign an MoU



'We look forward to cooperating at all levels with Amity, from student exchange to applied research. Their excellent reputation in India and extensive network of international campuses make them a key partner in our international network, particularly in activities relating to teaching and researchinbusinessinnovationandinformationtechnology,' reflects Oliver Kessler, co-head of International Office at LSoB, on this collaboration facilitated by swissnex India. To know the story behind the collaboration, <u>click here</u>.

4.4 Online and blended learning

Online education ecosystem in India is dominated by private players. It also offers ease of collaboration as the decision-making process is less bureaucratic. However, when planning to launch an online course, it is important to identify the right partner, to avoid losing credibility in this segment. Also, pricing has to be in line with what other global universities are offering.

Popular models of collaboration are:

Content partnerships: License content to Indian universities or private companies. Content curation is resource intensive. Therefore, there is huge demand for good content that is designed for online programs.

Portal partnerships: Foreign universities are now collaborating to offer courses in association with Indian private universities who have online portals, like Amity Future Academy & Manipal ProLearn where foreign universities often collaborate as academic and knowledge partners. Universities can also offer joint certification.

Collaborate with edtech firms to offer CAS, MAS & DAS: Edtech firms like Coursera can be ideal for online course collaboration, if the objective is to earn higher revenue through the online offer in India.

Collaborate with corporates: Indian corporates offer upskilling and skilling programs through online channels and blended format as its cost effective, less impact on work hours and provides flexibility to employees.

What swissnex India offers to Swiss universities

swissnex India offers its services to all Swiss university and institution stakeholders as a strategic advisor and partner. We strongly believe in "co-creating" and hence, are open to new ideas to shape new partnership models with India. Our current services include, but are not limited to:

5.1 | Fostering partnerships in India

Utilise our network in the major science and technology hubs in the country to build your presence in India. We'll help you identify the right partners, connect you to experts within your domain and support you in setting up new collaborations.

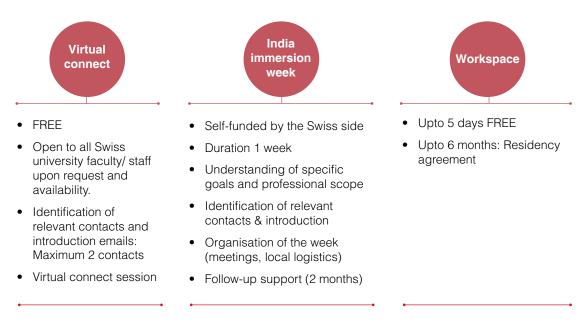


Figure 5: Fostering partnerships in India - swissnex

5.2 | Co-creating mobility and exchange programs

Work with us in co-creating programs that offer Swiss students an exposure to India's emerging market, subject matter experts and key players from various industries and its innovation ecosystem.



Figure 6: swissnex- mobility and exchange programs

We currently run the following programs with our Swiss university stakeholders

- ETH Studio Bangalore with ETH Zurich
- India Industry Internships (iii) with SUPSI, FHNW, HEIG-VD and HSR Rapperswil
- India Switzerland Social Innovation CAMP (INSSINC) with EPFL and University of Lausanne
- Knowledge to Action on SDGs (K2A) with HES-SO Haute école de travail social Fribourg

5.3 Continuing education: promotions and partnerships

Tap into India's growing demand for international continuous education programs, with us. Promote your continuous education programs in India and enhance your internationalization efforts using our expert guidance and services tailored to your needs.

For example, swissnex India is the strategic advisor to the **University of Geneva** for promotion of their continuing education programs in India. We offer the following services:



Figure 7: swissnex- services offered

5.4 Startup support and innovation ecosystem alliances

Engage with India's booming startup ecosystem with us to accelerate your Swiss university spin-offs in Indian market, promote the tech-transfer licences and access world-class technology platforms and services.

We spearheaded the journey of University of Basel's Innovation Office in building its strategic Indian partnerships (page 26). We mentored Swiss university spin-offs through programs like <u>Academia-Industry</u> <u>training camps</u> and <u>1:1 coaching sessions</u>. If and when the startup is ready, we support them with their <u>India market entry</u>.

6 Key takeaways



Here's our 5-step approach for Swiss academic stakeholders to build partnerships with Indian institutions, and to engage with swissnex India to facilitate the process.

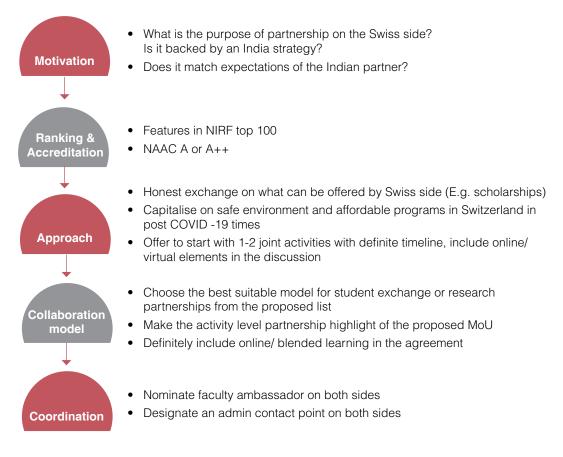


Figure 8: swissnex - five step approach for Swiss academic stakeholders

Endnotes



¹Building Respectful and Collaborative Partnerships for Global Health Research by CCGHR

²University Grants Commission consolidated list as of 01.02.2020 (accessed on April 27, 2020)

³<u>University Grants Commission consolidated list as of 01.02.2020</u> (accessed on April 27, 2020)

⁴https://www.ugc.ac.in/oldpdf/Consolidated%20list%20of%20All%20Universities.pdf nts-Registration-Portal.htm" <u>https://www.mea.gov.in/Students-Registration-Portal.htm</u>

⁵India Switzerland Relations, Ministry of External Affairs, Government. of India, Feb 2020

⁶<u>https://www.nirfindia.org/Parameter</u>

⁷NAAC website

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⁹Ministry of Human Resource Development, Government of India

¹⁰University Grants Commission mandate

¹¹Source: <u>University Grants Commission</u>

¹²List of Institutes of National Importance

¹³GetmyUni.com article accessed on 01 May 2020

¹⁴MHRD website

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²⁵India Today Article, accessed on May 3, 2020

²⁶IEC article accessed on May 4, 2020

²⁷QS report

²⁸<u>https://economictimes.indiatimes.com/news/economy/policy/foreign-training-of-officials-may-be-put-on-hold/articleshow/73780075.cms?from=mdr</u>

²⁹https://theprint.in/india/governance/how-modi-Government-is-quietly-revolutionising-the-training-of-iasips-irs-officers/381410/

³⁰Indian Tech Start-up Ecosystem 2019

³¹YourStory article accessed on May 8, 2020

³²Switzerland Global Enterprise report 2019

³³The Hindu Business line accessed on May 8, 2020

³⁴Switzerland Global Enterprise report 2019

³⁵Innovative Models for Collaboration and Student Mobility in Europe, May 2019

³⁶Building Respectful and Collaborative Partnerships for Global Health Research by CCGHR

³⁷ibid

³⁸IAU website

³⁹<u>Ashoka University</u>, Academic Excellence Committee

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