INDIAN APPLICANTS:

Focus on STEM Subjects and Academic Freedom

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INTRODUCTION: A UNIQUE CONTEXT

International higher education (HE) is continuing to expand its reach and engagement, with each decade witnessing enormous growth in participation and diversity. The latest figures from the OECD forecast eight million students will study abroad by 2025. Indian students are likely to account for a large segment of this figure. Tertiary-aged populations (18-22) have a direct causal relationship with the volume of foreign tertiary enrollments, and in just 20 years over 0.5 billion Indians are expected to reach university age. India's population growth is also predicted to overtake China's in the coming decades.

QS is able to seek out the narratives of this growing body of future leaders, with unparalleled access to undergraduate, master's and PhD applicants worldwide. The research for this report was collected in India during the QS World Grad School Tour 2017, and encompasses 32 focus groups, 50+ individual interviews and 600+ survey responses. The cities covered include Mumbai, Pune, New Delhi, Bangalore, Hyderabad and Chennai, providing a good overview of the motivations, ambitions and expectations of Indian applicants.

41% of Indian applicants regard teaching quality as the most important factor when choosing a university. This is followed by the university's reputation among academics (37%) and the strength of a university's research (23%). Thus, it is evident that this array of criteria - teaching,

academic reputation and research - not only relates directly to subject choice but plays a large role in the motivations of prospective Indian students. An exploration into how subject choices impact Indian applicant decisions therefore warrants a closer look.

This report will explore how subject choices intersect with three key areas; motivations behind subject choices, the importance of subject and academic reputation and the international academic experience itself. Delving into divergences between the six cities surveyed, this report seeks to understand why, for instance, STEM subjects are popular in India, as well as how subject choices determine broader study decisions. The narratives of prospective Indian students help to unpack these thinking processes, which can aid an effective recruitment strategy to this region.

The subject choices of Indian applicants are wedded to a variety of push and pull factors, including social norms and the pursuit of academic freedom, funding, modern facilities and teaching quality, as well as perceptions about subject and professor reputation. Many Indian applicants are led primarily by their research interests, which they prioritize over location and rankings. Subject choices are thus often the catalyst for student mobility from this region of the world, as Indian applicants follow a path carved by their ambition.

DEMOGRAPHICS

Location:

Mumbai
Pune
New Delhi
Bangalore
Hyderabad
Chennai
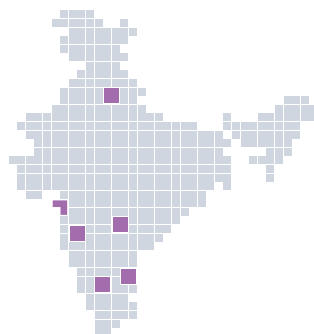
Participants:

646 survey responses

32 focus groups

50+ individual interviews

MOTIVATIONS BEHIND SUBJECT CHOICES

When it comes to university subject choices, India is a special case. While some of the drivers determining subject choices are common to all international students from the region, some are specific to the Indian context. Our research reveals that some of these decisions are shaped by existing societal pressures. For example, there are several subjects that are prevalent among applicants from India, specifically subjects in business and management, and engineering and technology. Irrespective of the desired destination, these subjects tend to dominate. Often, applicants indicate this stems from family pressure or societal ideas related to employment.
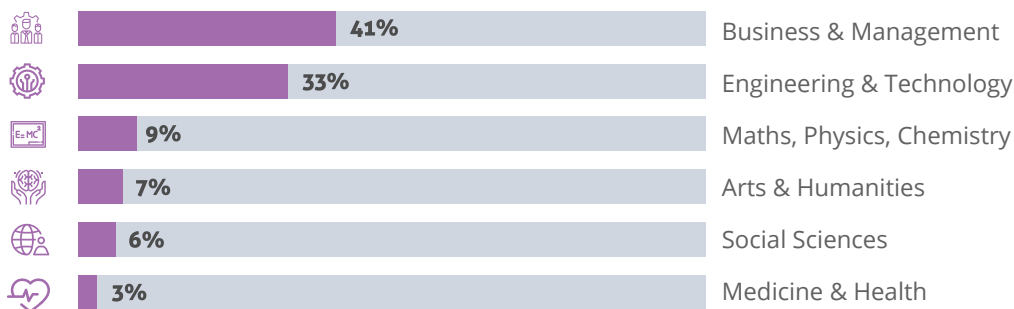
There is also the perception in India that one degree is not necessarily enough to secure top level employment, a perception that is generated by intense competition and overpopulation. Hence there is a pressure to study further and ideally internationally – candidates that are able to do this are seen as more desirable by Indian employers. These and other motivations specific to the Indian context and affecting subject choices are explored in this section.

Focus on STEM subjects

City breakdown

The India survey reveals that some subject areas are a lot more popular among Indian applicants than others. In particular, across the six cities surveyed, 41% of students are interested in pursuing a subject in business and management, whilst 33% of all students are interested in engineering and technology. The interest rates for the other subject areas drop off rapidly, with the third most popular area being science, at only 9%. This is broadly representative of Indian students in the UK according to the **Universities UK 2017 report**. In other words, like other students worldwide, Indian students are interested in pursuing business master's, but are also exceptionally focused on STEM (science, technology, engineering and mathematics) subjects. In fact, according to the UN Conference on Trade and Development, India ranks first in the world in terms of getting bachelor's degrees in STEM subjects.

SUBJECT CHOICE

	41%	Business & Management
	33%	Engineering & Technology
	9%	Maths, Physics, Chemistry
	7%	Arts & Humanities
	6%	Social Sciences
	3%	Medicine & Health

The distribution of subject preferences is also interesting to note across the different Indian cities. While business and management and engineering and technology dominate across all cities, there are some important differences. Bangalore is the only city where engineering and technology (47%) subjects overtake business (34%) subjects, with Hyderabad showing an enhanced interest in engineering too. New Delhi, Bangalore and Hyderabad are also cities in which science subjects are the most popular out of the six surveyed, with Mumbai applicants prioritizing arts and social sciences slightly more. Medicine and health sciences is consistently the least popular subject area for participants in India, with Delhi students displaying the most interest - though at a small margin (5%).
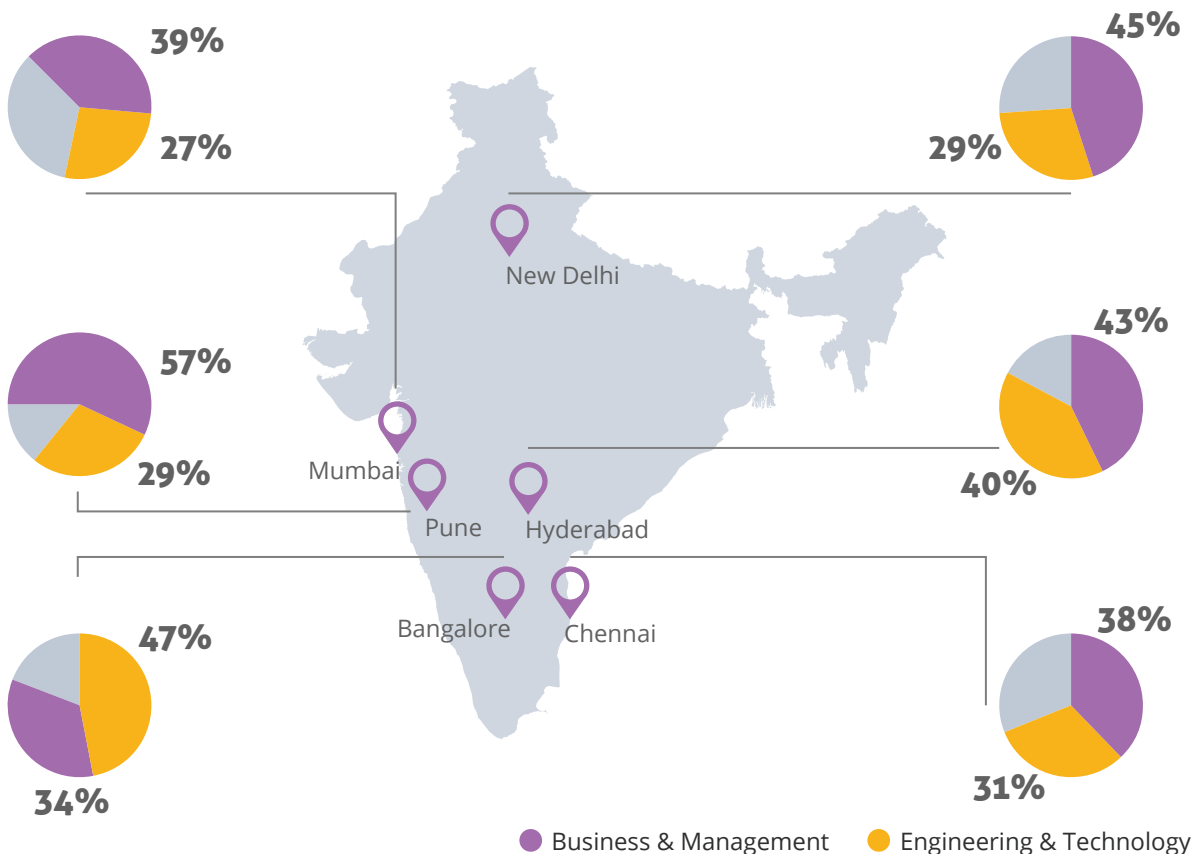
Employment opportunities

One of the main factors driving Indian applicants to feel compelled to study STEM subjects is the fact that STEM subjects are perceived as more employable – explored in detail in the QS report on the importance of employability to Indian applicants.

"It's good that we can push ourselves a little more so that we can go there and learn everything so that, a little bit quicker, we can get to where we want to go."

Mahir, Bangalore

FOCUS ON BUSINESS MANAGEMENT AND STEM SUBJECTS

- 39% / 27%
- 45% / 29%
- 57% / 29%
- 43% / 40%
- 47% / 34%
- 38% / 31%

New Delhi · Mumbai · Pune · Hyderabad · Bangalore · Chennai

● Business & Management   ● Engineering & Technology

Prospective master's student in Bangalore, Mahir, expresses this sentiment, explaining why he wants to study computer science abroad: *"Mainly because we get to learn and study what major companies want."* Mahir feels computer science will push him to achieve his ambitions: *"It's good that we can push ourselves a little more so that we can go there and learn everything so that, a little bit quicker, we can get to where we want to go."*

"The career opportunities we have in India are all service oriented and not industry oriented. That's why regarding career opportunities, going abroad seems better... given the competition in India I prefer going abroad."

Madhav, Hyderabad

Beating intense competition

There are strict prerequisites for pursuing STEM master's programs in India, where a directly relevant undergraduate subject needs to be studied and a highly competitive GATE (graduate aptitude test in engineering) exam is required. GATE primarily tests the comprehensive understanding of various undergraduate subjects in engineering and science. This exam is not needed if studying a STEM master's abroad, and hence studying abroad opens up choices, allowing Indian applicants to select from a wider pool of subjects and avoid some of the intense competition. This motivation is expressed by Madhav, in Hyderabad, who feels frustrated: *"I want a master's in material science but in order to pursue this in India I need to give an examination called GATE in the field of material science, which is not my field, whereas abroad I can apply through TOEFL and get accepted for the master's. The career opportunities we have in India are all service oriented and not industry oriented. That's why regarding career opportunities, going abroad seems better... given the competition in India*

I prefer going abroad." Madhav's words summarize the relationship between STEM subject choices, competition in India and international study.

Desire to boost India's economy

Aside from this, there is a feeling that STEM programs are not as advanced in India compared to abroad, where applicants feel they will be able to make direct applications of their knowledge and gain access to a broader range of STEM disciplines. This is expressed by prospective master's in engineering student, Neeraj, in Bangalore: *"Electrical engineering in India is good but it is not as high as in Japan, so that's the reason why I chose Japan and that's the reason why I want to study there. I want to know the people, culture and the technology over there and I would love to come back to India and implement (my knowledge). India has given a lot to me so; however, it is possible, I am planning to pay back."*

"I want to set up my own business at the end of the day. I'm coming from an emerging market, so there's a lack of industry here so when I set up a business I think I'll be profitable and on a global scale I think I can produce some products."

Niroop, Bangalore

Neeraj points towards another reason for the popularity of STEM subjects, that is likely born out of growing up in an emerging market - the perception that particular subject choices will enable them to enrich their own economy. This is evident in the words of engineering master's applicant, Niroop in Bangalore, who wants to marry his knowledge of mechanical engineering to his entrepreneurial intentions: *"I want to set up my own business at the end of the day. I'm coming from an emerging market, so there's a lack of industry here so when I set up a business I think I'll be profitable and on a global scale I think I can produce some products."*

The influence of family

Family influence is another likely factor affecting decisions of Indian applicants around subjects and careers. Parents of applicants tend to be closely involved in the application process and their children's education more broadly. As Vjwala, a business master's applicant from Chennai, shared: *"Family really does (influence decisions about where to study) because when I wanted to go for BA literature, my father kind of forced me to join computer applications. So yeah, family does play an important role in what you choose, in what you become. It does (influence my decision about going to Canada) mainly my father, he takes the decisions in the family and he (feels Canada is safe) that's why."* She highlights both the fact that certain subjects are seen as more prestigious than others, and that she feels pressure from her father that she is unable to challenge.

This is not the case for all students however, with others expressing that they simply feel supported by their family to study abroad, rather than being pressured into selecting certain subjects and destinations. As Bharath in Chennai, looking to study in Europe, shares: *"Family does help us and motivate us to study abroad but they don't influence our choices about where we need to go and what we need to study, but we still need that motivation and support when we go abroad."* It is interesting to note that the family pressure was more likely to be mentioned by female applicants. This could suggest that either male students are given a li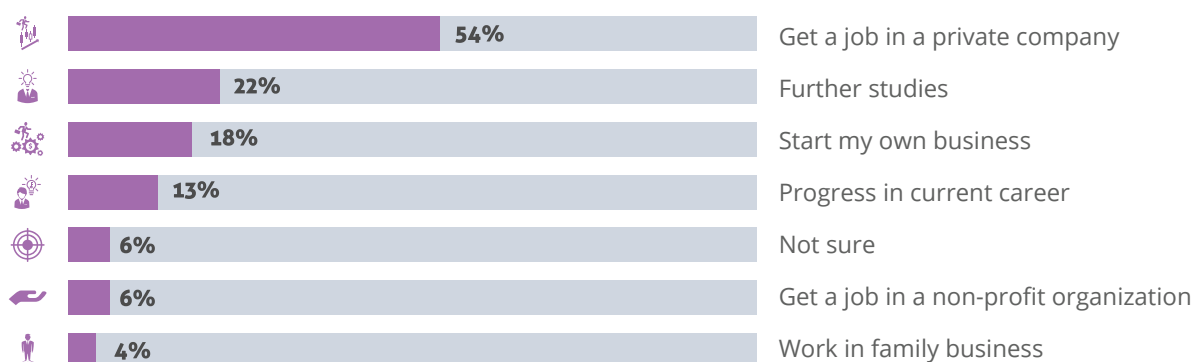ttle more freedom in deciding their destiny than female applicants, or that male students are more likely to be interested in STEM subjects, hence causing less friction at home.

One degree is not enough

The QS 2016 India report, **'What Matters to International Students?** Focus on India', focused on the challenges of standing out in India. This was a strong theme that emerged then, and two years on, it is still a substantial driving factor. When it comes to subject choices, there is an increased desire to specialize – a finding that is less prominent in other countries. This links back to competition and the fact that having a general undergraduate degree is no longer seen as sufficient enough to beat competition.

As Varad in Pune tells us: *"I want to do an MBA because nowadays doing an undergraduate degree is not enough to take you ahead and doing actual sciences or some other course related to economics at a later stage, by which I can get into the market easily, and it will be a reputable position that I get on in."* Varad highlights the fact that not only are some subjects preferred by employers, with MBAs often being given special attention, it is generally important to specialize and study further in order to stand out in a highly competitive employment market. India has an overwhelmingly high population of 1.3 billion, which explains why applicants feel a pressure to compete.

PLANS AFTER GRADUATION

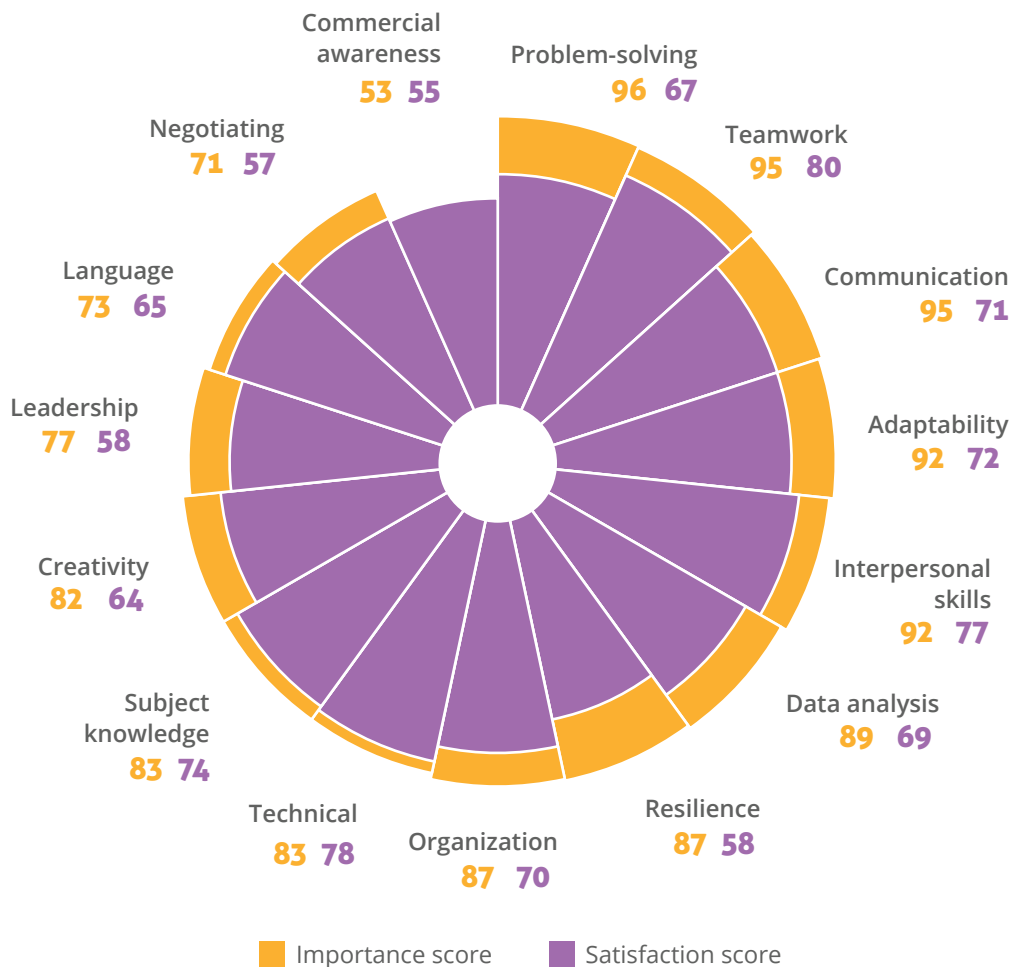|	
54%	Get a job in a private company
22%	Further studies
18%	Start my own business
13%	Progress in current career
6%	Not sure
6%	Get a job in a non-profit organization
4%	Work in family business

The value of expertise

Tied to the emphasis on specialization among Indian applicants, is a sense that employers will prioritize someone who has a more in-depth subject knowledge. Prospective master's in biological sciences student, Reysham in Bangalore, highlights this exact issue: *"I want to do my master's because I feel like in my Bachelor of Science, we never really specialized in anything. My master's will allow me to become an expert in my field and that would also help me to get good jobs abroad."* Whilst in-depth subject knowledge may well be valued in India, there is clearly a perception that this is the case abroad too. This is in fact, not always the case, as the latest QS research shows that employers in leading labor markets worldwide prioritize flexibility and adaptability over subject knowledge in graduates. However, several Indian applicants mentioned seeking a PhD, as well as master's and MBAs, for this very reason.

> *The latest QS research shows that employers in leading labor markets worldwide prioritize flexibility and adaptability over subject knowledge in graduates.*

GLOBAL OVERVIEW OF CORE SKILLS: IMPORTANCE VERSUS SATISFACTION

Commercial awareness **53 55**
Problem-solving **96 67**
Negotiating **71 57**
Teamwork **95 80**
Language **73 65**
Communication **95 71**
Leadership **77 58**
Adaptability **92 72**
Creativity **82 64**
Interpersonal skills **92 77**
Subject knowledge **83 74**
Data analysis **89 69**
Technical **83 78**
Resilience **87 58**
Organization **87 70**

■ Importance score   ■ Satisfaction score

Source: The Global Skills Gap in the 21st Century, QS

Interestingly, in light of political instability in popular host markets such as the US and the UK, following the election of Trump and Britain's decision to exit the EU, Indian applicants feel they will be in a safer position if they are more specialized and are already seen as experts in specific industries. As Akshay from Chennai shares, when asked about how the political climate might affect his degree: *"…master's are very specialized, and I don't think anyone looking for employment will be that affected by anyone who's in power. Even Brexit won't affect the job line that much, maybe the low-level jobs will get lost but then not the highly specialized ones. So, if I do well I'll get a job, that much confidence I have."*

APPLICANTS WANTING TO PURSUE FURTHER STUDIES POST-GRADUATION

20%

21%

14%

21%

New Delhi

Mumbai

Pune   Hyderabad

Bangalore   Chennai

24%

28%
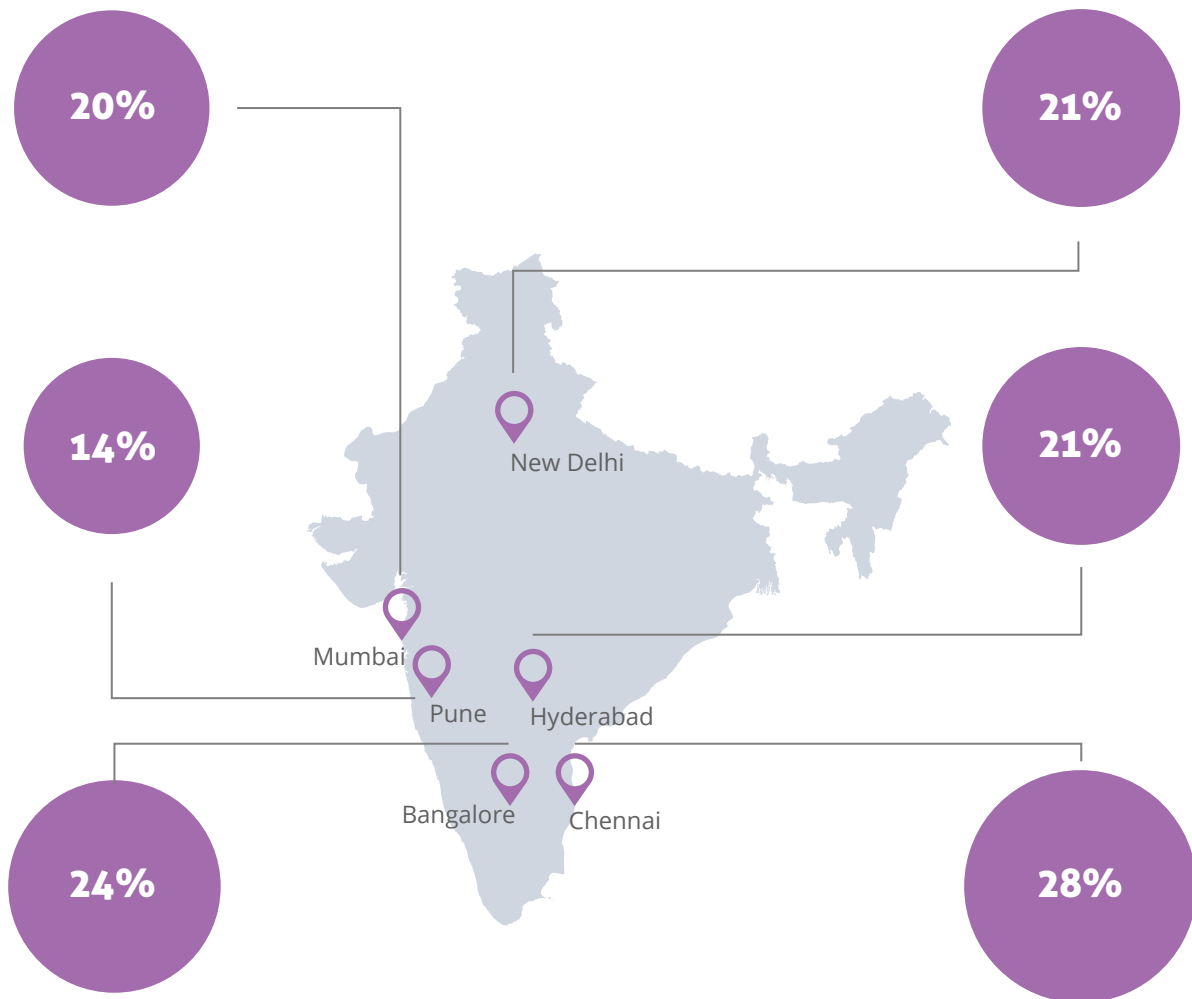
THE INTERNATIONAL ACADEMIC EXPERIENCE

International academic experience plays an important role in the subject choices of Indian applicants. The narratives of participants expose a number of underlying push and pull factors involved in the decision to study their subject of choice outside of India. This relates to differing teaching methods, freedom of ideas and access to funding, as well as the industry opportunities related to their subject area. Complaints with the Indian education system that arose in a 2016 QS report, **'What Matters to International Students? Focus on India'**, emerged again, indicating that these issues are unresolved and continuing to push Indian applicants to study elsewhere. India is indeed an emerging market and as a result, despite hosting several quality institutions, the higher education system suffers from a lack of funding, participation and diversity.
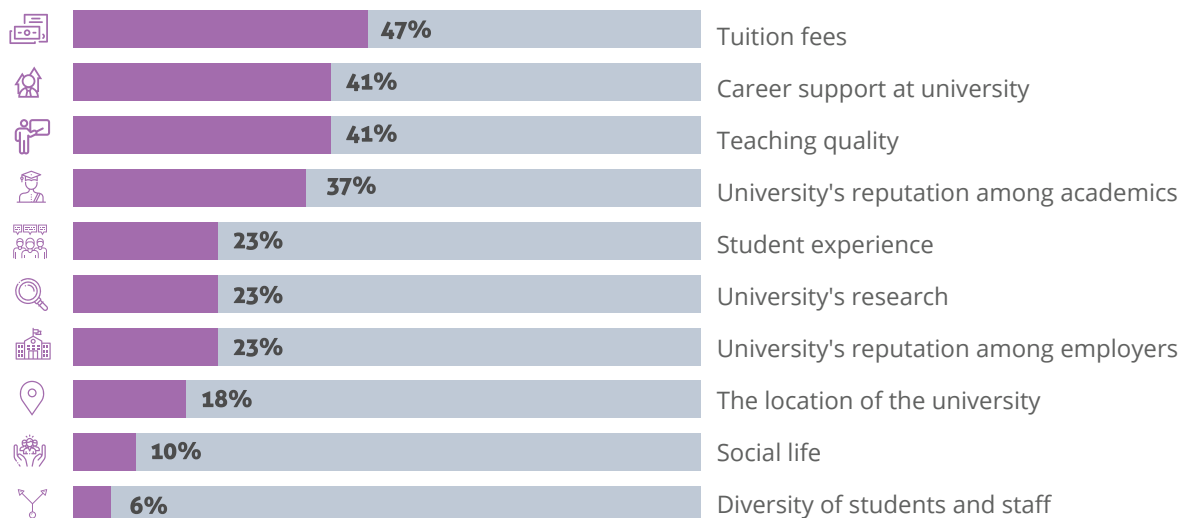
Given that 41% of survey participants in India selected teaching quality as the most important factor when choosing an institution, it is unsurprising that many Indian applicants seek an international academic experience, intent on accessing the best teaching standards their chosen subject area has to offer. Such sentiment is expressed succinctly by a master's in engineering applicant, Gaurav in Mumbai: *"I would like to pursue research at the frontier of my field, so the cutting edge of science as far as I know in this time. India is actually ahead in lot of areas but not exactly in my field. So, I would like to see the best in the world before I come back to serve my own country."*

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>
> Gaurav, Mumbai

KEY CRITERIA FOR SELECTING A UNIVERSITY

Criteria	Percentage
Tuition fees	47%
Career support at university	41%
Teaching quality	41%
University's reputation among academics	37%
Student experience	23%
University's research	23%
University's reputation among employers	23%
The location of the university	18%
Social life	10%
Diversity of students and staff	6%

The pursuit of (academic) happiness

The term 'academic freedom' and its relationship with international study emerged during interviews with Indian applicants. Numerous prospective students feel that studying internationally will allow them to benefit from greater academic freedom in their subject area than they can access at home. Such a view is related to what applicants feel is a lack of choice and freedom to pursue their own research interests at local universities. This is expressed by Ram Mohan in Hyderabad, who is looking to pursue a sociology PhD and wants to study in Europe because: *"There's not as much academic freedom (here) as there is outside, although there are similar topics, there's not much freedom as to the choice of your research. There are also problems regarding the availability of the professors and the research fields. I think research freedom is the most important aspect of a university - to be able to pursue your interests."*

> *"I'm not thinking about the rankings of the colleges, it's about the area of study I want to take and the quality of research. So, I'm deciding on the basis of my chosen area of robotics expertise in colleges."*
>
> Pritha, Chennai

This view is shared by Pritha, in Chennai, who is looking to study a robotics master's in the US: *"The marking system in India has some limitations and it doesn't allow students to think outside the box, so there is some restriction with my studies over here. I'm interested in a particular area of robotics, but if I study here I will be pushed to do something else. In US we don't have such limitations. I think that is lacking between other countries and India."* This highlights how Indian applicants place particular value on being able to exercise creativity within their chosen subject areas, and the importance of

a flexible research agenda at an institution. Pritha further explains that academic freedom takes precedence over rankings: *"I'm not thinking about the rankings of the colleges, it's about the area of study I want to take and the quality of research. So, I'm deciding on the basis of my chosen area of robotics expertise in colleges."* Such a view illuminates how important subject choices, and the related research opportunities, are to Indian applicants.

The ability to study multiple subjects

Another way in which subject choices relate to international study in India, is a desire to switch subjects, which participants feel they are unable to do at home. Prospective students also share that opportunities abroad, like being able to study a module outside of your course of study, are highly appealing. This lack of academic diversity and freedom in India pushes many prospective students to seek the higher education markets of study destinations elsewhere. Such a view is expressed by Vinay in Delhi: *"I have a love for international affairs and I am especially interested in international trade and marketing. I therefore want to shift my areas towards that position, but India only has two colleges which specialize in postgraduate international business courses. They are both extremely difficult to get into. It is this that has prompted my decision to study abroad."* Thus, it appears that the highly competitive higher education market in India, and the scarcity of specialization opportunities, contributes to the desire to obtain an international academic experience.

Indian applicants place particular value on being able to exercise creativity within their chosen subject areas

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CASE STUDY
Hare, Chennai

A recent graduate in mechatronics, Hare Krishna is 22 years old and currently living in Chennai. He expresses his determination to specialize in his chosen subject area, demonstrating an ambition frequently found among Indian applicants: *"I've worked all over in different fields of robotics, so I just want to narrow down in my master's. I'm just looking forward to find which field I'm more interested in, and then delve into it."*

As this report identifies, one of the reasons Indian applicants want to specialize is to stand out in a highly competitive job market. However, Hare's words are indicative of another motivation. He goes on to discuss his preference for subject reputation over location when choosing an institution: *"Destinations are not like strictly focused on US or Europe, for example. I'm mainly looking at the research output from institutions and laboratories and I have specific areas of interest like artificial intelligence and machine learning with robotics. So, I've been looking at the kind of projects they've been doing and the faculty involved."*

Hare describes choosing a university, and course, as a lengthy and judicious process, demonstrating how important this decision is to many Indian applicants: *"It's a long research actually, it's months of research into different institutions and faculty which are involved, what kind of work they're doing, if I'm interested in it and if they have vacancies for graduates. It's not just the rankings."* Hare highlights that university rankings are not informative of all aspects of an institution's research, calling for a need to make more information accessible: *"It's not like you have a ranking specifically for each area so it's more on the curriculum of a specific program. I feel independent research is more important than looking at the rankings."*

Hare portrays a love for his country that is often found among Indian applicants, a feeling that is related to growing up in an emerging economy and understanding the power of education as a tool for change: *"I'm more of a patriot, I want to contribute to my country with my research. I want to come back, but I want to gain some experience first, and learn the necessary skill-set, and then bring the facilities here."*

It was acceptable in the 80s?

Another reason Indian applicants choose to study internationally, according to research participants, is a feeling that many universities in India are ill-equipped with the recent advances in technology, especially with regards to scientific facilities and teaching methods. This view is expressed by master's in veterinary science applicant, Shubham, in Pune. Shubham feels the top three institutes in India are still incomparable to universities abroad: *"You can't get that quality of education in India, at least as far as my field is considered. In our country you need a lot of paperwork just for getting some new machinery, or some new technology which is readily available abroad. We are learning things on a machine from the 1980s! Once I go for a job, the machine will definitely be much more advanced and if I don't know how to use it, then what was the use of my entire education?"* Prospective computer science student Abhimau, in Delhi, in no uncertain terms, agrees: *"I have seen the best of what India has to offer in terms of labs and research equipment. Their best is not good enough and so I want to transfer during my degree to a university abroad."* This highlights why international study can be so attractive to a student from an emerging economy, many of whom also want access to the latest pedagogy for their chosen subject.

Practical versus theoretical

The 2016 QS India report revealed that Indian applicants were calling for a more practical approach to studies, rather than theoretical. In 2018, concerns remain the same, with many applicants wanting to study internationally so that they can develop the skills and understanding of how their subject works in practice, rather than just the theory behind it. This issue arose repeatedly in each of the six cities visited. Given the most popular subjects in India, according to the survey, are business and management (41%) and engineering and technology (33%), which require a level of hands-on and technical experience, it is understandable why Indian applicants are looking for more practical teaching methods.

> *"I have heard unlike Indian universities international universities focus more on a practical thing and that is really good. If I do a master's in mechanical engineering I want them to engage me more into cars... more into whatever is related to mechanical."*
>
> Sakshi, Mumbai

Sakshi, in Mumbai, for example, feels: *"I have heard unlike Indian universities international universities focus more on a practical thing and that is really good. If I do a master's in mechanical engineering I want them to engage me more into cars... more into whatever is related to mechanical."* This view is supported by master's in mechanical engineering seeker, Hare in Chennai, who sums up the issue succinctly: *"In India we have a general education system that concentrates on getting an overall picture of what you're studying, and the resources are a bit limited when it comes to research - it's a developing country so that should be obvious. Why people go abroad basically comes down to this; the facilities, the research, the money invested which in India is not on the global scale. Other than the premium institutions, like Indian Institute of Technology, we don't have the funding."*

TEACHING QUALITY VERSUS STUDENT EXPERIENCE AS THE #1 FACTOR WHEN SELECTING A UNIVERSITY

Teaching quality ● Student experience
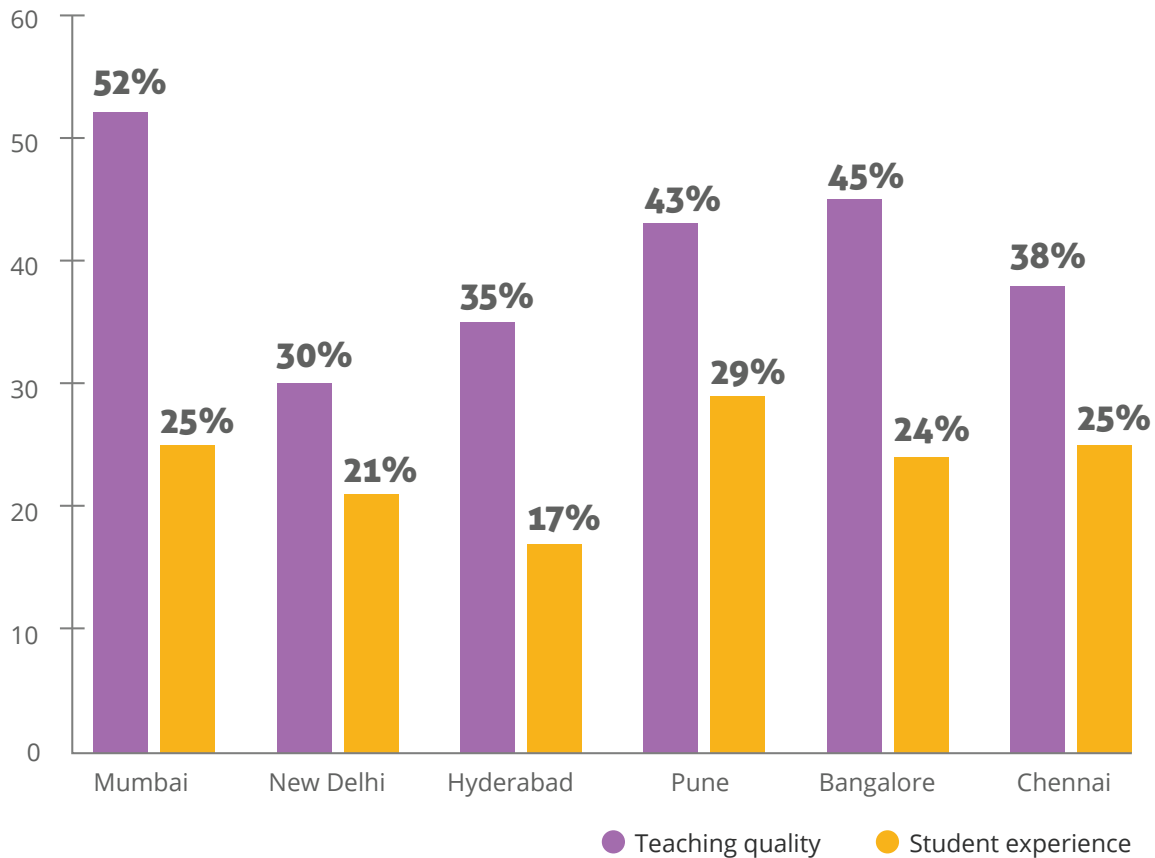
Seeking a collaborative experience

Some students are attracted to a more multidisciplinary approach at university, and feel this is more accessible abroad, like prospective master's in engineering student, Ashish, in Delhi: *"Abroad they have the collaboration with different universities across the globe. Whereas in my country the courses are concrete, the professors are concrete, but the discipline is not intermixed. If you are an electrical student, then you die as an electrical student. At universities abroad, an electrical student is collaborating with the mechanical to produce a tesla automobile that is electrical, mechanical and a CS. So that amalgamation is what I am looking for."* This portrays a desire to not only collaborate with different departments but with different institutions worldwide, thus communicating a preference for a global university with international partnerships.

The relationship between subject choices and location

Many Indian applicants feel there is a strong correlation between subject choices and study destinations, believing location is key to unlocking the best potential for their interests. This can be seen in the words of applicant Ritik, in Mumbai: *"The location is important where you study. Like, for every field there are different location to study. I want to study biotechnology, for which Germany is a key destination. So, that is why I want to study internationally."* Deramshu, in Bangalore, says something similar: *"I am emotionally and intellectually attached to the US because machine learning leaders are based in the UK and the US and I want to be at the front of this field. Also, I am inspired by the work of people from universities such as MIT and Stanford and their work in AI. Being personally taught by them will*

allow me to gain greater insight in my field." Akhil, in Chennai, also has specific perceptions about study destinations: *"For management courses I prefer UK because it's generally considered the place for this."* Indian students favor universities, and even study destinations, which they perceive to excel in particular subject areas - institutions that highlight these strengths are therefore likely to receive a positive response from the region.

> *Indian students favor universities, and even study destinations, which they perceive to excel in particular subject areas - institutions that highlight these strengths are therefore likely to receive a positive response from the region.*

> *"The location is important where you study. Like, for every field there are different location to study. I want to study biotechnology, for which Germany is a key destination. So, that is why I want to study internationally."*
>
> Ritik, Mumbai

THE IMPORTANCE OF ACADEMIC REPUTATION

ACADEMIC REPUTATION AS THE #1 FACTOR WHEN SELECTING A UNIVERSITY

37%

38%

44%

34%

New Delhi

Mumbai

Pune   Hyderabad

Bangalore   Chennai

34%

38%
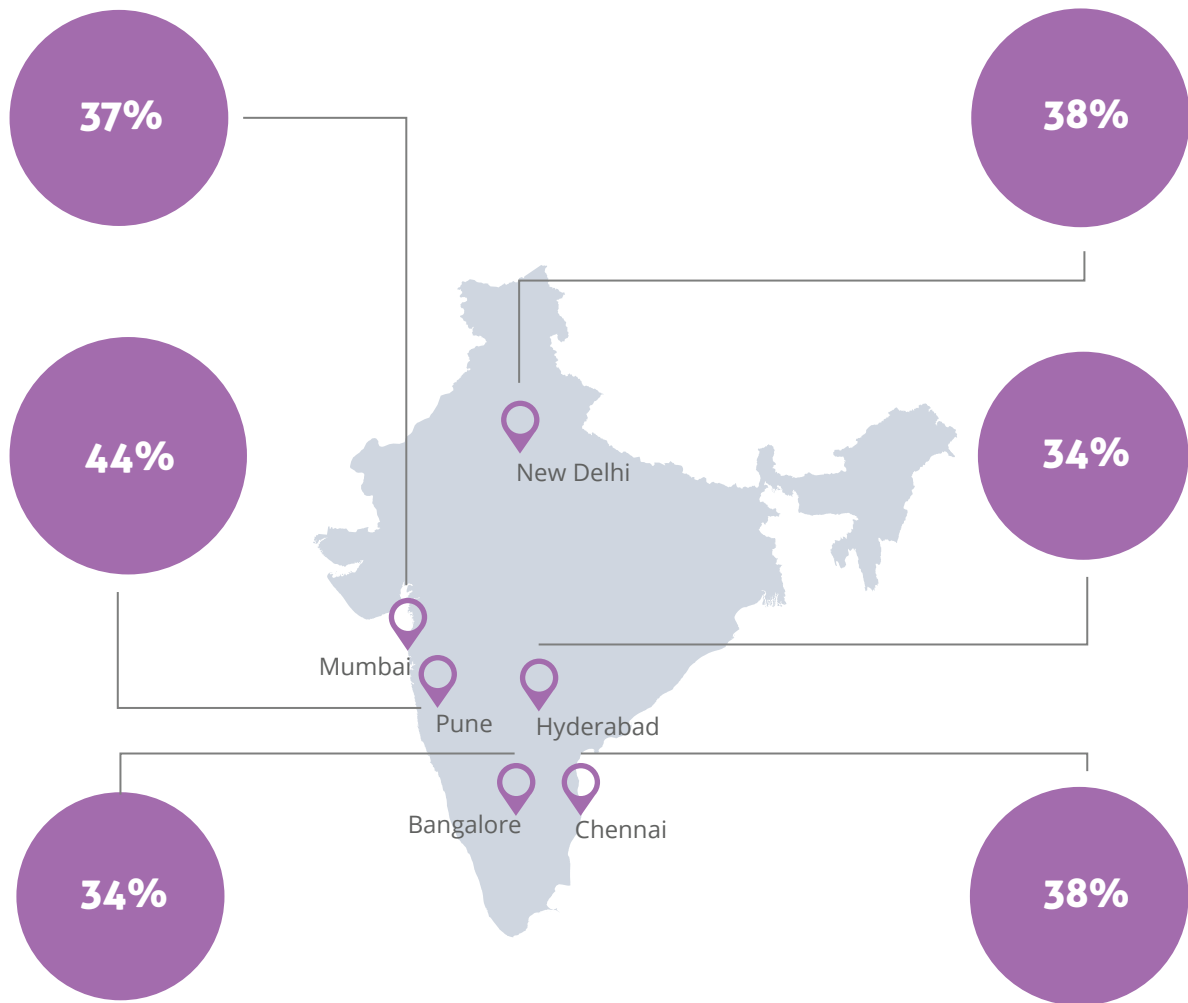
With 37% of Indian applicants placing a university's reputation among academics within their top three priorities when selecting a university, it seems that the academic reputation of universities is highly important for students, placing even higher than the 'university's reputation among employers', which 23% of applicants placed in the top three. This section therefore explores how subject, professor and course reputations all interconnect and play a part in Indian applicants' decision processes.

The reputation of specific subjects

In the 2016 QS India report, applicants were asked whether they find subject-specific or overall rankings more useful when choosing a university. An overwhelming number (66%) of Indian applicants found subject-specific rankings more useful, showing that they closely relate rankings to a university's prestige, and tend to particularly value how universities performed in their subject of interest. This report reveals this sentiment is

still relevant, as expressed by applicants such as Akshay in Chennai: *"Rankings are definitely important to me. I prefer the subject rankings rather than the overall ones, because if the subject ranking is good, that means more funding is going into that field for research."*

There is also a clear notion that certain subjects are better to study abroad, as students recognize that the course could be more favorably viewed by employers and give them a good return on investment. Speaking in Pune, Shaista told us she has studied a postgraduate degree in intellectual property but is considering studying abroad, as: *"The subject is very new to India and there's*

a lot of development which needs to be done. So that's encouraging me to do the same course again internationally, because there is quite a lot of fame in that subject and there's a lot of development over there so there would definitely be a lot of return on my investment."

The most popular study destinations among Indian applicants, in declining order, are; the US, Australia, Canada and the UK. This is interesting given the HE markets of these destinations tend to perform much better than India in the QS Subject Rankings for the two most popular subject areas: business and management and engineering and technology.

SUBJECT AREA RANKINGS: INDIA VERSUS WORLD

Engineering & Technology

Global

University	Country	Rank
MIT	US	1
University of Melbourne	Australia	27
University of Toronto	Canada	43
University of Cambridge	UK	3

India

University	Rank
IITD	64
IITB	68
IITM	95
IIT-KGP	108

Business & Management

Global

University	Country	Rank
Harvard University	US	1
University of Melbourne	Australia	14
University of British Columbia	Canada	38
London Business School	UK	3

India

University	Rank
IIM - Ahmedabad	101-150
IIM - Bangalore	101-151
IITB - Bombay	101-152
IIM - Calcutta	151-200

Gaps in the rankings?

While subject rankings are helpful for giving prospective students an idea of the most well-respected institutions in their field of study, Indian applicants are also very much aware that rankings cannot tell the full story to empower a fully informed decision. Abhimau, in Delhi, told us he is looking elsewhere to help him decide where to study his master's in computer science: *"Afterwards I realized the ranking does not matter and instead your own personal research in that field is more important. For example, for AI and computer science the rankings do not correspond with what research is going on at the university. I instead used forums and websites such as Quora, where you can get better answers on what kind of research is happening at particular universities. This is more helpful than using rankings."*

One of the indicators used to compile both the QS World University Rankings® by Subject and the QS World University Rankings® is 'citations per faculty member', with a higher percentage weighting being given for more research-heavy subjects. This allows students to narrow down the results to see which universities are performing best for research impact, but further research, such as that conducted by Abhimau, is needed to see which areas of research the university is particularly reputed for. Furthermore, Indian applicants feel there is a lack of transparency about the specific research interests of universities, in their chosen field. This information could also arguably be made easier for students to access.

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Abhimau, Delhi

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## The importance of professor reputation

Another key consideration for many Indian applicants is the reputation of the professors themselves, which sometimes comes above the overall ranking in terms of their preferred method of researching prospective universities. For example, Abhishek, in Bangalore, feels: *"I look at the faculties, the department and the professors. And then I look at Google to check their citations, what kind of reputations they have, and I also vaguely look at the QS World Rankings."*

Similarly, Shavanthi in Chennai says she would rather study at a lower ranked university with a good professor than a highly reputed one: *"When it comes to rankings, I'd say it depends more on my academic advisor - if they are very good but the university isn't highly ranked, that's okay. I just*

want to study under a good professor for research related to my subject." Vinay, also in Delhi, says that when choosing an institution, he looks: *"At the kind of research that the professors do in terms of their expertise".* This highlights the importance of professor reputation within subject areas among Indian applicants. Universities which promote the academic excellence of their staff are likely to appeal to students from this region.

For some students, the quality of teaching delivered by professors appears to be more important, while others consider the research experience and overall knowledge of subject field by their professors to be the priority. Prospective master's student Bijoy, in Delhi, considers teaching the most important factor when choosing a course, as well as: *"Who the professors are, what kind of experience they have and how they're going to help me in the long run."*

UNIVERSITY'S RESEARCH AS THE #1 FACTOR WHEN SELECTING A UNIVERSITY

New Delhi — 24%
Mumbai — 20%
Pune — 21%
Hyderabad — 24%
Bangalore — 25%
Chennai — 23%
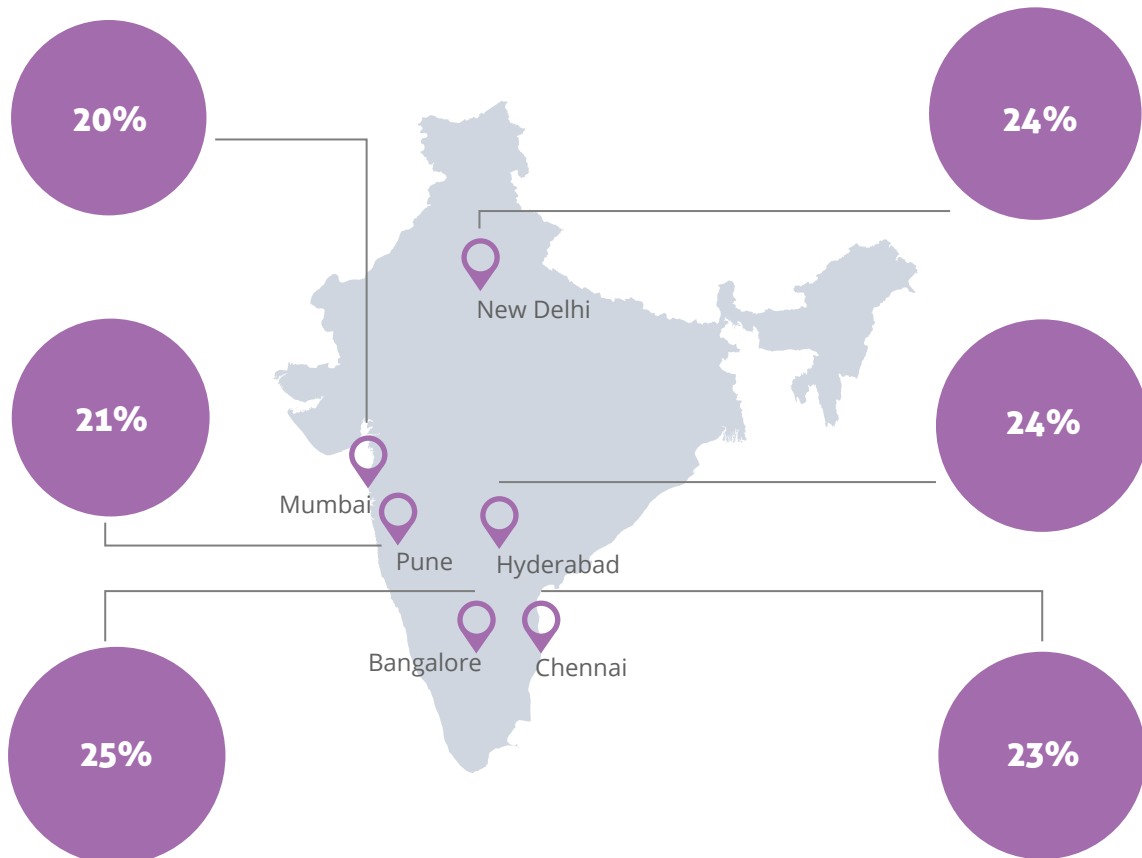
Directly contacting professors

Other students, such as a prospective PhD student Salman in Bangalore, use the subject rankings to narrow down their options as the first step in the decision process: *"Essentially, I look at top universities for my particular course, see the list of universities, and then look up their faculty and what research they're currently working on, and I'll email the professor asking for provisions in the lab."* Salman is by no means the only student to prioritize the professors - and their research - themselves. Neither is he the first to contact them directly to find out more.

Many Indian applicants go to the effort of getting in touch with professors, despite being well aware that contacting them is not always easy, demonstrating their preference towards having tutors who are a good match for their research goals, and are responsive. As Ram states: *"That's the most difficult thing, getting in touch with the professors, in many universities they need to authorize your application before it even gets through the process. You can't go onto QS and find out what kind of research is going on*

in a specific university." Just as applicants feel there are gaps in the subject rankings, Ram highlights a need for greater communication between universities and prospective students - to enable them to identify the right mentor for their research interests. Universities which make this information transparent and readily available are likely to see recruitment success among Indian applicants.

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>
> Salman, Bangalore

Ram highlights a need for greater communication between universities and prospective students - to enable them to identify the right mentor for their research interests. Universities which make this information transparent and readily available are likely to see recruitment success among Indian applicants.

Reputation of the program

While many students find subject rankings useful in helping them to narrow down universities, it is clear that rankings are not the most important factor for many when it comes to selecting a university. In addition to carrying out meticulous research into the professors, students in the region heavily research the curriculum of their intended program, ensuring that both are a strong match to their personal and professional goals. Part of this attention to detail is perhaps related to the expense of higher education, made even more costly for those from emerging markets with a poor exchange rate. This issue is clearly identified in the survey results, which reveal that many Indian applicants (47%) regard tuition fees as the single most important aspect when choosing a university.

"I would say the curriculum is something that I use to compare universities. If one of them is a higher ranked university but the curriculum doesn't match what I want to do, what I want to pursue, then I will probably drop it, and take a slightly lower ranked university."

Sandeep, Pune

It is no surprise that students should want to research what they would be studying in their program before they commit to it, but it is notable how many Indian applicants place importance on the contents of the curriculum itself. 41% of students selected teaching quality as one of the top three factors they consider when choosing a university, demonstrating the importance of content and structure of the program.

Several prospective students explain that the curriculum is the most important aspect they look for when measuring and comparing universities, including Sandeep, in Pune, who values it more than rankings: *"I would say the curriculum is something that I use to compare universities. If one of them is a higher ranked university but the curriculum doesn't match what I want to do, what I want to pursue, then I will probably drop it, and take a slightly lower ranked university."* Mohan in Chennai supports this view, placing more importance on the curriculum than the study destination: *"Any university that would offer a specific course I'm after and has a reputation to do that, I would choose that. There are a lot of universities in Italy and the UK that offer the course structure I need and I would stick to that. At this point the destination is not my priority as such, anything else other than course structure is not my priority."* Such a view illuminates the important role program reputation plays among Indian applicants, thus demonstrating its value as an effective tool for recruitment.

KEY FINDINGS

Motivations behind the overwhelming popularity of STEM subjects in India uncovered

- **STEM subjects are linked to increased employability in India and abroad**. Applicants from the region strongly believe that some disciplines are more employable than others, therefore selecting a subject with a view of a future career.

- **Family pressure** is sometimes expressed by Indian applicants when it comes to subject choice, with some female applicants in particular expressing an interest in arts programs and being persuaded into sciences by their parents.

- **There's a desire to specialize to beat competition**. Indian applicants feel the need to specialize beyond just the undergraduate, often feeling that a single master's is not enough. There is a perception that employers globally seek specialists over generalists and that in-depth knowledge of a subject is highly regarded, fueled by the need to stand out.

## Indian applicants seek greater academic freedom

- **Indian applicants feel India's HE system lacks academic freedom**. This pushes many applicants to pursue an international academic experience, where they feel there will be more freedom to follow their research interests.

- **There is a strong sense of frustration among applicants** that India's HE system lacks modern teaching methods, as well as equipment. Prospective students call for a more practical, rather than theoretical, approach to study in India, which they feel they can access more readily abroad.

- **Perceptions about study destinations often relate to subject choices** among Indian applicants, who regard specific countries as notorious for specific subject areas. Universities should take advantage of perceptions such as these to enhance recruitment strategies.

Indian applicants call for greater research transparency

- **Subject rankings do not always play a huge part** in helping Indian students decide on a university, with the course curriculum and professor reputations sometimes valued more. Some would even choose a lower-ranked university if the curriculum or professor were a better match for their goals.

- **The reputations and previous research work done by prospective professors is highly important** to Indian students, particularly for those looking to study a PhD.

- **Indian applicants tend to be very active in researching their prospective course curriculum** and professors, to assure that they match their goals and interests. Information regarding the specific research interests of universities and academic staff, could arguably be made easier for students to access.

See the full range of insight reports on student motivations and trends on
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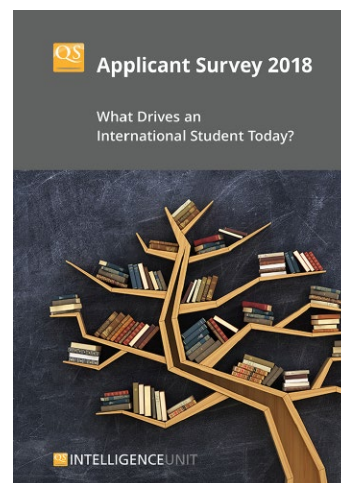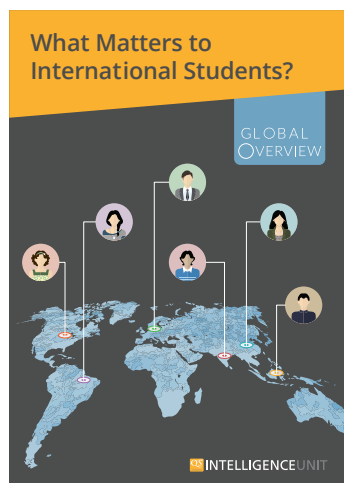
If you are interested in first-hand access to insights, want to explore a particular topic or region, or would like to partner with us on future research projects, please do not hesitate to get in touch, on
b2bmarketing@qs.com.

ABOUT QS

Established in 1990, QS is dedicated to providing independent and authoritative research and resources for both prospective students and higher education providers worldwide. The QS World University Rankings®, published annually since 2004 and hosted on student-focused platform TopUniversities.com, is among the most-consulted resources in the sector.

In response to growing public demand for comparative data on universities and other higher education providers, and for institutions to develop deeper insight into their competitive environment, the QS Intelligence Unit was formed in 2008. Committed to the key values of rigorous integrity, undeniable value, unique insight and charismatic presentation, QSIU strives to be the most trusted independent source of global intelligence on the higher education sector.

In addition to the research and insights provided by QSIU, the company offers a range of services to help prospective international students find the right institution – and vice versa. This includes a global series of higher education fairs; an annual publication cycle of guides, reports and e-papers; and a dynamic range of online platforms.

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