

Course Name- Complete guide for campus interviews: Step by step preparation for Internships and Full-time jobs

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Value of Masters Programs

Hello folks, today we'll talk about the value of the master's program and dig a little bit deeper into it. So the content is going to be of this nature. We're going to talk about a different master's program, specifically the MBA program, the MS program, the PhD programs. We're going to look at options within India and also look at, of course, the civil services. Then have a discussion about pros and cons of all these programs and then think about how students would make a good career choice, thinking about the long-term viability of their career with respect to some of these career choices or educational choices that they would be doing. So firstly, the key things to think about is that there is a skill gap difference between what you learn as an undergraduate versus what you would learn in the master's program.

So clearly everything about master's program should be tailored towards increasing or gaining more skills and or going towards regions where there's a skill shortage. So you should have these two calculations in mind. When you think about whether I should go on for further studies, when you say masters, I of course means larger things like anything for further studies, like further training, further doctoral skills or anything of that nature. Most people always think that a higher education is something that you would do purely from a technical perspective, but you'd be surprised that growth in the industry is beyond a certain level.

For example, beyond being a manager, it's all about people and communication skills. In fact, if you look at CEOs, like for example Sundar Pichai or everyone else, you would notice that they had been assigned a mentor who actually trains them to be a better effective communicator. So there is actually called a communication coach. So all top executives, vice president onwards, actually are assigned with a coach who actually tell them how to deal with people, how to talk effectively and how to communicate ideas more succinctly towards audience. So don't always think about growth purely from technology side.

It is definitely a stream. You can be someone who is technically an expert and then become like a chief scientist or something like a principal fellow. But most cases, your career is going to involve dealing with people and communicating ideas and solutions. And consequently, having development along those lines is going to be a reason why you would again think about higher education or getting more skills along the directions. Before we go into all programs, I just want to think about a few things.

So there's something, an idea called a break-even point. The idea of a break-even, and this is something that I advise all students to think about. So when you decide that, hey, should I go for a program and get myself trained? There's always a cost-benefit analysis that's partly qualitative and partly quantitative. The quantitative bit is going to be into an idea like a break-even point and a break-even point is very simply this I have a certain amount of money invested into a program there's a sunk cost as well as some hidden costs how much time will it make for me to actually recover the sunk cost right so that's that's idea really of a break-even point so that's a one of the good measures to think about whether there is value in going ahead

with one of the further educational goals that you have OK, so for example, if you look at the slide and if you look at some of the examples here, this is an example with an MBA program in mind. And if you are doing an Indian MBA degree, you can expect something like a gross salary post-graduation of the order of 22 lakhs per annum.

And then if you do other things related to expected growth, your rental, your living expenses, and then talk about how much would be your takeaway, there is some money that's going to come as a takeaway. So that's one part of the equation. The second part is a cost. So normally there is two years of fees that is order of magnitude of about 26 lakhs at the moment. And there's also some sunk cost which is or hidden cost which is related to the opportunities you have missed.

So the two years you are in the MBA program you not worked. So there is some opportunity cost associated with it. So putting all this together, doing a simple equation, math, sunk cost divided by the savings I have, you would come to a return of investment about, sorry, a breakeven point of about 10 years or 11 years. And in fact, you would see that most of the bank loans are structured around this way, a payback period of 10 years for a loan. That's normally how things are structured.

So what this means is over the 10 years, you're going to be pretty much locked into giving all your savings away just to pay back the loans that you have. So you cannot change careers. If there is fluctuations or shocks in the market, you can't just leave a job. If you lose a job, then it'll be really difficult for you to pay back the loans. You'll be in debt.

So someone would actually come trying to chase you down to get the money from you. So it's going to be a pretty tight, intense period for the 10 years till you actually pay back the money that you actually took, a loan that you took. Now, if you are someone who has already saved that money, of course, it makes sense. If you are someone who has actually reduced the cost that you would have to invest into the master's program or have got scholarship, again, it makes sense to actually go for a program. So always think about what is the payback period time.

think about the call quantitative aspects of it and also consequently think about what that means for you in terms of your flexibility to think about other options downstream with that in mind let's look at some of the more qualitative aspects and walk them through so in this case we are looking at mtech and phd programs so Firstly, let's look at MTech program within India and reason why you should be doing an MTech program. So for most jobs, so we know that I have now had like about 15 years of experience in the industry. Our friends have had like the same amount of time and we have like interacted with maybe junior executives, senior executives of thousands or more, right? And one of the things that we have noticed is people do not really need high um master's degree or a high uh technical skill to actually proceed or be successful in their job your bachelor's degree is in most cases more than enough if you have common common sense if you're able to pick things on the job it should be perfectly fine you should be able to do a really good job so why then would you go and do a master's program right one of the and especially in india if you're doing a master's program please remember that you better have an academic um um goal or an inclination towards doing a professorial job. So that should be your inclination. And consequently, that's the reason why you want to do a master's program.

And why do you want to do a master's? Because during the time of your master's, you would focus on a certain research. You get to have expertise or publish papers related to a certain field, which makes you a great candidate for a doctoral program. So if doctoral program is going to

be the direction you want to head into, doing a master's in India is a great option. It gets you the academic credentials necessary to pursue the doctoral path in future. Right? That's definitely one solid reason why you might want to pursue a master's program or MS program in India.

The second reason can be that there are certain set of skills that you have not developed when you were in undergrad. Even though the undergraduate program is supposed to give you all the skills required for the job, you might find that either the technology landscape has changed, the job market has changed, or you are not really focused on your education at the time of your bachelor's degree. And consequently, you really need to reskill and upskill your skills. Right? So, if that is a reason, that's again a very valid reason. Programs within India are structured towards a job market within India.

So, if that's the goal, if skill development and a focus on the Indian market is your goal, it makes perfect sense to do a master's program in India or go forward for a better future in the Indian market. Finally, if you are thinking about public sectors and other things, I think is a little bit of a brand equity some of the big public sector companies some of the top mncs actually come towards certain set of schools so if brand is an issue and you think that your opportunities are restricted at least in the beginning right in the beginning of your career when you do not have much experience then of course you might want to aim for one of those brand named schools like the iits the institute of science nits and then think about how do you want to go ahead and get a degree or education from there such that you can leverage the opportunities that are available But these I believe are the top reasons why you should be thinking about a master's program within India. Why do you want to do a doctoral program? So if you have been following the news, IITs and Indian Institute of Sciences, for example, have become among the top schools in terms of generating quality research output. So India is no longer a place where things used to be like, hey, we are a decade or so behind in technologies. In some of the fields, India is actually leading the world or it's among the top universities in the world actually publishing content out there, research content out there.

The work that you do with IITs and many of the top IITs and IACs are pretty much top notch. So you want to think about how do you go ahead and work with those faculty and develop those skills. Second thing you want to think about is, hey, the most jobs in the universities are going to come because you have a doctoral program.

You have a Ph.D. degree under your belt. So, if you are thinking of, hey, I want to be a faculty at say NITs or one of the top universities, having a degree from, again from one of those top universities help. There is a little bit of a trouble at some of the universities which are, which kind of prefer foreign PhDs or a PhD abroad and it is only because the The kind of research work that the universities are trying to do is still a little behind from the work that the other university's counterparts around the world are doing and they want to catch up in that. So there may be a small difference in related to the quality of work being done between the top universities and the universities abroad. It is only because of the traditional gap that has existed but the gap is bridging really fast.

One of the things I want to call about is that if people want to like migrate to other countries, opportunities are open only for people who have had extremely good technical skills. So for example, this grading sort of rating system based on your technical or your educational skills, countries like US, UK, US, and even I think Canada have this program where you can migrate if you have top skills. And consequently, that may be one of the reasons why you want to do a

PhD. Jumping into why you might want to do a PhD abroad, specifically why in US. Firstly, doing a PhD program is extremely selective.

There is only a limited set of students that the professor actually looks to bring into the program. And consequently, your research profile must be really good. So if you are an undergrad applying without having a good research potential or research background, it's going to be really, really difficult for you to get into these doctoral programs. If you have research work and it doesn't matter really the university you study, if you have very good quality research work done and if you have it under your belt or if you have a master's degree with a specific set of research focus, then it's going to be much more easier to crack into these programs. PhD programs in US offer a separate route towards getting work visas.

So we'll not get into the details, but it makes it a lot more easy to apply for work visas on behalf of the companies. And consequently, it's easier to get into industry. Similarly, the skills that you have trained in a PhD program in the US makes you kind of a specialist. And consequently, your value in the market is way more than someone who has done an MS or an MBA. And consequently, you have a lot more stability.

I would make a point here that if you're going to apply for US specifically, think about the professor and the quality of research and look about the fit. Those are the parameters you need to be looking rather than just the name or the brand of the university. A lot of people just apply with the brand value. For a doctoral program, brand value makes absolutely no sense. It's the work that you do, the professor that you work with that makes a lot of value.

When we talk about PhD programs, it's not just going to be PhD in US, of course. There's a lot of other countries that might actually slip under the radar. So people normally think about, say, can I do a PhD in Canada? That might be an option. I would say compared to US, the opportunities within Canada is significantly lower. It might make sense for a certain set of programs.

For example, civil construction might make sense. But if you're in high tech, for example, it might not make sense to be in Canada for a PhD program. It really depends on the faculty and the school you're going to target. But Canada, think about it. Europe offers a lot of, I think, you can think of it as completely funded programs.

And you can also think about easier ways to completion of your degree. So normally a doctoral degree in Europe, if I'm talking about Germany or if I'm thinking about Italy or Spain, it would get completed in say three years. So compared to say the time spent in US, which is probably six plus years. So there's significant advantage there.

That might be one of the reasons. But the job market in Europe is not that significant compared to, say, in, say, US. Alternatively, there are a bunch of opportunities. So when Vinod and I were working, we traveled to around the country, specifically Singapore. We have been in Korea. And we have noticed that there is a lot of opportunities in Asian countries which people tend to miss out.

So if you're thinking about opportunities in Korea, in Japan, if you're thinking about, say, Singapore, Australia, there's a fantastic set of opportunities. And again, there are a new set of agreements between the government of India and, for example, with Australia that makes a lot more potential for people to actually go and work in, say, Australia compared to any other

place. So think about these non-traditional places to do a PhD. Some of the work done in Japan and Korea, especially in semiconductor technology is like high-end.

Similarly with Taiwan. You need to be thinking about how do you go work into or learn or get your doctoral program over there. But ultimately remember that there's a lot of growth back in India. So always keep that in mind of how do I learn something and how do I leverage those capabilities back in India. Let's look at a little bit of the admissions. So normally, whether it is a MS program or a PhD program, there are a couple of things that you need to do.

You always need to do a SOP, something called a statement of purpose. You need to provide something called a resume. And you need to provide a bunch of your standardized scores, for example, GRE or TOEFL, or it could be GMAT, for example, for MBA programs. So there are a couple of standardized things. And of course, recommendation letters need to be given.

There is a subtle difference. For example, a resume is a set of work that you have done listed in a certain structure. We have talked a lot about resumes. The one pager probably for academic or for a PhD program or a master's program, it even makes sense to write two pages. But you can maybe dig a little bit deeper into that in some of the videos that we have done. but I want to talk about statement of purpose statement of purpose is not just restating your resume it is talking about interest for example with your program so we'll not get into the nuances of it but there is a difference in what you're trying to express through each of these articles MS program is It's probably easier to get in if you are not looking for financial aid or funding, right? And if you do not have good research potential or research background.

PhD program, if you have great research background and if you are not thinking of funding from your pocket, you're looking for scholarships, that's of course a perfect place to get into. So again, restating that exact thing, just MS in US, it's really, really difficult to get a fund in. You might get maybe an offer provided your things like your GPA, your standardized scores and your statement of purposes and letters of recommendations all are good. But getting a scholarship is going to be really difficult. Especially in these days where the resources allocated for master's programs have come down, it's near impossible to get a scholarship.

Think about it that way. You might be lucky among the few who get it, but largely it's going to be really difficult. But normally, when people talk, when we Indians talk about how do we go ahead and study in US, the US costs are in dollars, right? It's pretty expensive. And we are talking about costs per year, like about 60K to 80K, really, for both the tuition fees and the living expenses. and that's a significant amount sixty thousand dollars or eighty thousand dollars is a significant amount for most indians so most indians are looking for scholarships and scholarships come in two flavor or rather three flavors they come as a research assistantship a teaching assistantship or fellowships fellowships are like not not gonna something be available for master students it's gonna be for phds maybe The RAs and TAs again are not going to be doled out to students unless professors have some connection or a network with students. So, they understand you really well, they understand your depth and they understand your capabilities.

So, it probably makes sense for people one year into the program to actually reach out and get some scholarships. I have seen that happen. But largely going from India to US, you are pretty much walking in with no funding. So, keep that in mind when you think about how do you actually go ahead and study in US for a master's program. Also, a key thing to call out right now is this for the work visas right now, the principal route is something called H1B.

So, we will not talk about what it is, but it is a lottery system. And currently, as it stands, there are about 800 odd thousand, 8 lakh students applying for the lottery and out of which 80,000 students are picked. So, it is a 10 percent chance. It is a 10 percent chance of you actually getting a work visa. You do get some things like a optional training period which allows you to work without the H1B for a period of time, but it eventually runs out and I am seeing a movement where companies require that you actually have H1B to be working in US.

So, there is lot of calculations that go in, the point of the slide is that there are nuances. There are some quantitative decisions. There are some qualitative decisions related to your odds. How can you actually work? How can you actually generate the funds required for you to survive? Those things need to be thought about before you decide that you will actually go ahead and do a master's program in, say, US. Okay. So talking about some other countries, a master's program in, for example, Germany is free, right? I think it's a case with some other European countries, but it is definitely the case with Germany.

There's some of the scholarships available, I think like the DART program, which might be an interesting way to leverage and get into Germany. And also once you get into Germany, for example, these technical skills become really valuable. The technology skills that are available in Germany and the kind of background you have working through your program becomes clearly something that you can leverage across the world. I've seen people who have migrated from Europe back into US and vice versa too, but it's definitely a good option. Similarly, I think I mentioned about Asian countries, specifically Korea, Japan.

When Korea, I mean South Korea, of course. You don't want to be North Korea. But if you're in Korea, if you're in Japan, or if you're in, say, Singapore or Australia, again, there's a fantastic set of universities. Many of the master's programs are funded. You might want to dig into what are the scholarships available, how do you actually access it.

But think about these non-traditional master's program, too. The job market in some of these places, for example, for Singapore, Australia, Korea, Japan, these are all are still pretty good, especially in the high tech industry. It really depends on the sector, though. So dig a little bit into what are the options, what are the companies that are available over there, and then see how you would actually leverage your skills. If you have been following the news, you would know, for example, that India has just tried up a bunch of Let's say agreements with Singapore to bring the semiconductor technology to India. So Singapore does lead India, at least, and maybe a large part of the world in semiconductor technology.

Some of the big fabs are present in Singapore. So if semiconductor devices or technologies is an interest, clearly a country like Singapore makes a lot of sense. One of the key things to notice, your MS does not limit your future potential. So if you have like ultimate goal to actually say, come back to India, or if you're thinking about say, hey, how do I go get further studies in a different country, let's say US or let's say Europe, you can still do that. A master's program in one of these countries, like the countries we mentioned, is a great opportunity for you to leverage it for a further PhD degree.

It's highly valued. You get the right research experience and it'll be really beneficial for you. Looking at MBA programs, unfortunately, I think quite a few students think MBA is something that they should do soon after a bachelor's degree. It might be because there aren't enough jobs. And consequently, people think that once you get into MBA degree, like an IAM, you would

have access to the labor market in the top managerial labor markets and life is all set. um but that's really a bad way to in my opinion it's a really bad way to do mba and if you look at mba requirements for example in us it states clearly that you need to have at least four years of experience before you can actually start applying for the program right so more experience you have it's better for you to actually be a valuable addition to the job industry.

So when when I went to do my MBA, for example, I, I, I realized quickly that you cannot really clear any of those interviews, unless you are able to talk about your experiences, right in the industry. So since I had experiences, I could talk, some of my friends, they had good experiences, they could talk. So you need to have significant experience. Otherwise, your degrees is pretty much meaningless, you'll be left without a job.

We did the break-even point earlier. We can do that similar calculation. But remember the costs are no longer in rupees or lakhs. It's going to be in like hundreds of thousands of dollars. So typically, a US MBA is complete between \$150,000 to \$250,000. It's a wide range and it's a lot of money.

So you can consequently think about what a break-even would be. And if you do not have the option to work in US, what that means? MBA program always allows for only one year of unsponsored, it's called optional training period, OPT. And companies do not value one year because that's a high risk that you will not get that H1B work visa when the lottery actually is asked. So it's a 10% chance.

Lottery may not work out. One year is too small for them. Small period of time for most companies to invest too. So unless you work this out really well, it can turn out to be a disaster where you don't have a job in US. You have big loans.

You don't have a job. You have to come back in India and look for jobs. So you'll have to start paying US debt with Indian salaries. That's going to be really, really difficult. So think of those when you make your decision and remember that MBA makes sense in a boom time where the market is really doing well, companies are trying to absorb or in fact most degrees are good in a boom time. In a recession where jobs are limited or where the market is, the industry is shrinking or the sector is shrinking, it may not really be the right time to do it. okay MBA in other countries now there's gonna be like in Europe it's gonna be language problem it's gonna be limited set of jobs Europe is not really a powerhouse in terms of like managerial jobs there are tech jobs but they are limited for master students you might want to think about um really is it worth to actually go invest and spend time in any other country okay if you have like fully funded scholarships if you can make that happen um it's a different argument uh and if there is specific reason that you want to be in that in that in the job market right maybe there is a startup opportunity you are aware of that nobody else is aware of if you are really specific and clear about your goals then it might make sense to work in other countries but really um you MBA should largely be taught from Indian labor pool as well as from the US.

In my opinion, it should be taught from these two countries. You can think about in some sense from Asia, for example, Singapore. But think about what that means in terms of, again, the break-even point. And whether really you should be doing a master's degree in Singapore or you should be doing an MBA, for example, in Singapore.

It's going to be a calculation. It's going to be related to your work experience. It's going to be related to what is the sector you're looking for. But my point is you need to dig a little bit deeper

before you make that call. Finally, I think there is that, at least of late, there is a craze for the civil services. It always used to be there, but the craze for civil services wasn't something that was so open and out there, right? Most students I talked to, like not most a couple a significant let me say put that way so i've been now walking around country talking to different students across across the country right from different universities and there is a there's maybe a there is a increased focus on trying to get into civil services right people spend away like years at a time trying to crack through civil services and wonder what happens after if things don't work out so let's get a little bit into it selectivity is really really low we are talking about one in 500 or or or so so think about the odds it's really tough It is also a little bit of like, if there is an insider information related to the kind of preparation you need to do and kind of like, let us say the ways that you need to present yourself, that is well understood by someone already in the civil services rather than someone trying to break in outside.

So, that again makes the odds really difficult for you. So, if your family is not, if not a civil servant, if you are not in IAS, if you are trying to break in, it is going to be really difficult. Okay, I think one of the key reasons why students want to look at it is, hey, I have a government job, I have pensions, I have like a guarantee throughout my life. And unfortunately, it leads to other things like there are other ways in which I can, this should not be the conversation, but there are people who are thinking about other than the salary, there are other ways in which you can exploit the system, right? I really seriously ask you folks to think through, not from the principle of exploitation itself, but the idea of, hey, should I actually think about a long-term secure job? doing nothing throughout my life or should I be someone who actually creates value for the country, right? The country is in a huge growth phase. We'll talk about some numbers a little later. It's got fantastic opportunities and each one of us should be thinking about how do we help the economy grow? How do we create jobs? How do we go ahead and provide value to the people rather than thinking about how do we take value, how do we like hide something away, pretty much in that way.

If you are someone who is passionate about like trying to help people through government services, and if you are ready to take that kind of odds then yeah it might make sense but for most people they really need to revisit on why they would want to do a upsc or civil service jobs versus spending that same time amount of time into a skill development activity like a phd or a masters right or thinking about spending time into doing something like creating opportunities for others through an entrepreneurship so with that we end today's notes um thank you all again hope this was informative and good luck