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EDITOR'S NOTE ■



ONLY THE OER FARNS

Talking about the art of cooking, Tom Colicchio wrote that 'recipes tell you nothing. Learning techniques is the key' and you'll be surprised at how much these few words tell about what is relevant and what isn't in the emerging world of online education today. Despite a fistful, nay, a wheelbarrow-full, of theories for effective online learning doing the rounds, it is yet to be seen if they all end up being just theories that exist on paper or manage to excite the learning synapses of students.

So far as the blitz of online communication is concerned, it is only too obvious if you happen to be anywhere near any of the prevalent social media platforms. From Facebook to Twitter to Instagram, there are literally hundreds of 'experts' wanting to teach you something or the other. Whichever direction one looks in, there will be someone or the other declaring he can teach you the techniques of shaping the future, or if not that, at least teach winning strategies. They all seem to know the path forward and seemingly have an insightful understanding of emerging trends and believe that any two-hour talk about the way change and innovation have become a necessity today is similar to having attended a few classes at Hogwarts school of Witchcraft and Wizardry. The art of navigating through complexities is what everyone assumes is going to award a learner the new competitive advantage... and thus we have more people on the social media and even the offline world intent on selling webinar sessions and online workshops than there possibly are those willing to learn.

My mind says that online learning is a misnomer. There is hardly any learning there, unless we happen to stumble upon some magical technique that connects the wonders of tonal expressions and body language to tell the teacher how much has been grasped and also lets the student get under the skin of mere information eruptions to caress the nuances that transform whatever is being taught into a learning that can be adapted to practical use. Decades of distance learning has proved that the best is the traditional format of teaching.

When I talk about adapting textual blocks into education, I mean to say that only a doer learns in the long run. To do matters. Doing turns an abstract and complex bit into something that suddenly becomes vocationally relevant. Take the case of tens of writers and publishers announcing webinars on 'how to write your novel' or some of those management gurus claiming to teach 'leadership traits' or 'effective salesmanship' through a few hours or maybe a few weekends or a few days of long daily grinds of sessions on Zoom or Microsoft Teams or Google Meet or any other platform. If their claims were so sound we'd have already had hundreds of best-sellers in the marketplace or have had hundreds of market-ready professionals in sales and marketing.

Before you start wondering if I am being over-critical of the online format, let me add here that online learning has its advantages and in the absence of the conventional learning format because of the Covid-19 phase, it is definitely the right step to take. After all, some learning is far better than no learning. However, every form of learning becomes meaningful only when it can help a learner turn theories into practical chunks that help him convert questions into workable solutions. We all need to finally become a 'doer'... because only the doer learns.

> arvind@theeducationpost.in arvindpassey@gmail.com

Blog: http://www.passey.info



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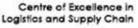
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Arvind Passey

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Brij Mohan Singh

РНОТО S.P. Singh

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letter@theeducationpost.in

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CONTENTS

Rankings and online education in the post-covid era

by Arvind Passey

PARENTING IN THE TIME OF LOCKDOWN

by Gaurav Sharma

Thrust on Online ducation by the Government of India - A Critique

by Prof. MJ Xavier

52

Opportunities for reorganizing work-life

by Dr. Rajesh K Pillania

Business Strategies for dine-in, take-away and home-delivery setups

by Prof. (Dr.) Ajay Kumar

Let's understand counseling

by Rimli Bhattacharya

ENGINEERING

58

The enigma called a mask

by Harsh V Verma

ONLINE EDUCATION A way forward for future learning

by Dr. Sujata Shahi



The Future Pedagogy

by Madhumay Mallik

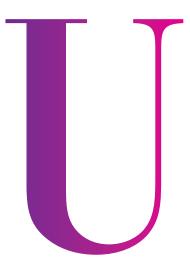
Covid-19 Impact on **Higher Education**

by Prof. Kamlesh Misra



Rimli Bhattacharya

LET'S UNDERSTAND COUNSELING



rmi a successful career woman found it difficult to handle the little strains of everyday life. Though she would appear cheerful but deep in her she carried a sadness which drained her intensely. The feeling of despair would then turn overwhelming. She would prefer reviving the memory of losses that she had encountered in her life and she disdained the little joys that nature provided her. She had in her a need to be constantly validated through likes and comments only from a man. "The feeling is somewhat ghoulish", she would often say it to herself staring at the blank walls, lost in the reflection of her own shadow. All that remained in her was the hoodwink of her hollow self, just the shell of being a human. She entered into multiple affairs with various men at different stages of her life until she ran into a trainer during the "Managerial grid program" which her office had arranged for a group of high performing employees.

She was one of them. The persona of the trainer bewitched her and she proposed a relationship with him. Given to his vast experience dealing with young personnel the sexagenarian man suggested her that she takes professional help. And instead of entering into a forbidden relationship with her he asked her to meet a counselor trained in handling mental disorders.

Make no mistake, please. By mental disorder I mean mental illness and in no way am I branding the person "Mad". A sound mental health is the key to a

Counselors are

who acts like a

trained professionals

caretaker to a person

dealing his/her issues.

They are strangers and

would listen and guide

you sagaciously.

who has difficulty in

successful life and contentment. It refers to our cognizance, conduct and overall emotional wellbeing. It's all about how we contemplate, our perceptions, and our subsequent actions on the same. It can also sometimes mean an absence of mental disorder but unfortunately that percentage is very less. If an individual is emotionally balanced then it would not only improve his work productivity but would also help him/her in understanding good versus evil. An extensive range of factors can influence our

emotional well-being. Some of these factors include genes, heredity, stress, illness, trauma, sex abuse and environmental reasons like poverty and socio-political circumstances.

According to the Mental Health Foundation (MHF), mental health problems are classified under two categories – Neurotic and Psychotic. Certain neurotic imbalance includes anxiety, depression, phobia, obsessive – compulsive disorder (OCD), panic attacks and post-traumatic stress disorder (PTSD). On the other hand certain psychotic imbalances include: bipolar disorder, schizophrenia, substance abuse, personality and eating disorders. The list is not exhaustive. There are other maladies as well but we need not discuss them now. They can be dealt later in a different essay.

Mental illness being a taboo subject, people normally push it under the carpet. No. Be vocal about it and get yourself treated and cured.

Urmi, on return from her program did consult a counselor where she was diagnosed of neurotic disorder. Later she was also referred to a psychiatrist by the counselor as she needed medicines to control the chemical imbalances in her brain. Majority of mental illnesses stem from certain chemical deficiency in the brain and there is where the psychiatrists come in

picture. They are the ones equipped with the knowledge of prescribing the appropriate medicines accordingly.

We would talk about the role of psychiatrists in treating mental afflictions in a different essay. But in this article I would like to focus on counseling which is the first and generally considered one of the best weapons to deal with psychological issues like phobias, panics, depression, OCD, mood swings and irregular thought patterns. As I mentioned Urmi was professionally successful and also held a good

academic report but it was her who confided that nothing can replace the benefits of real human interaction. Precisely, it's a clear distinctive source of support. There can be nothing more sympathetic other than having a listener with whom you can talk about your feelings. But the barrier comes when you have your forbidden and personal dark issues and you feel the hiccup of discussing them with a known person or your family. That's where a counselor comes in picture.

Counselors are trained professionals who acts like a

caretaker to a person who has difficulty in dealing his/her issues. They are strangers and would listen and guide you sagaciously. They are specialists in cognitive behavioral therapy (CBT) and with each session with them not only you can start dealing with your mental illness on your own but can also improve your quality of life. With a counselor you are open to discuss any subject or taboo under the sun and you would be free of your overcoming your sense of guilt, embarrassments or topics which you are ashamed to talk about. In case of Urmi, it was her poor self-esteem which acted as a catalyst for triggering her mental ailment as and when she entered into a relationship with a man who would use her and then throw her like a doormat.

I too had undergone counseling sessions while dealing with my parents' afflictions and numerous hospitalizations, fighting my divorce and retaining custody rights of my daughter. I was unable to handle such trivial yet complicated issues on my own.

If you are considering counseling to deal with your problems and maladies here are a few pointers reflecting the benefits which you reap during your talk therapy with trained and qualified professionals whom we call counselors.

Catharsis

There can be nothing more relieving than purging out your pent up emotions. We all have in us bottled up thoughts and feelings that tend to weigh us down. Such liberating interaction feels like lifting a weight off your mind. Gradually you can set yourself free by spelling out those irrational feelings which you have been holding in you for so long. For Urmi it was her liaisons with men and for me it was my husbands' attitude towards me that had turned both Urmi and me emotionally vulnerable.

Watch your thoughts from a whole new world of perceptions

How do you feel when you verbalize your negative thoughts and emotions instead of grumbling in the interior of your own mind? I think we all know the answer. Not only it is cathartic but you can also get a guidance towards dealing your problem by letting them out. I had a problem of being vocal about my problems. My counselor suggested I maintain a diary and write down the thoughts and complications that are bothering me. She would then read my diary and then tailor a solution to deal with those issues. She helped me realizing that these worries and anxieties that I had been harboring in me were baseless. The fact that these doldrums are a part and parcel of life came as a huge relief to me. It worked for me, and trust me it will work for you as well once you figure out your real cause of concern and spell it out to the professional. An entire new world of perceptions would then greet you and the feeling is liberating.

Coping with Everyday Life

It can be a releasing experience when you know there is someone with whom you can talk to without getting judged. The very feeling that you know you can rely on someone who will not only listen to your problems but would also guide you towards solution can mean focusing on those disturbing patterns in your life which you have developed over the years. Take Urmi's case. She needed a validation from the opposite gender. But why? Was there any need? You are good enough and that is what she realized during her sessions. It reproduced a virtuous cycle, a feeling of being able to concentrate on self-development in everyday life and focus on positive changes. That in turn will uplift your mood. It can also open a brave new world of dreams and you start taking small steps towards achieving them in your daily life.

You are not alone

Both Urmi and I thought we were the only unfortunate ones who are unable to share our issues with people even if that meant with someone closest to you. Having a complete stranger who would not only give you the freedom to talk and would also not judge will empower you with the feeling that you are not alone. There is someone to take care of you. This is immensely helpful as you no longer feel isolated dealing with your sufferings especially something which had been bothering you for long and you feel embarrassed discussing with people who knows you.

Time you confront your feelings

Urmi had an episode of child sex abuse that she felt the need to be in to relationships with no string attached which would later leave her with a sense of remorse. I lost my mother but didn't have time to mourn her death. I divorced the man with whom I had a love marriage and that grief would refuse to leave me. Counselling helps dedicating some time from your schedule to face or confront your emotions. An appointment with a counselor not only ensured that you are committed to them for that period but that also meant you cannot run away without facing your own feelings. You make peace with yourself and a boost in self-esteem and confidence follows. As you confront your feelings you realize the anomalies in your behavioral pattern and trust me with each session with a counselor you can get rid of them. The counselor helped Urmi understand herself and I too healed from my mental bruises.

In closure I reiterate that anyone can benefit from counseling let alone only a mentally ill person. Irrespective of your age, your ailment, just a simple need to speak to someone while swimming through troubled waters these talk therapy works. It is no manipulation but it's like sharing your deepest, dark secrets with a person who will never label you good or bad. Counseling had helped people deal with afflictions like depression, OCD, bipolar disorder, anxiety, mood swings and also a wide spectrum of hindrances which you may be facing in your everyday life. A note of caution, if you find your case to be severe, deep rooted and complex you will need medications from a psychiatrist along with the sessions with your counselor. That would be a booster. And there is also a good news. Some people even gets cured only with the help of counseling as I said they are the ones who will help you understand yourself and what had gone wrong with you but without a judgment.

Stay mentally fit. Stay healthy... and yes, counseling helps!





Gaurav Sharma

PARENTING INTHE TIME OF LOCKDOWN

e are past the period when the newly-discovered experience of being locked down within our homes seemed fun. The limitless time to relax, watch TV, sleep and everything else we always whined about or the leisure enabling us to talk to our children, interact with our neglected elderly parents, work out, pursue our hobbies looked like a privilege only for the first few days. We felt sick of staying within the same walls and seeing the same faces sooner than we had expected.

When we, despite understanding the importance of the lockdown and the social-distancing norms to curb the spread of the pandemic, could get sick of the monotony that has inadvertently fallen upon us, we can't overlook the misery of our children. The energetic youngsters who are always restless, curious and love to explore fun, are made to stay indoors. They are bound to feel like 'caged' birds however sensible they may be. They can't go out to play or hang-out with friends whereas their virtual studies are going on. This does drain them out in the absence of inadequate means of recreation and diversion. Children have nothing to balance their enthusiasm and the pent-up energy runs the risk of transforming into another epidemic of idleness. It is even more difficult for the parents if the child is hyperactive. Despite the best of intentions, online classes cannot bring in the needed discipline, sincerity, punctuality and effectiveness. Direct interactions between the teacher and the student are essential for productive teaching and fruitful learning. Lockdown is more testing for our young children more than us. Hence, the demands and the role of parenting has taken a whole new meaning in the times of lockdown.

Now that, the lockdown has erased the boundaries between the scholastic, social and domestic circles of our kids, the onus of ensuring that the terrible constraint doesn't distress them, lies on parents. Here are some suggestions:

Reprimanding, scolding kids about their messy rooms or study-corners?

Make a policy that you don't comment on their habits – no matter how difficult it gets. If at all you feel the urge to point out, say it calmly without unleashing your temper. Choose your words carefully. Children have delicate self-esteem and it gets fragile when they are forbidden to do what they want.

Debating about the time-table?

Don't be stringent about their schedule and mind your own. Don't fume about the time they wake up, bathe or sleep. Let them choose their way of doing their chores during covid captivity. If you are worried that indiscipline would spoil them, chillax and let them realize that. Everything will fall in place as soon as life comes back to the track.

Are they always glued to their phones and gadgets?

This is indeed worrying but your grumbling won't mend their ways. Due to the online classes, they always have their studies as an excuse. What's the remedy then? You may fix an hour as 'Family-Time'. Sit together and talk. Play some non-digital games together. Narrate stories of your childhood. Tell them about their infantile days. Ask their views about the pandemic, about the steps government has taken, about the life after the lockdown and their learning from this experience. Such discussions would help them in the future



Encourage them to spend some time on their hobbies

You must be aware of your children's vocational studies. You must make them realise that they won't get a better time than the lockdown for honing their skills and must encourage them to spare some time on upgrading and polishing their skills. Not only discussions but a sincere follow-up would not only keep the flame of inspiration alive in them but also, help you to understand their psyche and personality better.

Motivate them to learn cooking

Cooking is mandatory and should not be a matter of interest. Every mortal must know how to deal with hunger and the least we can do in this regard is to make our children capable enough to take care of their meals

FOCUS EDUCATION

in the hour of need. I personally feel sorry for those children who can prepare only the famous 'two-minute-meal'.

Do you pour out your irritation on your children?

Don't spit out your irritation even if you are bored with their juvenile conversation. You can't expect them to rise to your level with their scant experience of life. However, you, having seen through the age they are in, should know what they would love to talk about.

Children are as exasperated as you are or maybe more than you are. So, hold on your anger. A face-off with your children would be the last thing you should expect in these difficult times. The younger and immature members of the family must not be a medium for you to vent out your frustration. If you somehow lose your temper, quickly apologize before things turn ugly. Don't let the ego of age and relation spoil the peace. You and everyone else in your family need it. Do not start an argument and if someone drags you in one, don't allow it to stretch too far.

Nobody likes lectures

Don't preach every time you sit with your children about studies, about too much use of phone, about their conduct et al.

Your constant criticism cannot go down well and send out the intended message. Assess and judge the situation to say what you don't like and send it across in a harmonious manner. No harm in being a little diplomatic even with your children.

Allow some 'Me-time' to your children and have some yourself

Don't feel jittery if your children sit alone in their rooms. Don't spy on them. Each one of us needs some time with ourselves. However, they should not do it excessively. Call them on some pretext and engage them with you but don't barge into their room and encroach upon their privacy. Do take some metime yourself. Meditate, interact with your friends, make your presence felt on social-media if you feel like or do anything you derive pleasure doing.

Know who your children's friends are?

Knowing your children's friends is as important as knowing your children. Time-famine has always handicapped us to take care of only a few vital aspects of parenting and we often ignore the details and family background of our children's friends. This lockdown has allowed us enough time to attend to this important task. Teenagers love to talk about their friends and the fun they have in the classroom. Be their friend and learn about who and why they like the most. What do they think about every individual? If they dislike someone, ask them the reason gently and don't force them if they don't want to share. Children often exaggerate when they describe their friends or the stories of their outings with them. Give them the impression that you believe them even if you find them unconvincing.

Parenting is always a full-time job and during lockdown it has become even more demanding and taxing. Not only small kids, but teenagers, adolescents and even the college-going youngsters get irritated easily because of the shackles of the lockdown. Often, parents have to bear the brunt of their mood swings and unfounded anger. This is wrong in every circumstance. However, captivity due to pandemic has complicated the existing mental health conditions. Parents do understand their kids, but they are not mental health experts to instantly know the stigmas of minds fun to heightened anxieties.

Special times require special measures. We cannot be the usual raging, fuming dads and grumbling, carping moms in the time of the lockdown. This is the first instance for us and our children too when we are spending the longest time together after they have grown up and have begun to understand their individuality. We need to be careful. Our love affair with our children is precious to us. We can't be casual.

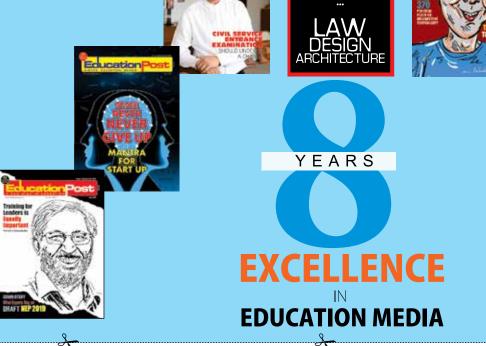
One thing our children are missing at the time of lockdown is the company of their friends. They do need their parents but not all the time. They crave to be with their buddies. The parents must play the role of their friends. Believe me, that is not childish but maturity.

The author is a mathematics teacher by profession and a writer by passion. He stays in Ghaziabad and has written three widely acclaimed novels, LOVE @ AIR FORCE (2013), RAPESCARS...They Never Heal (2014), and DAWN AT DUSK (2016).

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Arvind Passey

RANKINGS AND ONLINE EDUCATION IN THE POST-COVID ERA

here will be 60 million students the world over who will be looking for the right courses in the right regions this season. I obviously mean the admission season. Students are smart enough to understand that they need to assess not just disciplines relevant to their career plans but also the best and safest options that may be available for them. If this be true, the conventional format and methodology used in rankings may not impress them at all.

After all, every student will want to know

After all, every student will want to know not just if the university or institute of their

choice has the discipline of their choice but also the way they are geared up to communicate meaningful tranches of workable knowledge. One example that comes to my mind is the Rain Classroom Teaching Platform that was launched by China in 2016. In this format they were dealing with 19 million users and had online sessions where students were encouraged to submit questions during live interactions. Quite obviously, the monologue method doesn't work well in an online world. Institutes that believe their Zoom, Meets or Team sessions with a hurriedly prepared presentation and notes whatsapped across is enough, are in a seriously delusional mode. The way these

institutes, colleges, and universities have performed in the past two months isn't going to remain a secret and the word-ofmouth going around is going to overshadow any form of rankings thrown at them. We will talk about this later in the article... let me first talk about why rankings are still relevant.

Nirmala Sitharaman said a few weeks before the lockdown phase that 'by 2030, India is set to have the largest workingage population in the world. Not

only do they need literacy, they need both job and life skills.' This can become a reality only if our colleges and universities ensure that they give their best in both the online and offline methods employed to educate. This isn't a mere belief but a reality that is based on how the industry perceives future-ready students. Bhushan Patwardhan from UGC, according to Lindsay Mckenzie in an article published online, is credited to remarking that 'industries are no longer interested in vanilla degrees, as they want professionals with relevant skills and knowledge. The online curriculum will have to be of high quality to make the students job-

ready, otherwise the increase in enrollment will serve no purpose.' All this can happen only if our rankings do their job of guiding students well. Rankings need to be based on coherent and correct data, a believable format of analysis, and relative freedom from paid mentions. This needs to be taken with a lot more seriousness than has been seen in the past. Rankings are not a frivolous sport to boost admission figures in institutes that do not reflect a serious attitude towards education. Duncan Ross, in a recent article published online, admits that 'the data will tell us a lot about how universities cope with this difficult period; it will be (however imperfect) a record of the changes wrought on the higher education

sector. Second, life will go on. Students will still want to make the best possible choice for their education, even if that means enrolling at an institution abroad. And there will still be demand for the data that sit beneath the rankings - whether on the current methodology or on an improved one.'

Once the rankings system has found its bearing, it is the students who must know how to

decipher the complexities of statistics and how to reach conclusions that are best suited to their needs. The steps that students must take are enumerated here:

Students need to consult their peer group, their seniors, family, and even career coaches besides just browsing through ranking statistics. They must plod through online groups for directions, prepare their plan A and plan B as all these steps help them in reaching a correct decision. And yes, they must also factor in the covid-risks that are related to regions. What this means in simple terms is that their awareness needs to find meaning in a thorough research about not just



EDUCATION POST | May 2020 | 16 | EDUCATION POST | May 2020 | 17

COVER STORY -**COVER STORY**

courses and institutes or universities but also the way the socio-economic and political under-currents behave in regions.

Students need to realize that decisions are never final and that a change must be welcome if their chosen institute or university does not respond to their queries and doubts in a transparent and straight-forward manner. Thus it is the responsibility of the institutes and universities to make sure that their responses are geared up to win hearts and minds by being upfront about the pros and cons involved... and they are prompt in answering queries. Nothing can be as self-defeating as procrastinating during the reply phase.

Students must employ social media platforms like Facebook, Twitter, Instagram, and Linkedin to lead them to correct decision-making. I believe this is already happening. What may not be happening is the way the universities and institutes employ these platforms to promote their cause in a positive light. The keyword here is 'stay informed' and this can happen only if information is forthcoming from the side of universities and institutes.

The way things happen in our higher education institutes is more in the domain of face-to-face or physical teaching even though audio-visual aids have made their entry a few decades ago. Now with the sort of emergency teaching needed during the covid lockdown phases, they have realized that there is a lot to be un-learned and an equal amount to be learned... it is how well this transition has happened that needs to be communicated by universities and institutes to win over students. This obviously is a step that is far more vital than just managing to have their names thrust into some ranking system. Students, as I have written earlier, are smarter today and can catch a slip-up faster than the blink of an eye.

Some of the questions that universities and institutes must ask themselves would be if they are equipped to handle this kind of change? Their thinktank huddles must pose other questions like if their admissions-intake will suffer in 2020 or not? In what ways will they be able to push their cause to the governments concerned to help them survive this scenario? Will they be able to device and implement new ways of teaching that are as effective as the ones they have been accustomed to? Will their faculty stand up to accept the challenges that online communication poses? Will their consolidation of their efforts really lead to a creation of a new system that will begin evolving? Will the evolution of teaching methods be

accepted by the faculty in the right spirit? Will their staff be willing to put in this extra effort over a longterm?

We all are aware that this 'malicious pandemic has disrupted economies and destabilized societies around the globe and that it is of utmost importance to contain the spread of this disease. In these testing times, educational institutes have rightly decided to safeguard the wellbeing of all the stakeholders...' as as article in India Today said. However, the battle does not stop at everything coming to a stand-still and a shut-down phase. The show must go on.

Now that we are on a questions spree, let me also quote from an article published in The Hindu, where C P Gopinathan wrote that 'mainstream institutions are willing to move to online, and there's a possibility of habits changing to enable Education 4.0. Or are we just being optimistic? Let us ask some sobering questions -Online higher education has been around for more than a decade now. Why did it not take over the conventional education system in the Pre-Covid era? Why is it not a norm already? When massive businesses have already moved from offline to online in the Pre-Covid era, why hasn't higher education not moved to online?' These are questions that only the universities and institutes can answer. Why indeed?

Had the answers been reasonable enough, a discussion on rankings would have been vastly different. As I have expressed earlier in this article, online education isn't some kind of lumping together of hastily prepared videos, e-books made from class-notes, and difficult to handle PDFs. There is an important lesson for educators to be learned from the way a really wonderful app 'Blinkist' functions. Non-fiction books are contextualized and converted into precise 'blinks' that turn the entire book into a byte-sized gem that makes learning interesting and engaging. This is an art that our educators need to learn.

There is another facet of classroom learning that may not find it easy to be replicated in the online world of education. The content-context cluster is a mean of the collective ability and existing knowledge quotient of a class and the teaching-learning transaction is devised or conceptualized keeping this mean in view. In the online environment where remote contact replaces a classroom, this mean may end up being meaningless even though there is a higher degree of technology involved.

It is common knowledge that specialized learning involves a lot of 'psychology, behavioral analytics,

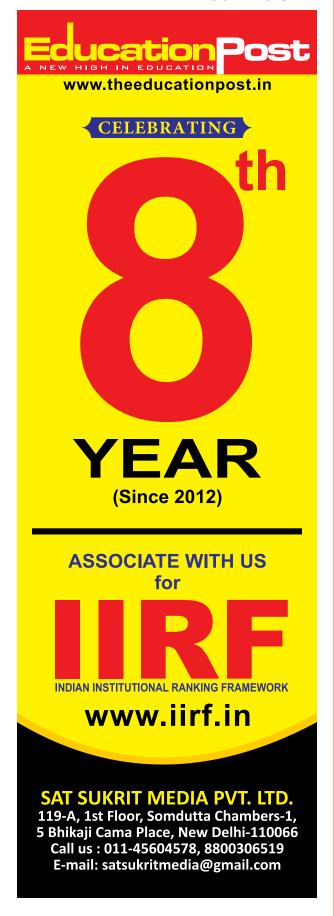


Students must employ social media platforms like Facebook, Twitter, Instagram, and Linkedin to lead them to correct decision-making. I believe this is already happening. What may not be happening is the way the universities and institutes employ these platforms to promote their cause in a positive light.

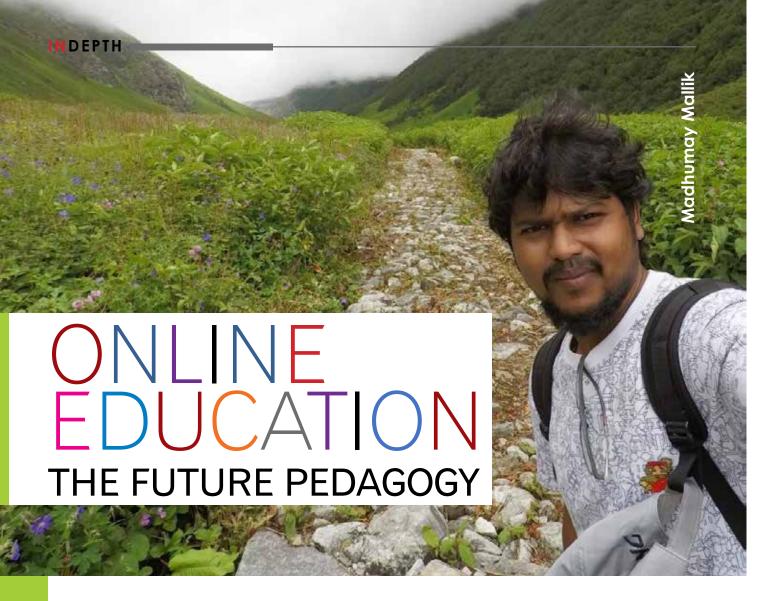
content delivery, and assessments to gauge and measure individual learner's journey and progress' that may not be as powerfully enabled in the online environ.

If the above facets are taken into account and a workable solution sought, it is easy to comprehend that one of the factors that may have a major bearing will be the 'academic know-all' stance of universities biggies. This needs to be discarded and only when this pseudo snobbery is off the tracks will the entry of digital learning specialists be facilitated. This is because a massive re-structuring and redesigning of the entire gamut of higher education communication strategies has to be done to create an effective and potent online system workable. This is vital because the past two months are enough to convince anyone that online education resolutions cannot possibly speed ahead without offline grandeur willingly stepping down its mighty pedestal. After all, there is no one-size-fits-all delivery system that is going to be possible in a world where the online education component becomes a permanent fixture.

It is true that online education is fast becoming an essential appendage to the concept of higher education and the covid-19 exigency simply accelerated this phase to come in when a lot of other upheavals were happening. It is also true that rankings in the future will need to take this new addition into serious consideration before they attempt to woo students.



EDUCATION POST | May 2020 | 18 EDUCATION POST | May 2020 | 19



earning can happen from anywhere. That's how it should be and that's how it is going to be! Education is one of the basic rights of any person and also the parameter for how developed a nation is.

The term "online education" is relatively new, but the institution of distance education has been functioning ever since. Distance education came into being in mid-nineteenth century with the development of Postal Service in the United States. Facilitation of reliable long-distance correspondence paved way for commercial correspondence programs in institutions and universities all over the world over the years. With the

advent of better technologies and devices for communication, the channels for correspondence kept on getting stronger. Specific departments in universities and stand-alone institutions dealing with correspondence studies went on to be founded. And today, with the proliferation of the digital and web technology, accessibility of the distance education programs has increased by leaps and bounds. As a result, the offerings have become much more diverse. Institutions from around the world, even the ones considered to be elite, have started offering online degrees and classes that popularized, and as a result, legitimized education over a computer.

Like the internet itself, online education is too vast a stream to understand on its own. Several historical elements including distance learning, computers and telecommunications have been instrumental in making the online education of today possible. At it's very base, online education constitutes educational theory along with computer technology and legislation.

Tracing the history of the modern online education

Let's look at the timeline of some of the inventions and innovations that went into making the online colleges, the online degrees, and any form of online education and learning of today possible.

- ♦ In 1957, Sputnik, the first satellite was launched by the USSR that gave birth to a new era of global communications.
- ♦ In 1975, Bill Gates and Paul Allen came up with the Microsoft Corporation.
- ♦ Invention of personal computer and personal web did revolutionize distance education after this phase. Through the 1980s, with increasing access to personal internet, various online programs popped up all over the U.S.
- ♦ Come 1991, and the internet is invented by Al Gore. The WorldWideWeb (WWW) is opened to public that allowed the usage of internet and online education.
- ♦ In 1998 Google search engine was developed.
- In 2004, Facebook gets launched by Mark Zuckerberg and histeam of fellow Harvard students, originally as a social chat site in the college.
- ♦ In 2005, YouTube domain was registered by Chad Hurley, Steve Chen and Jawed Karim, originally as a matchmaking site.
- ♦ In 2006, iTunes U launched, that offered lectures on a long list of topics at a price. Khan Academy was founded by Salman Khan.
- ♦ In 2012, Udacity and EdX, two massive online education

- websites offered hundreds of university level MOOCs, Massive Open Online Courses.
- ♦ In 2013, the first online-only public university is launched. University of Florida-online!
- ♦ By 2018, some or the other form of online program is offered by majority of the public universities and colleges.
- ♦ In 2019, the University of Pennsylvania becomes the first Ivy League university to offer a totally online bachelor's program.

Online education in the Indian perspective

Although, the breakthroughs happened mostly in the U.S., the U.K., Australia and South Africa walked hand-in-hand in providing education remotely through technology, and eventually it has spread to almost every corner of the world that has internet accessibility.

Correspondence courses in higher education in India started to get offered in 1962 to fulfil an ever increasing demand in education that couldn't be met by the conventional system. Being one of the nations with exponential technological development, India has come a long way in online education. The second most populated country in the world with over 1.3billion people with the access to smartphones and internet facilities, India could have the most number of people that are technologically driven. The way of life in India has completely changed with the rise of internet. Online education and learning stand second at being the most significant online industry, with Ecommerce having taken the first spot. With the umpteen number of online courses and the ever increasing availability of information on the internet a lot many people in India have gone learning from the internet way.

The growing demand and popularity of digital technology and the underlying potential has driven Mr. Prime Minister to envision



From \$247million in 2016, online education market in India is projected to go up to about \$1.96billion in 2021 at a compound annual growth rate of 52 percent. An estimated rise from 1.6 million online users in 2016 to 9.6 million by the end of 2021 would be enrolled for different online courses. Almost 48% of the entire India's population lying in the age group of 18-40 years of age have high aspirations but fall in the lower income category. The acceptability of the online medium being higher in the younger demographic makes it a good target market. Also, with an estimated 175 percent increase in the cost of classroom education, online education gets much higher preference for its cost effectiveness.

online correspondence courses as a part of Digital India Project.

The challenges of online education in India

Every boon comes with its own unique share of challenges. It is impossible to impart and learn courses online that requires Laboratory experiences and hands-on workshops. One of the most popular courses like Engineering is not possible to study online. In a professional course like MBA, you cannot have the opportunity to network professionally or gain experience overseas; the aforementioned being integral to the courses.

E-Learning programs bring along other side-effects on higher education too. For example, the profile of students has changed significantly. The average age of undergraduate students enrolled is more than 32 years of age. The major population of students taking online classes are female. Traditional colleges have now brought in changes by introducing more number of online courses whose

intake go round the year. Major universities from around the world like the University of California Berkeley, Harvard University and MIT offer free open courseware with video lectures and quizzes held directly from the discussion in the class.

Absence of face-to-face lectures and real classmates might make you lose focus easily. In online education losing track of your studies is inevitable unless you keep yourself motivated enough. It might take longer than usual for you to complete the course. Or, you might just end up abandoning the course completely.

It is of utmost importance to stay clear of the fraudulent online programs. You need to choose an accredited program to spend your money on. There are many websites that offer online courses without any accreditation of any educational authority under the banner of fake authorities. And such courses wouldn't land you any job. While employing the companies accept online degrees as long as it is accredited and approved by DEC, the Distance Education Council of India.

An increased demand for online learning

Companies and employers in India are encouraging their employees to get online education for honing their skills. The massive advantage of learning from anywhere at any time helps working professionals pursue new courses without having to give up their jobs. All that is required is a laptop or a smartphone with internet connection. They can learn in their free time on holidays or weekends, with all of the study material so readily available at their fingertips.

In online education all of the course materials being provided beforehand, you could learn it by taking your own time. Students could clear their doubts on forums or by live online chat as well. A serious disadvantage of traditional education is solved by online education. Because everyone learns at a different pace, many students find it difficult to follow the lessons in a classroom where everyone is taught together. Here they can learn at their own individual pace.

Studying at your own time helps you save time. And since online education is much more cost effective than an on-campus degree, you save your money too. Somebody who cannot afford to spend on a college degree without having to compromise gets to accomplish his or her dream, and that too without having to shell out a fortune.



The top players in the Indian online education landscape

Coursera is the world's largest platform offering online courses from universities and other institutions.

EdX, the only non-profit organisation in the running is vouched for its high quality video courses from top U.S. universities like Harvard and MIT.

FutureLearn is the most important online courses provider in Europe based in the United Kingdom.

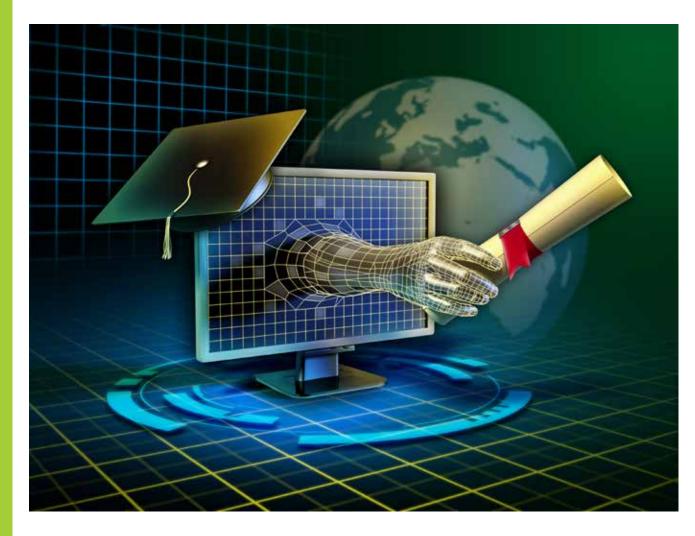
Udemy is a platform that doesn't come from universities; rather independent experts from their respective fields have come up with it

Skillshare is another platform about instant add-ons of specific skills required for accomplishing day-to-day tasks.

LinkedIn Learning identifies the skills that are in high demand among employers by using its own insights from its professional network. It provides learning content that helps close the skills-gap between existing and required skills.

BYJU's, headquartered in Bangalore, is one of the top Indian companies offering e-learning. It boasts to have received the first investment in Asia from the Chan Zuckerberg Initiative. They have created a K12 learning smartphone app offering engaging learning programs which are highly adaptive and effective. They not only cater to school students, but also impart training for various competitive examinations like UPSC, IIT-JEE, CAT, GRE etc.

Dexler Education, Educomp Solutions, IGNOU, NIIT, Edukart, Simplilearn, Zeus Learning, Meritnation, and Excelsoft are some of the other top Indian ventures offering e-learning in various sectors and directions.



With the advent of eLearning, more and more people than ever before are able to learn, connect and grow on their own terms surpassing the hindrances which comes along with traditional education on the campus. The traditional experience might never be replaced totally, but you cannot deny how eLearning has not only impacted how formal education was pursued, but also changed how we taught, learnt and perceived knowledge as whole.

The tools of the trade

Apart from flexibility in terms of time and place, online education seamlessly combines many different tools to make it more effective than a traditional classroom. Even online classes are subject to teaching styles and materials used but all the tools available when put to use helps the students learn better.

Audio-visual lectures let students replay the sections that are difficult or confusing to them until they have attained proper understanding of the subject. Mobile technology and media players facilitate the anywhere-anytime concept. All forms of social media networks and apps now help students, fellow students and teachers communicate real-time, seamlessly all over the world and Google Hangouts, Facebook, Twitter and Instagram being the most used. Images and audiovisual content in form of animations and interactive presentations help keep the students engaged and in the process facilitates better retention of the content learnt.

The increasing popularity of learning analytics and big data, and the surfacing of cloud computing are major trends that lent to the changing face of e-education market in India. The SaaS-based solutions for technical support, like ERP and LMS, provided by the cloud services brought in the shift. To

make the cloud platform prevalent, these companies are effectively working with the governments and educational boards. Learning analytics has been playing a major role in helping the eLearning companies design custom-made courses. Selfregulation of the learners is being ensured. Frequent auto-graded quizzes are being conducted and the students are able to access their grades and learning progress. The evolution and soaring awareness about the latest technologies will shoot up the rate at which eLearning is adopted in the Indian education scenario, hence pushing growth in the online education market.

The implications for the new-age learners

If you are interested in playing a role in the growing field of online education, the study of computer science should help you provide a strong foundation in the theoretical and technical aspects of computer technology, pumping you with the skills needed to create and innovate tools for the same. If you are more game for the business aspect of running a profit churning online institution, a degree in business administration should teach you the different elements which go into running a company successfully. From accounting and finance, to management and marketing. Lastly, if you are leaning more towards helping the e-learning programs to become more effective, you should learn theories and methods to create qualitative instructions by getting educated in an instructional psychology degree program.

Today, in 2020, right when the eLearning companies in India were striving hard to replace the traditional education system by bringing in the latest educational technologies, the

COVID-19 pandemic has brought in a paradigm shift in the education system. Students are having to make bigger adjustments as learning has mostly always been in classrooms which is no more than a far-fetched dream now. Many of them even might not be adequately equipped with the tools and technology to avail remote learning. The Indian government's vision of Digital India now emerges as a vital instrument to solve the ongoing crisis. This is the ideal time for experimentation, and for new tools to be deployed to make the system more efficient and productive. Also developing improved professional knowledge and skills by learning online and assessing.

The use of technology is making it more student-centric than the previous teacher-centric system. Various online tools and virtual classrooms are making the teacher-students engagement as close to real classroom experience as possible. These tools can also provide the necessary interactivity by facilitating parent-teacher meetings and staff meetings at much less costs consuming less time than earlier.

The important link between course-content, teachers and trainers, technology and the students form the pedagogy in digital education. While the private schools have adapted to regular live Zoom, Skype and WhatsApp classes, even for their dance and taekwondo classes, the urban government schools are depending on course material circulated on WhatsApp. Exchanging notes, submitting assignments, clarification of doubts and talking to friends- everything is being getting done over WhatsApp.

Avanti, a social educational enterprise, has launched a free app for the students from 9th to 12th classes in Hindi medium government schools. It conducts free live classes on social media platforms also. Sankalp application offers recorded content in video format, solved examples and quizzes in NCERT topics of Science and Mathematics. More than 1000 users have already installed it from the Google Play Store. It has partnered with the state governments to make its free content accessible to over one million students.

Government initiatives towards online education in India

Avanti says "students from urban areas and from private schools are able to access digital learning of great quality but they aren't able to help the masses from economically weaker sections of rural India." Due to the current lockdown, millions of students from Government schools in rural India do not have access to online education. According to the statistics, less than 15% households in rural India has internet and out of the meagre 13% people aged above five surveyed just 8.5% of the females could use internet. The poorest of households cannot even afford a smart phone or a computer.

Some of the state governments have started broadcasting pre-recorded lessons on television. Pedagogically strong teachers are picked up to deliver these lessons that are aligned to the curriculum, in a staged classroom setting.

Democratizing the entire system that includes stable supply of electricity, high-speed internet connectivity at affordable prices, telecom infrastructure, subsidised phones, subsidised phone-data, availability of the hardware, software, tools for education and online assessment etc. is a challenge. But technology-based education is much more transparent in treating all the students equal.

Various initiatives have been undertaken by the governments and private players like SWAYAM online courses for teachers, UG/PG MOOCs, e-PG Pathshala or e-modules on arts, fine arts, social science, natural and mathematical science. CEC-UGC YouTube channel. Vidwan- a database of experts who give information to collaborators and peers, NEAT -by AICTE in collaboration with Education Technology Companies and NDL, is based on the PPP model and helps enhance the employability skill in the students, Spoken Tutorial, FOSSEE, e-Yantra, Google Classroom and so on. Government of India along with the state governments have created infrastructure to deliver e-education through their departments and ministries. These are NKN, NPTEL, NMEICT, NAD amongst others. All of these enhance the connection with the institutions and accessibility to resources. For instance, high speed network to institutes is provided by NKN. The agencies are also trying to improve the product considering the social distancing aspect and available limited bandwidth.

ThinkZone, a start-up from Odisha, is reaching out to households with no internet by using SMS, IVR and radio. It is broadcasting learning modules in English, Hindi and Odia for students from three to ten years of age, in partnership with a local radio channel. They are believed to have reached more than five thousand families through SMS and IVR.

The way forward with online education:

Going further, the use of technology in education shall bring in a new era wherein the best offaculty will be available from across the world to the students. The quality shall not be gauged just by the quality of the faculty but also have familiarisation of the faculty with digital technologies and the quality of IT infrastructure available as the judging parameters.

The important link between course-content, teachers and trainers, technology and the students form the pedagogy in digital education. While the private schools have adapted to regular live Zoom, Skype and WhatsApp classes, even for their dance and taekwondo classes, the urban government schools are depending on course material circulated on WhatsApp.

The physical infrastructure of the institutions will have less importance, and so should become more cost effective. Review meetings, conferences and PTMs wouldn't be location dependant. A new education policy for liberal education emphasizing the real vision shall get executed. In the times to come, it might so happen that a student is allowed to take up courses from any school, college, or, university depending on the quality of the faculty and so the course-fees irrespective of her or his location, finally getting a degree from the university where she or he has completed maximum number of courses from, creating a balance of economics of good education. Focus could shift from majors to just goal-oriented learning. Emphasis could be on more gamification of learning to make it fun and app-like. Digital field trips could be implemented using virtual reality. There could be classrooms interacting with all other classrooms around the world.

For all of this to turn into reality, the mind-set of the educationists, students, authorities and policy makers has to undergo a radical change. The thought process has to be re-aligned. Technology friendliness and adaptiveness should be an important criterion in faculty selection. On similar lines, the parameters for accreditation have to be reconsidered. All these steps should help the country in strengthening its digital learning infrastructure in the long run. The current COVID-19 situation has just been instrumental in accelerating the adoption of technologies to deliver education to the masses. We hope that it soon gets completely integrated into the system, giving access of education, to all. Where ever there is a student, there should be a classroom!

INDIAN INSTITUTIONAL RANKING FRAMEWORK

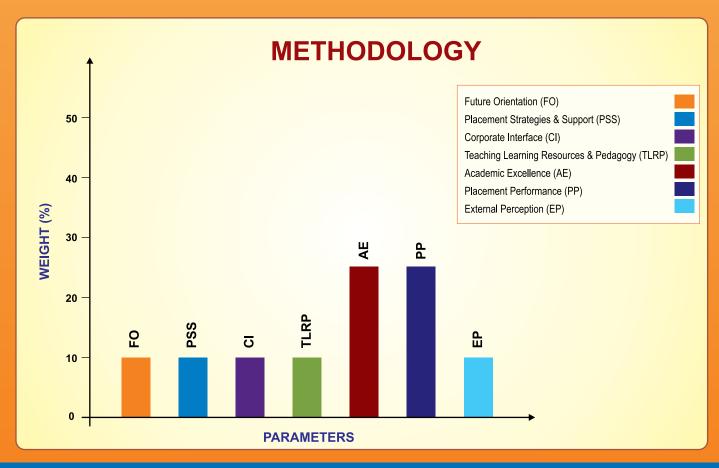
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Discipline Survey : Engineering Colleges

Courses Assessed

B.E. & B.Tech Courses



NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank*
Indian Institute of Technology	Govt.	Delhi	1	
Indian Institute of Technology	Govt.	Chennai	2	
Indian Institute of Technology	Govt.	Bombay	3	
Indian Institute of Technology	Govt.	Kharagpur	4	
Indian Institute of Technology	Govt.	Kanpur	5	
Indian Institute of Technology	Govt.	Guwahati	6	
Indian Institute of Technology	Govt.	Roorkee	7	
Indian Institute of Technology (BHU)	Govt.	Varanasi	8	
Institute of Chemical Technology	Govt.	Mumbai	8	
Anna University	Govt.	Chennai	9	
Birla Institute Of Technology and Science (BITS Pilani)	Pvt.	Pilani	9	1
Netaji Subhas Institute of Technology	Govt.	New Delhi	10	
Birla Institute of Technology	Pvt.	Mesra	11	2
Delhi Technological University	Govt.	Delhi	= 11	
Indian Institute Of Space Science and Technology (IISST)	Govt.	Thiruvananthapuram	12	
Harcourt Butler Technological Institute	Govt.	Kanpur	13	
Indian Institute of Technology	Govt.	Gandhinagar	14	
Indian Institute of Technology	Govt.	Indore	15	
Indian Institute of Information Technology	Govt.	Allahabad	16	
Indian Institute of Technology	Govt.	Ropar	17	
Motilal Nehru National Institute of Technology	Govt.	Allahabad	18	
IIT (ISM)	Govt.	Dhanbad	19	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Indian Institute of Technology	Govt.	Mandi	20	
Indian Institute of Technology	Govt.	Hyderabad	21	
ABV Indian Institute of Information Technology & Management	Govt.	Gwalior	22	
National Institute of Technology	Govt.	Rourkera	23	
National Institute of Technology	Govt.	Tiruchirappalli	24	
G. B. Pant University of Agriculture and Technology (College of Technology)	Govt.	Pantnagar	25	
Indian Institute of Technology	Govt.	Bhubaneswar	= 25	
Manipal Institute of Technology (Manipal Academy of Higher Education)	Pvt.	Manipal	26	3
National Institute of Food Technology Enterpreneurship and Management (NIFTEM)	Govt.	Sonipat	= 26	
Thapar University (Thapar Institute of Engineering & Technology)	Pvt.	Patiala	= 26	= 3
Vellore Institute of Technology	Pvt.	Vellore	= 26	= 3
National Institute of Industrial Engineering	Govt.	Mumbai	27	
National Power Training Institute-Northern Region	Govt.	Delhi	= 27	
National Institute of Technology	Govt.	Warangal	28	
Kalinga Institute of Industrial Technology (KIIT)	Pvt.	Bhubaneswar	29	4
Aligarh Muslim University (AMU)	Govt.	Aligarh	= 29	
Bharath Institute of Higher Education and Research (BIHER)	Pvt.	Chennai	30	5
Dhirubhai Ambani Institute of Information and Communication Technology	Pvt.	Gandhinagar	= 30	= 5
National Institute of Technology	Govt.	Durgapur	= 30	
G. B. Pant Engineering College	Govt.	Pauri	31	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank*
Indian Institute of Information Technology Design & Manufacturing	Govt.	Kancheepuram	= 31	
Indian Institute of Technology	Govt.	Patna	32	
Indian Institute of Technology	Govt.	Jodhpur	= 32	
College of Engineering	Govt.	Trivendrum	33	
National Institute of Technology	Govt.	Raipur	34	
National Institute of Foundry & Forge Technology	Govt.	Ranchi	35	
National Institute of Technology	Govt.	Delhi	= 35	
Central Institute of Plastic Engineering & Technology	Govt.	Bhubaneswar	36	
Dr. B. R. Ambedkar National Institute of Technology	Govt.	Jalandhar	= 36	
Indian Institute Of Information Technology Design and Manufacturing	Govt.	Jabalpur	37	
National Institute of Technology	Govt.	Kurukshetra	38	
National Institute of Technology	Govt.	Srinagar	39	
National Institute of Technology	Govt.	Uttarakhand	= 39	
SRM University (SRM Institute Of Science & Technology)	Pvt.	Chennai	40	6
Amity University	Pvt.	Noida	= 40	= 6
National Dairy Research Institute	Pvt.	Karnal	41	7
College of Engineering	Govt.	Pune	42	
National Institute of Technology	Govt.	Silchar	= 42	
National Institute of Technology	Govt.	Arunachal Pradesh	43	
Punjab University	Govt.	Chandigarh	44	
Indraprastha Institute of Information Technology	Govt.	New Delhi	45	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank [*]
National Institute of Technology	Govt.	Hamirpur	46	
National Power Training Institute	Govt.	Durgapur	47	
Maulana Azad National Institute of Technology	Govt.	Bhopal	48	
Malviya National Institute of Technology	Govt.	Jaipur	49	
Coimbatore Institute of Technology	Pvt.	Coimbatore	50	= 7
Indian Institute of Information Technology, Design and Manafacturing	Govt.	Chennai	51	
Sardar Vallabhbhai National Institute of Technology	Govt.	Surat	52	
National Institute of Science & Technology	Govt.	Berhampur	53	
National Power Training Institute	Govt.	Nagpur	= 53	
National Institute of Technology	Govt.	Manipur	54	
National Institute of Technology	Govt.	Meghalaya	= 54	
International Institute of Information Technology	Govt.	Hyderabad	55	
Visvesvaraya National Institute of Technology	Govt.	Nagpur	= 55	
Jamia Millia Islamia	Govt.	New Delhi	56	
National Institute of Technology	Govt.	Jamshedpur	= 56	
National Institute of Technology	Govt.	Calicut	57	
National Institute of Technology	Govt.	Mizoram	= 57	
National Institute of Technology	Govt.	Nagaland	58	
National Institute of Technology	Govt.	Sikkim	= 58	
National Institute of Technology	Govt.	Agartala	= 58	
National Institute of Technology	Govt.	Goa	59	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank*
National Institute of Technology	Govt.	Surathkal	= 59	
Defence Institute of Advanced Technology	Govt.	Pune	60	
JNTU College of Engineering	Govt.	Hyderabad	= 60	
University College of Engineering Osmania University	Govt.	Hyderabad	61	
Jadavpur University - Faculty of Engineering and Technology	Govt.	KolKata	62	
International Institute of Information Technology	Govt.	Bangalore	63	
PSG College of Technology	Pvt.	Coimbatore	64	8
Koneru Lakshmaiah Education Foundation University (K L College of Engineering)	Pvt.	Vaddeswaram	65	9
NIIT University	Pvt.	Neemrana	= 65	= 9
NMIMS University (Mukesh Patel School of Technology Management and Engineering)	Pvt.	Mumbai	66	10
PEC University of Technology	Pvt.	Chandigarh	= 66	= 10
Ambedkar Institute of Advance Communication Technologies and Research	Govt.	Delhi	67	
Jorhat Engineering College	Govt.	Jorhat	= 67	
Shiv Nadar University (SNU)	Pvt.	Dadri	= 67	11
BITS Pilani (Hyderabad Campus)	Pvt.	Hyderabad	68	12
Guru Gobind Singh Indraprastha University	Govt.	New Delhi	= 68	
Thiagarajar College of Engineering	Pvt.	Madurai	= 68	= 12
Maharaja Surajmal Institute of Technology	Govt.	New Delhi	69	
Birsa Institute of Technology	Pvt.	Sindri	70	13
RV College of Engineering	Pvt.	Bangalore	= 70	= 13
Government College of Technology	Govt.	Coimbatore	71	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank*
Army Institute Of Technology	Govt.	Pune	72	
Bharatiya Vidya Bhawan's Sardar Patel Institute of Technology	Pvt.	Mumbai	73	14
BMS College Of Engineering	Pvt.	Bangalore	= 73	= 14
College Of Engineering	Govt.	Roorkee	74	
CV Raman College Of Engineering	Pvt.	Bhubaneswar	= 74	15
BP Poddar Institute Of Management and Technology	Pvt.	Kolkata	75	16
MS Ramaiah Institute Of Technology	Pvt.	Bangalore	= 75	= 16
BK Birla Institute Of Engineering and Technology	Pvt.	Pilani	76	17
PES Instituite Of Technology, Bangalore South Campus (Formerly PES Scool Of Engineering)	Pvt.	Bangalore	= 76	= 17
College Of Agricultural Engineering and Technology- Punjab Agricultural University	Govt.	Ludhiana	77	
College Of Engineering & Technology	Govt.	Bhubaneswar	78	
Reva University (Faculty of Engineering and Technology)	Pvt.	Bangalore	79	18
University School Of Information & Communication Technology (GGSIPU) (Formerly USIT)	Govt.	Delhi	80	
Sathyabama Institute of Science and Technology	Pvt.	Chennai	= 80	19
Meenakshi College of Engineering (MCE)	Pvt.	Chennai	= 80	= 19
PE Society's Modern College Of Engineering	Pvt.	Pune	81	20
Sant Longowal Institute Of Engineering and Technology	Govt.	Sangrur	82	
SDM College Of Engioneering and Technology	Pvt.	Dharwad	= 82	21
Sri Sivasubramaniya Nadar College of Engineering	Pvt.	Kancheepuram	83	22

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
St. Joseph College Of Engineering	Pvt.	Chennai	= 83	= 22
Maharaja Agrasen Institute of Technology	Govt.	Delhi	84	
Mahatma Gandhi Institute of Technology	Govt.	Hyderabad	85	
Sri Muthukumaran Institute of Technology (SMIT)	Pvt.	Chennai	86	23
National Institute of Technology	Govt.	Patna	87	
MMM Engineering College	Govt.	Gorakhpur	88	
Chandigarh University (University Institute of Engineering)	Pvt.	Mohali	89	24
Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology	Pvt.	Chennai	= 89	= 24
Kumarguru College of Technology	Pvt.	Coimbatore	90	25
JNTU College of Engineering	Govt.	Kakinada	91	
Rajiv Gandhi Institute of Technology	Govt.	Kottayam	= 91	
University Institute Of Chemical Technology, North Maharashtra University	Govt.	Jalgaon	= 91	
Amrita Vishwa Vidyapeetham University	Pvt.	Coimbatore	92	26
Bengal Engineering and Science University	Govt.	Shibpur	93	
Shanmugha Arts Science Technology & Research Academy	Pvt.	Thanjavur	= 93	27
University School Of Biotechnology (GGSIPU)	Govt.	Delhi	= 93	
Anil Neerukonda Institute of Technology and Science	Pvt.	Vishakhapatnam	94	28
Assam University - Triguna Sen School of Technology	Govt.	Silchar	= 94	
Bharti Vidhyapeeth College Of Engineering	Pvt.	Delhi	95	29
CVR College of Engineering	Pvt.	Hyderabad	= 95	= 29
Dharmsinh Desai University - Faculty of Technology	Pvt.	Nadiad	= 95	= 29

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank [*]
Institute of Engineering & Technology	Govt.	Lucknow	96	
Nirma University (Institute of Technology)	Pvt.	Ahmedabad	= 96	30
Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Jabalpur	Govt.	Jabalpur	97	
Dayanand Sagar College Of Engineering	Pvt.	Bangalore	= 97	31
Government Engineering College	Govt.	Bikaner	98	
Government Engineering College	Govt.	Kozhikode	= 98	
Govt. College of Engineering,	Govt.	Amrawati	= 98	
Guru Nanak Dev Engineering College	Govt.	Ludhiana	= 98	
Government Engineering College	Govt.	Thrissur	99	
Government Engineering College	Govt.	Wayanad	= 99	
Government Engineering College, Barton Hill	Govt.		= 99	
Institute of Engineering & Management	Govt.	Kolkata	100	
JIET School of Engineering and Technology for Girls	Govt.	Jodhpur	101	
Jaipur Engineering College and Research Center (JECRC)	Pvt.	Jaipur	102	32
Presidency University (School of Engineering)	Pvt.	Bangalore	103	33
Government College of Engineering	Govt.	Amrawati	= 103	
MODY University of Science and Technology (SET)	Pvt.	Lakshmangarh	= 103	= 33
College Of Engineering (University Department, Anna University)	Govt.	Guindy	104	
Governmenrt College of Engineering and Technology	Govt.	Bikaner	105	
Government College of Engineering	Govt.	Karad	= 105	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank [*]
Government College of Engineering	Govt.	Jalgaon	= 105	
Jabalpur Engineering College	Govt.	Jabalpur	106	
Jodhpur Institute of Engineering and Technology	Govt.	Jodhpur	= 106	
Lovely Professional University	Pvt.	Jalandhar	107	34
Thapar University (Thapar Institute of Engineering & Technology)	Pvt.	Kothamangalam	= 107	= 34
BMS Institute Of Technology	Pvt.	Bangalore	108	35
Gurukul Kangri Vishwavidyalaya (Faculty of Engineering)	Govt.	Haridwar	= 108	
Christ University	Pvt.	Bangalore	109	36
University College Of Engineering, Punjab Technical University	Govt.	Patiala	110	
University Institute Of Engineering and Technology, maharshi Dayananda University	Govt.	Rohtak	= 110	
University Department Of Anna University BITS Campus	Govt.	Tiruchirappalli	111	
University Department Of Chemical Technology, Amrawati University	Govt.	Amrawati	112	
University Institute Of Engineering and Technology, Kurukshetra University	Govt.	Kurukshetra	113	
University Science Instrumentation Centre, University of Kalyani	Govt.	Nadia	114	
Dr. Baba Saheb Ambedkar Technological University	Govt.	Raigad	115	
Siddaganga Institute Of Technology	Pvt.	Tiumkur	= 115	37
Central Food Technological Research Institute	Govt.	Mysuru	116	
Mahakal Group of Institutes	Pvt.	Ujjain	= 116	38
Dr. Bhimrao Ambedkar Engineering College of Information Technology	Govt.	Banda	117	
Indian Institute of Carpet Technology	Govt.	Bhadohi	118	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Indira Gandhi Engineering College	Govt.	Sagar	119	
Indira Gandhi Institute of Technology	Govt.	Sarang	= 119	
Bharati Vidyapeeth Deemed University College of Engineering	Pvt.	Pune	120	39
College of Agricultural Engineering and technology- CCS Haryana Agricultural University	Govt.	Hisar	= 120	
Ch. Devi Lal Memorial Government Engineering College	Govt.	Sirsa	121	
College of Engineering	Govt.	Thiruvananthapuram	= 121	
Chaitanya Bharathi Institute of Technology	Pvt.	Hyderabad	122	40
Rajasthan Technical University - University College Of Engineering	Govt.	Kota	123	
MES College of Engineering	Pvt.	Malappuram	124	41
Sardar Patel College Of Engineering	Pvt.	Mumbai	= 124	= 41
Symbiosis International University	Pvt.	Pune	125	42
University College Of Engineering	Govt.	Villupuram	= 125	
Pondicherry Engineering College	Govt.	Pondicherry	126	
University College Of Engineering	Govt.	Arni	= 126	
Mepco Schlenk Engineering College	Pvt.	Sivakasi	127	43
University College Of Engineering	Govt.	Tindivanam	= 127	
Sree Venkateswara University College Of Engineering	Govt.	Tirupati	128	
University Of Petroleum and Energy Studies (UPES)	Pvt.	Dehradun	= 128	44
The National Institute Of Engineering	Govt.	Bangalore	129	
Thanthai Periyar Government Institute Of Technology	Govt.	Vellore	130	
Acharya Institute Of Technology	Pvt.	Bangalore	131	45

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Alliance University	Pvt.	Bangalore	132	46
Bapuji Institute Of Engineering and Technology	Pvt.	Denangere	= 133	47
Vishwakarma Government Engineering College	Govt.	Chand Kheda	= 133	
Atharva College Of Engineering	Pvt.	Malad	134	48
Hindustan Institute of Technology and Science	Pvt.	Chennai	= 134	= 48
West Bengal University Of Technology	Govt.	KolKata	135	
Maturi Venkata Subba Rao Engineering College	Pvt.	Hyderabad	136	49
Sri Krishna college of Engineering and Technology	Pvt.	Coimbatore	137	50
JNTU College of Engineering	Govt.	Anantpur	138	
JNTU University College of Engineering	Govt.	Vizianagaram	= 138	
JNTUA College of Engineering	Govt.	Cuddapah	139	
JNTUH College of Engineering	Govt.	Karimnagar	= 139	
Bannari Amman Institute of Technology	Pvt.	Sathyamangalam	140	51
JSS Science and Technology	Pvt.	Mysuru	= 140	= 51
Government College of Engineering and Ceramic Technology	Govt.	Kolkata	= 140	
Government College of Engineering	Govt.	Kannur	141	
Government College of Engineering and Technology	Govt.	Jammu	= 141	
Government College of Engineering and Textile Technology	Govt.	Berhampore	= 141	
Government College of Engineering	Govt.	Salem	142	
Government College of Engineering	Govt.	Tirunelveli	= 142	
Government College of Engineering	Govt.	Bargur	= 142	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank Survey / Perceptive Based	National Private Category Rank [*]
Government College of Engineering	Govt.	Kalahandi	= 142	
Government Engineering College	Govt.	Surat	143	
Government Engineering College	Govt.	Ajmer	= 143	
Government Engineering College	Govt.	Bharatpur	= 143	
College of Engineering	Govt.	Adoor	144	
College of Engineering	Govt.	Chengannur	= 144	
Maharaja Institute of Technology	Govt.	Thandavapura	145	
College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology	Govt.	Udaipur	= 145	
Mysuru Royal Institute of Technology	Govt.	Mysuru	146	
Kongu Engineering College	Pvt.	Perundurai	= 146	52
Pandit Deendayal Petroleum University	Govt.	Gandhinagar	147	
Bhilai Institute of Technology	Pvt.	Durg	148	53
Bipin Tripathi Kumaon Institute of Technology (Formerly Kumaon Engineering College)	Pvt.	Dwarahat	149	54
Birla Institute of Technology	Pvt.	Patna	= 149	= 54
Bharati Vidyapeeth College Of Engineering	Pvt.	Navi Mumbai	150	55
Bundelkhand Institute of Engineering and Technology	Pvt.	Jhansi	= 150	= 55
Government College of Engineering and Leather Technology	Govt.	KolKata	151	
Sri Venkateswara College Of Engineering	Pvt.	Kancheepuram	= 151	56
TKM College of Engineering	Pvt.	Kollam	= 151	= 56
Graphic Era University	Pvt.	Dehradun	152	57
Vignan's Foundation For Science Technology and Research	Pvt.	Guntur	= 152	= 57

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
G.H. Raisoni College Of Engineering	Pvt.	Nagpur	153	58
Government College of Engineering	Govt.	Aurangabad	= 153	
Government Engineering College	Govt.	Bilaspur	= 153	
Kalyani Government Engineering College	Govt.	Nadia	154	
Sri Sairam Engineering College	Pvt.	Kancheepuram	= 154	59
Kamla Nehru Institute of Technology	Govt.	Sultanpur	155	
Swami Keshvanand Institute Of Technology, Management and Gramothan	Pvt.	Jaipur	= 155	60
LNM Institute of Information Technology	Pvt.	Jaipur	156	61
Jodhpur National University	Govt.	Jaipur	157	
Ballari Institute Of Technology and Management	Pvt.	Bellary	158	62
Bhagwant University	Pvt.	Ajmer	159	63
Vidyavardhaka College of Engineering	Pvt.	Mysuru	160	64
Amity University	Pvt.	Jaipur	= 160	= 64
Birla Vishvakarma Mahavidyala	Pvt.	Anand	161	65
Calicut University Institute Of Engineering Technology		Malappuram	162	
CGC College Of Engineering, Landran Campus	Pvt.	Mohali	163	66
Chandigarh College of Engineering and Technology	Pvt.	Chandigarh	164	67
Yeshwantrao Chavan College of Engineering	Pvt.	Nagpur	= 164	= 67
College Of Engineering	Govt.	Attingal	165	
College Of Engineering	Govt.	Kallooppara	= 165	
College Of Engineering	Govt.	Karunagappally	= 165	
College Of Engineering	Govt.	Kidangoor	= 165	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
College Of Engineering	Govt.	Kottarakkara	= 165	
College Of Engineering	Govt.	Munnar	= 165	
College Of Engineering	Govt.	Pathanapuram	= 165	
College Of Engineering	Govt.	Perumon	= 165	
College Of Engineering	Govt.	Poonjar	= 165	
College Of Engineering	Govt.	Cherthala	= 165	
Deenbandhu Chhotu ram University Of Science and Technology	Govt.	Murthal	166	
DY Patil College Of Engineering, Akurdi	Pvt.	Pune	167	68
Dr. Ambedkar Institute Of Technology	Pvt.	Bangalore	168	69
Dibrugarh University - Institute Of Engineering & Technology	Govt.	Dibrugarh	169	
Faculty Of Technology and Engineering, The Maharaja Sayajirao University Of Baroda	Govt.	Vadodara	170	
Dr. DY Patil Institute Of Engineering and Technology	Pvt.	Pune	171	70
Dr. Mahalingam College Of Engineering & Technology	Pvt.	Pollachi	172	71
G Narayanamma Institute Of Technology and Science (For Women)	Pvt.	Hyderabad	173	72
Francis Xavier Engineering College	Pvt.	Tirunelveli	174	73
Federal Institute Of Science and Technology	Pvt.	Ernakulam	175	74
Dr. Ambedkar Institute Of Technology For Handicapped	Pvt.	Kanpur	176	75
G Pullaiah College Of Engineering and Technology	Pvt.	Kurnool	= 176	= 75
Government College Of Engineering	Govt.	Bhavnagar	177	
Government College Of Engineering	Govt.	Palanpur	= 177	
Government College Of Engineering	Govt.	Rajkot	= 177	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Government College Of Engineering	Govt.	Dahod	= 177	
Government College Of Engineering	Govt.	Ghandhinagar	= 177	
Government College Of Engineering	Govt.	Godhra	= 177	
Government College Of Engineering	Govt.	Modasa	= 177	
Government College Of Engineering	Govt.	Patan	= 177	
Government College Of Engineering	Govt.	Valsad	= 177	
Government College Of Engineering	Govt.	Chandrapur	= 177	
Gandhi Institute Of Technology and Management (GITAM)	Pvt.	Vishakhapatnam	178	76
Mahatma Jyoti Rao Phule University	Govt.	Jaipur	= 178	
Guru Nanak Dev University - Faculty Of Engineering	Govt.	Amritsar	179	
Guru Nanak Institute Of Technology	Pvt.	Secunderabad	180	77
Heritage Institute Of Technology	Pvt.	KolKata	181	78
GB Pant Government Engineering College	Govt.	Delhi	182	
Gayatri Vidya Parishad College Of Engineering	Pvt.	Vishakhapatnam	183	79
Maharaja Sayajirao University of Baroda	Govt.	Vadodara	= 183	
Government College Of Engineering Textile Technology	Govt.	Kolkata	184	
Rajalakshmi Engineering College	Pvt.	Chennai	= 184	80
Govt. College Of Engineering and Research	Govt.	Pune	185	
Guru Jambheshwar University Of Science and Technology - Dept of Computer Science and Engineering	Govt.	Hisar	= 185	
BVRIT	Pvt.	Hyderabad	186	81
Institute Of Information and Communication Technology	Pvt.	Ahemdabad	= 186	= 81

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Institute Of Mass Communication and Media Technology, Kurukshetra University	Govt.	Kurukshetra	187	
Sri Krishna College of Technology	Pvt.	Coimbatore	= 187	82
ITM University	Pvt.	Gwalior	188	83
Jain College Of Engineering	Pvt.	Belagaum	189	84
Jaypee Institute Of Information Technology (Main Campus)	Pvt.	Noida	190	85
JNTU College Of Engineering	Govt.	Manthani	191	
Vardhaman College of Engineering	Pvt.	Rangareddy	= 191	86
Kalasalingam University	Pvt.	Virudhnagar	192	87
Karnatak Law Society's Gogte Institute Of Technology	Pvt.	Belgaum	193	88
Karunya Institute of Technology and Sciences	Pvt.	Coimbatore	194	89
M Kumarasamy College of Engineering	Pvt.	Karur	= 194	= 89
Government Engineering College	Govt.	Raipur	195	
KJ Somaiya College Of Engineering	Pvt.	Mumbai	= 195	90
KJ Somaiya Institute Of Engineering and Information Technology	Pvt.	Mumbai	196	91
KL University (Koneru Lakshmaiah Education Foundation)	Pvt.	Vijaywada	197	92
Indira Gandhi Institute Of Technology	Govt.	Delhi	198	
Mahatma Gandhi Mission's Jawaharlal Nehru Engineering College	Govt.	Aurangabad	= 198	
Institute Of Engineering & Technology, MJP Rohilkhand University	Govt.	Bareilly	199	
Jain University	Pvt.	Bangalore	200	93
Dr. Vishwanath Karad MIT World Peace University	Pvt.	Pune	201	94
KLS Gogte Institute Of technology	Pvt.	Belagaum	= 201	= 94

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank
KU College Of Engineering and Technology	Pvt.	Warangal	202	95
West Bengal University Of Animal and Fishery Sciences	Govt.	KolKata	= 202	
G Pulla Reddy Engineering College	Pvt.	Kurnool	203	96
Maharishi Arvind Institute Of Engineering and Technology	Pvt.	Jaipur	= 203	= 96
MET Institute Of Engineering	Pvt.	Nashik	= 203	= 96
DIT University	Pvt.	Dehradun	204	97
Maharishi Markandeshwar University (Trust)	Pvt.	Mullana	= 204	= 97
NITTE Meenakshi Institute Of Technology	Pvt.	Bangalore	205	98
NMAM Institute Of Technology, NITTE	Pvt.	Karkala	206	99
Rizvi College Of Engineering	Pvt.	Bandra	207	100
Shiksha 'O' Anusandhan (Institute Of Technical Educa- tion and Research)	Pvt.	Bhubaneswar	208	101
IMS Engineering College	Pvt.	Ghaziabad	209	102
Rajasthan College Of Engineering For Women	Govt.	Jaipur	210	
Raj Kumar Goel Institute Of Technology	Pvt.	Ghaziabad	211	103
Orissa School Of Mining Engineering	Govt.	Kendujhar	= 211	
Bansilal Ramnath Agarwal Charitable Trust's Vishwakarma Institute	Pvt.	Pune	212	104
Don Bosco Institute Of Technology	Pvt.	Mumbai	= 212	= 104
Ajay Kumar Garg Engineering College	Pvt.	Ghaziabad	213	105
Fr. C Rodrigues Institute Of Technology	Pvt.	Navi Mumbai	214	106
Dr. C. V. Raman University, Faculty Of Engineering & Technology	Pvt.	Bilaspur	215	107
Krishna Institute of Engineering & Technology	Pvt.	Ghaziabad	= 215	= 107

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Maulana Abdul Kalam Azad University of Technology	Govt.	Nadia	= 215	
G.L. Bajaj Institute Of Technology & Management	Pvt.	Greater Noida	216	108
New Horizon College Of Engineering	Pvt.	Bangalore	= 216	= 108
Sree Vidyanikethan Engineering College	Pvt.	A. Rangampet	= 216	= 108
GH Patel College Of Engineering and Technology	Pvt.	Anand	217	109
Padamsri Dr. B. V. Raju Institute of Technology	Pvt.	Medak	= 217	= 109
BNM Institute of Technolgy	Pvt.	Bangalore	218	110
Gudlavalleru Engineering College	Pvt.	Gudlavalleru	= 218	= 110
Arya College Of Engineering and IT	Pvt.	Jaipur	219	111
Institute Of Aeronautical Engineering	Pvt.	Dundigal	= 219	= 111
J. K. Institute Of Applied Physics and Technology	Pvt.	Allahabad	220	112
KLE Technological University	Pvt.	Dharwad	= 220	= 112
Don Bosco University (Don Bosco College Of Engineering and Technology)	Govt.	Guwahati	221	
Narula Institute of Technology	Pvt.	Kolkata	= 221	113
Jerusalem College Of Engineering	Pvt.	Erode	222	114
Mahatma Gandhi Mission's College Of Engineering and Technology	Govt.	Navi Mumbai	223	
Mahaveer Institute Of Science and Technology	Pvt.	Hyderabad	224	115
Manyawar Kansi Ram Engineering College Of Information Technology	Govt.	Ambedkar Nagar	225	
PES College Of Engineering	Pvt.	Mandya	226	116
Saraswati College of Engineering	Pvt.	Navi Mumbai	227	117
Shri Guru Govind Singhji Institute Of Engineering and Technology	Govt.	Vishnupuri	= 227	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank*
North Eastern Regional Institute of Science & Technology	Govt.	Itanagar	228	
Rungta College Of Engineering and Technology	Pvt.	Bhilai	229	118
RNS Institute Of Technology	Pvt.	Bangalore	230	119
C M R Institute of Technology	Pvt.	Bangalore	231	120
Rajiv Gandhi Memorial College Of Engineering and Technology	Govt.	Kurnool	= 231	
Haldia Institute of Technology	Govt.	Haldia	232	
Noida Institute Of Engineering and Technology	Pvt.	Greater Noida	233	121
Goka Raju Ranga Raju Institute of Engineering & Technology	Pvt.	Hyderabad	234	122
Integral University	Pvt.	Lucknow	235	123
K J Somaiya College of Engineering	Pvt.	Mumbai	= 235	= 123
Kakatia Institute of Technology and Science	Pvt.	Warangal	236	124
Tamil Nadu College Of Engineering	Pvt.	Coimbatore	= 236	= 124
University College Of Engineering	Govt.	Kariavattom	237	
Tezpur University - School Of Engineering	Govt.	Sonitpur	238	
St. Xavier's Catholic College Of Engineering	Pvt.	kanyakumari	239	125
Thakur College Of Engineering and Technology	Pvt.	Mumbai	= 239	= 125
Sri Venkateswara College Of Engineering	Pvt.	Tirupati	240	126
Sreenidhi In stitute Of Science and Technology	Pvt.	Ghatkesar	241	127
University institute Of Chemical Engineering and Technology	Govt.	Chandigarh	242	
University Institute Of Technology	Govt.	Burdwan	243	

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank*
University School Of Chemical Technology	Govt.	Delhi	244	
Uttar Pradesh Textile Technology Institute	Govt.	Kanpur	245	
University Of Science & Technology Meghalaya	Govt.	Ri- Bhoi	246	
University Institute Of Technology, Barkatullah University	Govt.	Bhopal	247	
VMKV Engineering College	Pvt.	Salem	248	128
Xavier Institute Of Engineering	Pvt.	Mumbai	249	129
Basavakalyan Engineering College	Pvt.	Karnataka	250	130
DY Patil College Of Engineering And Technology	Pvt.	Kolhapur	= 250	= 130
Dr.Ram Manohar Lohia Awadh University - Institute Of Engineering Technology	Govt.	Faizabad	251	
College Of Engineering	Govt.	Bhubaneswar	252	
Deogiri Institute Of Engineering and Management Studies	Pvt.	Aurangabad	253	131
Babu Banarasi Das University (School Of Engineering)	Pvt.	Lucknow	254	132
Vishwakarma Institute Of Information Technology	Pvt.	Pune	255	133
Valliammai Engineering College	Pvt.	Kancheepuram	256	134
Centurion University Of Technology and Management	Pvt.	Gajapati	257	135
Bhilai Institute Of Technology	Pvt.	Raipur	258	136
Invertise Institute Of Engineering & Technology	Pvt.	Bareilly	259	137
Shri Vishnu Engineering College for Women	Pvt.	Bhimavaram	260	138
Institute Of Technology, Guru Ghasidas Vishwavidyalaya	Govt.	Bilaspur	261	
MKSSS's Cummins College Of Engineering	Pvt.	Pune	262	139

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Orissa Engineering College	Pvt.	Khordha	263	140
Rajiv Gandhi Institute Of Petroleum Technology	Govt.	Raibareli	264	
St. Peter's Engineering College	Pvt.	Hyderabad	265	141
Vidya Academy Of science and Technology	Pvt.	Thrissur	266	142
Vignan's Institute Of Engineering For Women	Pvt.	Vishakhapatnam	267	143
Christian College Of Engineering and Technology	Pvt.	Bhilai	268	144
Shri Ramdeobaba College Of Engineering and Management	Pvt.	Nagpur	= 268	= 144
Mewar University	Pvt.	Chittoragarh	269	145
Jaypee University Of Engineering & Technology	Pvt.	Guna	270	146
Sagi Ramakrishnam Raju Engineering College	Pvt.	Bhimavaram	= 270	= 146
Ambala College Of Engineering and Applied Research	Pvt.	Ambala	271	147
University Institute Of Engineering and Technology	Govt.	Chandigarh	272	
Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engg. College	Pvt.	Morai	= 272	148
Uttaranchal University	Pvt.	Dehradun	273	149
Pimpri Chinchwad College of Engineering	Pvt.	Pune	274	150
Sree Venkateswara College Of Engineering and Technology	Pvt.	Chittor	= 274	= 150
Shri Mata Vaishno Devi University College Of Engineering	Pvt.	Udhampur	275	151
MBM Engineering College	Pvt.	Jodhpur	276	152
Shri Shankaracharya Group Of Institutions- Faculty Of Engineering	Pvt.	Bhilai	277	153

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
Sri Sai Ram Institute of Technology	Pvt.	Chennai	= 277	= 153
Ansal University (SET)	Pvt.	Gurgaon	278	154
ABES Engineering College	Pvt.	Ghaziabad	279	155
ANU College Of Engineering and Technology	Pvt.	Guntur	280	156
M. G. R Educational and Research Institute	Pvt.	Chennai	= 280	= 156
Bangalore Institute Of Technology	Pvt.	Bangalore	281	157
Basaveshwar Engineering College	Pvt.	Bagalkot	282	158
Anjuman College Of Engineering and Technology	Pvt.	Nagpur	283	159
Dr. ZH Institute Of Technology & Management	Pvt.	Firozabad	284	160
Rajiv Gandhi University - Faculty Of Engineering and Technology	Govt.	Papum pare	285	
SRM Easwari Engineering College	Pvt.	Chennai	286	161
University Institute Of Engineering & technology, Panjab University SSG Regional Center	Govt.	Hoshiarpur	= 286	
Feroze Gandhi Institute Of Engineering & Technology	Govt.	Raebareli	287	
Hindu College Of Engineering	Pvt.	Sonipat	288	162
Rewa Engineering College	Pvt.	Rewa	289	163
Sardar Vallabhbhai Institute Of Technology	Pvt.	Anand	= 289	= 163
Adhiyamaan College Of Engineering	Pvt.	Hosur	290	164
Jalpaiguri Government Engineering College	Govt.	Jalpaiguri	= 290	
Shri Shankaracharya Engineering College	Pvt.	Bhilai	= 290	= 164
LBS College Of Engineering	Pvt.	Kasargod	291	165

NAME OF INSTITUTES (Engineering)	STATUS	CITY	National Cluster Rank* Survey / Perceptive Based	National Private Category Rank [*]
University Institute Of Technology-Rajiv Gandhi Proudyogiki Vishwavidyalaya	Govt.	Bhopal	= 291	
Maharastra Institute Of Technology	Pvt.	Pune	292	166
Lokmanya Tilak College Of Engineering	Pvt.	Navi Mumbai	293	167
Mahant Bachittar Singh College Of Engineering and Technology	Pvt.	Jammu	294	168
Mizoram University - School Of Engineering and Technology	Govt.	Aizawl	295	
Nagaland University - School Of Engineering and Technology and Management	Govt.	Lumami	296	
Sam Higgin Bottom Institute Of Agriculture, Technology & Sc. (AAI)	Pvt.	Allahabad	297	169
Quantum School Of Technology	Pvt.	Roorkee	298	170
University College Of Engineering	Govt.	Thodupuzha	= 298	
Vignana Bharathi Institute Of Technology	Pvt.	Ghatkesar	= 298	= 170
NRI Institute Of Information Science & Technology	Pvt.	Bhopal	299	171
Skyline Institute of Engineering & Technology	Pvt.	Greater Noida	= 299	= 171
SIES Graduate School Of Technology	Pvt.	Navi Mumbai	300	172
Ujjain Engineering College	Govt.	Ujjain	= 300	
Waichand Institute Of Technology	Pvt.	Solapur	= 300	= 172

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Woxsen University Launches 7 Cutting-Edge UG Programs

One of the first Private Universities of Telangana, Woxsen University has launched 7 New Cutting-Edge UG Programs for the 2020 intake.

"Addressing to the needs of Gen Z during Covid times, the university launching New Programs in emerging technologies like B.Tech. in Data Science & Ai, B.Tech. in Automation & Robotics apart from Computer Science Engineering. On the Business side also, the university has launched BBA in E-Com and Digital Marketing, BBA in Data Science & Ai, Entrepreneurship Development (Hons).

Woxsen has already invested in setting up a State-of-the-Art AI and Robotics Lab to provide simulated case studies & Live projects to make its students Industry ready. The course outline has been designed by its nationally acclaimed faculty & delivery designed with a very unique pedagogy pivoted towards Applied Learning instead of just theory. The visionary founder and management team are always ahead to deliver academic excellence & global exposure to all those discerning students, who at times look for educational institutions outside India..." said, Mr. Vishal Khurma, CEO, Woxsen University.

Mr. Praveen Kr. Pula, Founder & Chairman, always had the bold vision to build an Institution of excellence in Higher education, where we innovate & transform the conventional educational processes through application of knowledge, research & industry feedback to further scale up community benefit.

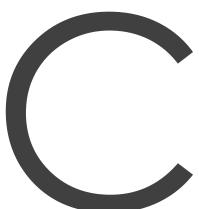
The "Ideate to Create" methodology is set to take the field of education by storm. Institutions carry a responsibility to provide a platform to not just ideate but propel the careers of its wards.

Aligned with the Prime Minister's vision towards 'Make in India', Woxsen has implemented an incubation centre for students to nurture their business ideas, gain mentorship and get funded with an opportunity to win a seed capital of USD 2,000 from the University.



Dr. Rajesh K Pillania Professor of Strategy, MDI, Gurgaon

OPPORTUNITIES FOR REORGANIZING WORK-LIFE



oronavirus epidemic (COVID-19) also called 2019nCov, 2019 Novel Coronavirus is impacting the world in an unprecedented way. It has put a break on the usual way of running the world. Instead of focusing on the negative impact of it, we need to look more at leveraging it as a godsend opportunity, though many of us are looking at as China-sent crisis.

Relook at COVID-19 as an Opportunity

Homo sapiens have survived on earth through many crisis situations, and this crisis should be taken as an opportunity. An opportunity to relook, unlearn and learn better ways to run our international organization, governments, industries, civil society originations, political organisations, religious organizations and educational institutes. This crisis should be used as a big life time opportunity to re-look at the way we run life, particularly work life on this earth.

Origin and evolution of work places

The current form of business organizations was mainly a result of manufacturing revolution resulting in creation of factories in 19th century and later it was more or less copied by service organizations as work place became symbol of prestige.

The origins of the modern office lie with large-scale organisations such as governments, trading companies and religious orders that required written records or documentation. Medieval monks, for example, worked in quiet spaces designed specifically for sedentary activities such as copying and studying manuscripts. As depicted in Botticelli's St Augustine in His Cell, these early "workstations" comprised a desk, chair and storage shelves. Over the course of the nineteenth and twentieth centuries, increasingly specialized office designs – from the office towers of Chicago and New York to the post-war suburban corporate campuses – reinforced a distinction between work and home (BBC, 2017).

This was pushed and shaped by the first Industrial Revolution in 18th Century which craftsman mostly working from home were overtaken by big factories pushing the concept of office. This continued through 2nd and 3rd Industrial revolutions. The work from office concept was helped to a great extent by technological evolution over time making it more cost effective, organized and productive.

People of current generation are so used to it that we take it for granted as we have inherited this system. This system though has number of benefits; it also has lot of issues that we have realized over the years.

The huge negative effects of current way to work

Though this system has helped in number of ways,but it has also created number of problems such as movement of people to cities and congested cities; time wasted in traffic and traffic jams resulting into pollution; increasing health issues in cities due to vehicular pollution, both air and noise pollution; increasing cost for organizations also in terms of creating huge office spaces and maintaining them to name a few.

The wastage due to and cost of each of the above mentioned item runs in billions of dollors and large numbers of wasted days for countries. Due to space constraints, let's look only at one of the item i.e. commuting for work. World over, people spend lot of time daily in commuting for work. According to data from the MoveinSync Time Travel Report the average Indian commuter in tier 1 cities spends between 48 and 56 minutes travelling one way to the office. On an average, Indians spend 7% of their day in commuting to office, averaging less than 3 minutes per kilometer (MoveinSync, 2019). Data from around the world shows lower but equally problematic levels of time spent commuting - Europe an average of 39 minutes per day (Eurofound, 2019), USA 26.6 minutes (Unites States Census Bureau Community Survey 2019), Beijing 52 minutes (Statistica, 2015). These long commutes are costing countries in billions of dollars every year. Long commutes are costing UK businesses an estimated £5.3bn a year in lost productivity (Corporate advisor, 2019). Besides monetary impacts, extended time spent in office commutes interferes with work life balance, impacts health, creates congestion and damages environment with air and noise pollution.

Redesigning our way to work

This should be taken as an opportunity to re-look at how we are running our work places i.e. international organization, governments, industries, civil society originations, political organisations, religious organisations and learning places i.e. educational institutes.

Going Digital

A lot of work can be done online using various tools such as video platforms. The current available and emerging technologies can be harnessed to the hilt for making digital easy, convenient and cost effective.

The work from office concept was helped to a great extent by technological evolution over time making it more cost effective, organized and productive.

Harnessing the power of working from home

By thoroughly relooking at each of these organization, we can reduce the need for everyone to be in organization premises every day. As we have realized during the current lock-down, there are huge advantages of working from home.

Finding the right home-office combination

The upper two ways can result in lot of savings for organizations and also result in reducing the negative impact of daily travels, traffic jams, traffic pollution on health and environment. However, we need to also look at maintaining certain offices as offices has its own positive impacts too. Different organizations need to study it in detail and find out the right home-office combination for them as it cannot be one solution for everyone.

Conclusion

Though we already knew the huge negative impacts of the current system of working from office, we ignored to re-organise it. We should take COVID-19 as a godsend opportunity to re-organise the way we run our work-life on earth.

(The author acknowledges inputs from Ms. Dearbhla O'Reilly)

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Prof. MJ XavierFounding Director – IIM Ranchi and
Professor of Marketing and Business Analytics – LIBA Chennai

THRUST ON ONLINE DUCATION BY THE GOVERNMENT OF INDIA – A CRITIQUE



This article traces the history of Distance Education in India and critiques the decision by the Government of India to permit top 100 universities to offer online education.

orona pandemic has forced every educational institution to turn to online education. Recently our Finance Minister, Nirmala Sitharaman announced that top 100 Universities in India can start online courses. Sitharaman also said that Swayam Prabha DTH channels would support and reach those who do not have access to the internet. Now 12 more channels are planned to be added. She also said PM eVIDYA- A programme for multi-mode

access to digital/online education would be launched immediately. These will have several components including online education by universities and TV channels for class 1-12. She also envisages extensive use of Community radio and podcasts. This article looks at the historic development of distance education and how these announcement will facilitate further growth of online education in India.

Distance education in India has a checkered history. The precursor to distance education was the correspondence courses. Alternative education had been a top priority of the Government which is noticed from the onset of the Five Year Plans. The First Five Year Plan provided for private study with the help of correspondence courses, radio talks offered by the Universities across the country. It also allowed the students to take private examinations. It was during the Third Five Year Plan (1960-65) that the country saw a boom in the demand of higher education and the demand-supply gap was filled by correspondence courses. More than 20 Universities started offering correspondence courses. The more prominent ones were the Delhi University, Mysore University, Annamalai University, Madurai Kamaraj University which had enrolments over 5000.

The First Five Year Plan provided for private study with the help of correspondence courses, radio talks offered by the Universities across the country. It also allowed the students to take private examinations.

Within a short time, correspondence education earned a bad reputation amongst the common people as well as within the academic circles. Correspondence education began to be linked with low quality education mostly preferred by the dull students, who could never qualify for traditional courses due to their incapabilities.

To overcome the bad image, the concept of open University was born. In 1985, Rajiv Gandhi announced the creation of a national open university. He included it in his new educational policy, thus giving a political leverage. As an Open University, IGNOU has come

a long way since 1985, having crossed national boundaries providing higher education as well as assisting other developing countries in this regard. It has more 7,50,000 students with extremely varied profiles, spread throughout the length and breadth of the country. The University has an efficient and effective networking of 67 Regional Centers and over 2667 Learners Support Centers, all over India and 29 overseas partner institutions. Now we have Open Universities set up in almost every state too.

Meanwhile, a project to provide web based training was set up and it is called the National Programme on Technology Enhanced Learning (NPTEL). This is funded by the Ministry of Human Resource Development (MHRD). This was first conceived in 1999, to pave the way for introducing multimedia and web technology to enhance learning of basic science and engineering concepts, was launched in September 2006.

In February 2009, India launched a National Mission on Education through Information and Communication Technology (ICT), which is a billion dollar enterprise. It provided for internet connection to about 20 thousand colleges and other educational institutions. In March 2010, the Cabinet Committee on Infrastructure (CCI) approved the establishment of the National Knowledge Network (NKN) at an outlay of Rs 5990 Crore, to be implemented by NIC over a period of 10 years. Establishing NKN is a significant step towards ushering in a knowledge revolution in the country with connectivity to 1500+ institutions. NKN initially connected IITs and IIMs and then extended to Central Universities, NITs and other Universities.

In between technology enabled distance education started taking roots. MIT started its Open courseware and made its class lectures and other materials free on the Internet. Subsequently we witnessed the birth of organizations like Coursera, Edex, Khan academy who started offering courses over the internet. These were called Massive Open Online Courses (MOOC). These entered Indian markets too. Many students and working professionals have joined different e-learning platforms in the past few years in order to enhance their skills. And, looking at trends, the number of people adopting online education platforms is expected to increase significantly in the near future. According to a KPMG Report the number of online users is expected to go up to 9.5 million in India by 2021.

In order to catch up with the rest of the world, India launched its own MOOC platform called SWAYAM

in 2017. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. This is done through a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to any learner. More than 1,000 specially chosen faculty and teachers from across the country have participated in preparing these courses.

Just as the then PM Rajiv Gandhi announced the formation of National Open University in 1985, the decision by Modiji's Government to allow top 100 universities to start online courses in India will go a long way in helping the country establish itself as a leader in this field. However the decision is fraught with a lot of problems.

Till today the distance education degrees are considered inferior to full time regular programs taught in the class rooms. Indiscriminate increase in the number of online education programs could lead to dilution of standards. Consequently the acceptance of

these graduates by industries could pose a problem.

Poor infrastructure in Colleges and Universities is another area of concern. There are no standards specified for the studio, LMS, Virtual class room software, proctoring solution and lecture capture solutions that are needed to set up online education. Most Institutions try to cut costs by using open source platforms which are available for free. Unfortunately most of these products are made by foreign companies. There are a few start ups trying to develop these tools in India. We have to go a long way in building our own platforms for eLearning. We should work out standard specifications for online education and also decide on the minimum technology investment needed to start online courses. We should also encourage Indian entrepreneurs to start developing these solutions.

Though the Institutions have got high speed internet connection, the rural students still suffer from

poor last mile connectivity. Even today bandwidth issues are there for live classes. We may have to upgrade to 5G and also make it available in every nook and corner of the country at affordable prices.

If the GER has to be increased, language can still pose a problem for many students. Only now steps are being taken to translate SWAYAM courses in to regional languages. Develop more courses that reflect the culture and traditional of the regions in local languages so that they can be preserved for posterity.

Though it is not a difficult problem to resolve, the

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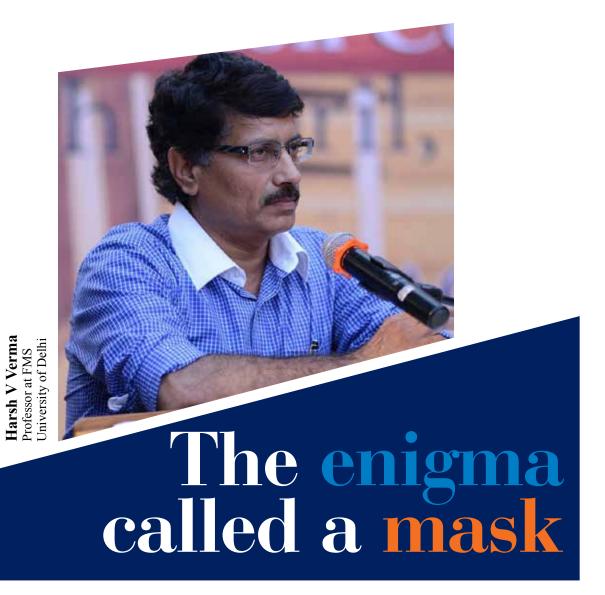
sive use of Community

radio and podcasts.

Government should clarify on the regulatory body that would approve and manage online education across the country. There was something called a Distance Education Council (DEC) that was established in 1991 to be responsible for the promotion and coordination of the Open University and Distance Education system and for the maintenance of its standards. The Vice-Chancellor of IGNOU was the Chairman of the DEC with members from UGC, MHRD, AICTE, NAAC and Vice Chancellors of State Open Universities as members. However in 2012, DEC got dissolved and the function get merged with UGC. It is now

called the Distance Education Bureau and operates under UGC umbrella. Universities have to shuttle between the UGC, MHRD and AICTE to get necessary approvals. A single body to regulate all aspects of Online Education will go a long way in improving the online education in this country.

On the whole, the intent is good. The future is online and the Government has rightly identified the same and has made sincere attempts to build on the foundation laid over the last several decades. Our reliance on international firms for technology, content and faculty should be gradually reduced. Some more efforts are needed in defining quality standards for equipment, software and delivery methods. Address the infrastructure issues related to bandwidth and connectivity across the country. Finally, set up a regulatory body for online education and simplify the approval process.



B

ehavioral modification is difficult if not impossible to achieve. Brands often suffer from delivery deficiency not on account of their performance but because of improper use. Users simply jump to use a product without reading instructions. In some cases people know what the instruction is yet base their behavior on subjective judgment (like instruction says use 50 ml of water but consumer uses a quantity that is perceived to be 50 ml is without measuring it). In the other case

a user may generalize use behavior to a dissimilar object under perception of similarity (cooking rice with rice cooker assuming it works like pressure cooker).

Covid 19 is here and in the absence of medication the only strategy to deal with it is prevention. One of the suggested methods to reduce its spread is to wear mask and maintain physical distance. Both of these preventive behaviors apparently do not involve high economic cost yet observational evidence shows people on the streets either don't wear masks or use them reluctantly. This resistance to put on an effortless gear could be dismissed on account of pervasive stupidity. But it may not be so. What lies behind the mask in the mind of the wearer has to be understood. To the observer a mask is a mask, a piece of clothing cut into a shape with stapled elastic band on the sides. A mask is certainly nothing more than cloth, elastic band cut and stitched into a conical or rectangular shape as a product to a producer but for its user it is much more.

Product in factory may start with a singular meaning but as it moves into a social system it begins to become a multi-layered entity. Things are viewed from psychological, social and cultural angle. This extends their meaning making them either object of desire or disdain or refrain. Consider different layers of product meanings:

Physical

A mask at physical level as mentioned previously is a combination of protective cloth, stitching, shape, elastic band and color. Physical dimensions are measurable.

Feeling

Feeling is sensory discernment like a surface may feel hard or soft or grainy. Wearing a mask feels suffocating, harsh on skin, produces itchiness.

Psychological

It relates to emotional and intellectual state of mind. This level of meaning throws a mask into subjective (not physical) psychological realm that includes cognition, emotion, conscious and subconscious response. Intellect (facts), cognition or reason does knowing, analyzing and categorizing. Correspondingly it serves to activate emotions through connections stored in memory. Brand/products tap into human desires like for

Product in factory may start with a singular meaning but as it moves into a social system it begins to become a multi-layered entity.

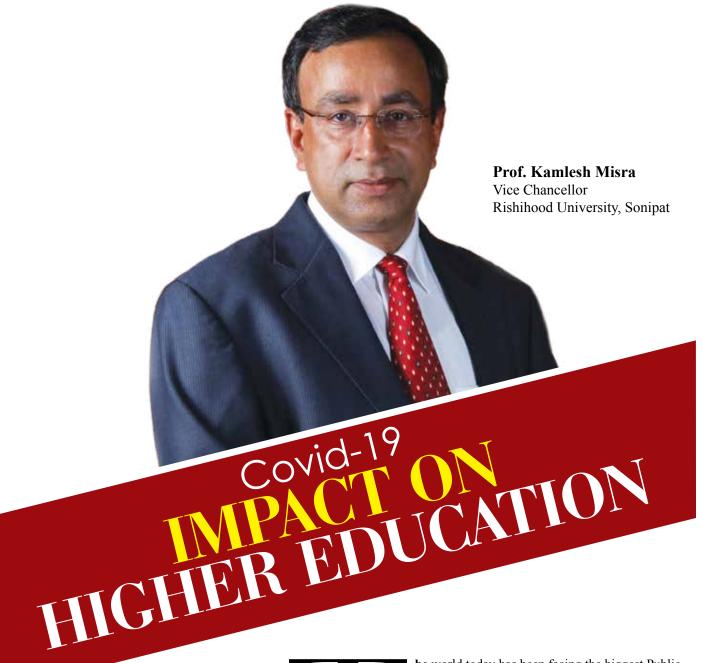
love (Cadbury), happiness (Hallmark), esteem (Mercedes), security (LIC), power (Bullet), and belonging (Lux). The question arises what emotional reward does wearing a mask provide? Ideally it should tap into basic need for safety and security but people just don't seem to bother. It probably requires sharp and penetrating communication. If not wearing Gillette after shave can prevent you from being 'the best you can' or being the man (Old Spice) then why can't not wearing a mask rob you of life. It is a matter of communication and positioning.

Cultural

It includes several aspects related to a society including values, beliefs, hierarchy, language, customs and roles. One such aspect relates to gender roles and aspects of masculinity/femininity. To hide behind 'make up' or 'veil' or cover face in public is linked with feminine identity. Further, covering face with a mask is patent admission of fear and symbolic of retreat and hiding in the face of challenge. It seems to violate masculine idea of being brave and being a fighter. A mask on the other hand from the perspective of women is a hindrance in pursuit of their ideal of being attractive (in narrow sense of gender construction). It runs contrary to the idea of beautification and making up. Mask therefore, is object of obstruction in way of performance of gender role and pursuit of gender identity. This however may not be the case with people who do not cast themselves and categorize themselves in rigid gender binary.

Product acceptance may start with basic form and functionality, but its success depends on cultivation of meanings in sync with the sociopsychological-cultural reality where its consumer is embedded.

FUTURE LEARNING _______FUTURE LEARNING



he world today has been facing the biggest Public Health Risk which is leading to one of the largest and the quickest reorganization of the world order. By the end of March 2020, the epidemic had spread to over 185 countries and resulted in closure over 90 percent of all schools, colleges and universities impacting close to 1.38 billion students. The speed of the spread of the epidemic, the closure of higher education institutions and the transition to online teaching was so swift that it hardly gave any time to plan and to reflect on the potential risks or the

potential opportunities that such a sudden change could bring. Given such a situation it is important to look at the impact and reflect back on what has transpired and what is likely to happen as we move forward to returning to a normal situation even though the new normal will be completely different from what we all have been accustomed to earlier.

A number of changes are likely to be obvious and have already started showing up. The entire higher education sector will have to go through not just a reform but a major transformation both globally and in India. The whole concept of education abroad will change at least in the short-term and possibly in the long-term as well. A large number of students who were planning to study abroad will change their plans and find ways of completing their studies locally till we are able to find solution to the problem we are faced with. The whole concept of defining study abroad by geographic mobility may change and a new framework that focuses on mobility of student minds could become more relevant. As a result, Universities in the United States, United Kingdom, Australia, Canada and New Zealand will see a decline or reduction in enrollments as a large proportion of the international students in these countries will be either from China or India.

Higher education will witness a shift to higher emphasis on online learning. It will however, not lead to a disruptive shift but more of a shift to blended learning models. Although there is speculation that there will be a dramatic shift to online learning, I have doubts that such a scenario will emerge. Shift to complete online learning will be a very dull proposition from a student's point of view and will result in nothing other than developing very passive learning environment for the students. Online learning is a special kind of methodology and not all teachers are good at it or at least not all of them were ready for the sudden transition from face to face learning to online learning. Thus, most of the teachers are just conducting lectures on video platforms such as zoom which may not be real online learning in the absence of a dedicated online platform specifically designed for the purpose. There is a risk that in such a situation, learning outcomes may not be achieves and it may be only resulting in engaging the students. Universities and colleges will shift to a model of blended learning where both face to face delivery along with online model will become a norm. This will require all teachers to become more technology savvy and go through some training to bring themselves to the level that would be required. New ways of delivery and assessments of

Higher education will witness a shift to higher emphasis on online learning. It will however, not lead to a disruptive shift but more of a shift to blended learning models.

learning outcomes will have to be adopted which opens immense opportunities for a major transformation in the area of curriculum development and pedagogy.

In the post Covid-19 scenario, Learning Management Systems at universities and colleges will become the new norm. A great opportunity will open up for those companies that have been developing and strengthening learning management systems for use by universities and colleges. This has the potential to grow at a very fast pace but will have to be priced appropriately for use by all institutions. Such a shift to a technology platform will also create new opportunities for universities and colleges to start improving the quality of the learning material that is used in the teaching and learning process. Since blended learning will be the new format of learning there will be a push to find new ways to design and deliver quality content especially due to the fact that use of learning management systems will bring about more openness and transparency in academics.

Finally, there will be rise in collaborative work. The teaching community has, to a large extent, been very insulated and more so in a country like India. There is a new opportunity where collaborative teaching and learning can take on new forms and can even be monetized. Faculty members/ teachers can deliver online courses to even students from competing institutions. Collaborations can also happen among faculty/teachers across the Nation to benefit from each other. It is expected that there will be a massive rise in teleconferencing opportunities which can also have a negative impact on the travel plans of members of the academic community. A large number of academic meeting, seminars and conferences will move online and there is possibility that some new form of online conferencing platform will emerge as a business model.

After all this, there is one certainty that we can envisage and that is going to change how higher education will be globally and in India. India is not going through just a reform in higher education, now it will go through a major transformation.

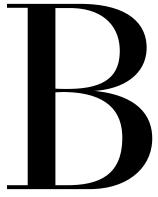
FUTURE LEARNING



Prof. (Dr.) Ajay Kumar Director GL Bajaj Institute of Management & Research Greater Noida

BUSINESS STRATEGIES

for dine-in, take-away and home-delivery setups



efore the virus hit, the Indian dine-in restaurants, take-away outlets and home-delivery setups was grossly overheated with new places opening at a fast pace in many cities. The number of cloud kitchens obviously increased to keep pace with the growing demand. While it's still too early to say what the post COVID-19 scene is going to look like, a lot has changed in a very short period.

For a country like ours, the biggest take-away from this pandemic will be an increased focus on health and sanitation. The restaurant industry needs to adopt more stringent practices to ensure that both its people and the food preparation follows stringent hygiene practices. Business strategies need to be revamped as per the changing consumer perception. Since the fear of changing infection rates is going to be very high, the focus should be on procuring branded ingredients for preparing food rather than earning profits by using me-too and brands with a doubtful lineage. Branding will signify hygiene, safety standards and in a way, sourcing credibility of businesses. Pop-up kitchens of the Auntyjii Food genre will be in demand, which will make small quantities fresh in their home kitchens and supply in packaging that is

'premium' delivery with full food experience sans the ambience. Consumer confidence towards restaurants will be directly proportional to the flow of positive news on lower numbers infected, and those succumbing to the infection. Thus businesses will take a few months to begin sustaining and staying above the danger mark, so to say.

"No waiting, No Contact" can be the technological formula for all players. They can use smartphone apps for creating a positive consumer interface starting from reserving a table, selecting food from the menu, valet-parking and making payments, thus reducing physical contact points. Training of staff regarding gloved service, masks and hair nets and the desire to up-serve the consumer will act as a booster. Restaurants which

In the wake of Covid-19, the biggest losers in the food business are likely to be dine-in restaurants, food stands and road-side vendors. To regain the confidence of consumers they can and must offer meals with minimal human touch-points.

following all safety and hygiene standards.

During the lockdown phase, the home delivery business, as we have observed, has survived despite all real and fictional fears around food safety and possible transmission of the infection, and home deliveries have continued (albeit 50-60% lesser) because they were allowed as an essential service. Going forward, certain precautions like sanitizing the kitchen every hour, taking employees' temperature every day for screening, and sanitizing delivery bags after every order are required.

In the wake of Covid-19, the biggest losers in the food business are likely to be dine-in restaurants, food stands and road-side vendors. To regain the confidence of consumers they can and must offer meals with minimal human touch-points. As of now, dine-in restaurants are still not allowed to function fully, except for home-deliveries, and top restaurants do offer

have an uninhibited kitchen view, will subliminally send out more welcome signals to the consumers. In today's digital era, marketers are required to shout loud about all these initiatives on various platforms to get positive reviews and comments. Besides full mealtime menus, restaurants may offer in-between meals menus, snack menus, all-day menus and maybe even late-night menus to keep their bottom line intact.

Decrease in street-food consumption, greater pick-up in take-aways, and better prospects for home-delivery are predicted. Lesser eating-out, sparser crowds at restaurants, visible kitchens, no/low-contact technologies, gloved and masked service, single-serve portions will be the 'new normal'.

This pandemic will act as a transition point for food related health and hygiene in India. Innovators and adopters will emerge as the leaders. Let us all wait and watch for the new advisory by Government of India for lockdown 4.0.

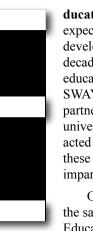
FUTURE LEARNING _______ FUTURE LEARNING



Dr. Sujata Shahi Vice Chancellor | Professor IILM University, Gurugram

ONLINE EDUCATION

A way forward for future learning



ducation sector has forever been expecting the need to pace with technology developments around the world. In the last decade, we have seen the emergence of online education with platforms like Coursera, SWAYAM, Udemy amalgamated by the partnerships with the world's most renowned universities. The Covid-19 crisis has merely acted as a catalyst for a wider adoption of these enablers by opening a new mode of imparting quality education.

Our education system has also undergone the same transformation at a global level. Education system at all levels, universities or schools has now moved to the online platform. It is, however, very important to distinguish between the already existing online education and moving ahead how we incorporate this new format of **bended learning** in our education system.

Online education or technological integration has been a part of our education system over a century now. The goal of online education system is to help students add to their already existing learning by providing courses that can develop the knowledge further. Dearth of information available on the sites encourages students to review research and develop ideas that challenge their skills and probe them to develop more, tapping on their curiosity. Further, online education gives access to a plethora of courses that the students utilise to build deeper understanding of the topics beyond their current degree curriculum. Online education casts shadow to the idea of traditional education in many ways- through online education where students are open to choose the learning material of their choice which is beneficial for creative and highly edged students who demand complexity, while it is equally beneficial for the self-paced learners to decide whether or not they would want to understand the concept in depth or in easier manner.

However, the only demerits of online education one faces is the lack of connection, traditional classroom encourages strong teacher-student relationship helping them develop a strong connection guiding and helping students clear their doubts, review performance and grade their learning. Further the teachers act out as an absolute mentor tracking the performance of the student, following up this session-learning through class assignments, home assignments and tests. Teachers also have the opportunity to guide the way students are thinking and the choice of information they should have access to. Even peer learning takes place in face-to-face teaching. On the other side are the online courses and information that provides an access to students through the web of knowledge sans restrictions, checks etc. It is very important to separate online education with technological integration which has now been a part of our classroom settings in the form of introducing smart boards, computer labs etc to increase students engagement and learning.

While it is vital to clear the common conceived misconception, it is important to highlight the format of online learning most education institutions are currently adopting and that is *blended learning*. Blended learning

in its simplest form is referred to as the "learning that can be derived after clubbing the traditional classroom environment and online mode of teaching together". Understanding the importance of online courses and traditional teaching, blended learning has been introduced, ensuring to cover the challenges student and faculty face at both ends of the communication spectrum. Blended learning incorporates synchronous and asynchronous learning, where students have an opportunity to interact with teachers and clear their doubt during face-to-face teaching and comprehend, strengthen, and reinforce this through self-directed learning at their own pace. While several models have been proposed to explain what and how blended learning looks like including, face-to-face, online lab, rotation, flex etc., but one of the most efficient system that has been widely promoted is the *flipped classroom* method.

Online education gives access to a plethora of courses that the students utilise to build deeper understanding of the topics beyond their current degree curriculum.

Flipped classroom method of blended learning has enabled the faculty and students to transform online education in the 21st century, which necessitates introducing online education, post Covid-19. Blended learning through flipped learning method demands an online learning management system where the learning material, all or some, can be uploaded for students by teachers much before classroom time, and the face-to-face classroom or class time is based on the discussion and the application use of the concept previously shared by the teacher using the online learning management system. Here the teacher becomes a facilitator instead of being a direct mentor, and the approach is more student-centric than being teacher-centric.

EDUCATION POST | May 2020 | 64 EDUCATION POST | May 2020 | 65

Further, the teacher pays more attention on the application rather than on delivery, choice of material, and the way of teaching. The assigned classes are encouraged towards discussion and classroom activities where learning can be discussed and students get more clarity of the concept application post the concept understanding using the reading material uploaded before the actual class. Hence here the teacher adopts a role of a guide on side which is mostly missing in online courses ones take as they exist or function today. While blended learning is still at the experimentation stage where universities are seeing whether or not it will help the students, its benefits are widely discussed.

While students are expected to benefit from online education, it is very important for us to see whether or not our teachers are ready for this transformation, effectively moving from traditionalistic approach to a more formative approach. While it is not wrong to say that it is difficult to adopt any new mode that fast but institutional support can bring about the real change. Introducing online education will make the job of the teacher much easier than before. Teachers would now be burden-free from preparing the module plan or class lectures or following up with the students since the online mode enables teachers to be prepared beforehand for timely uploading of the material on the static learning management system site. Further, the teacher's efficiency will be increased and it will give more time to the teacher to involve in honing their skills, working on research papers and coming out of creative ways of initiating discussions and probing new ideas. Further, the student's immediate feedback and queries can be attended timely and on one-on-one basis. Academic and research emphasis would be enhanced by this mode of learning.

Mindfully dealing with the upcoming challenges?

As exciting as it may sound, online education can further pose challenges that should be reworked at an intermediate level.

Introducing technology in a hassle free manner is essential. Traditional education system demanded technology free lectures but introducing online education will require both the faculty and students to become tech trained to make the best use of it. The most effective way of dealing with this challenge is to teach the efficient way by using technology extensively.

The teacher takes up a passive role and becomes the side-quide or facilitator without directly controlling the learning that happens for students thus making the student the sole driver. While online education though blended learning is an ambiguous model which though it has been proven to be reliable, the effectiveness of it is still under speculation. The Covid-19 phase definitely demands immediate intervention because of the element of uncertainty, which it carries along its side.

The second challenge that could come up is when the students are not keeping up with their routine work. Online education lets student have complete control over their education and learning materials in hand. Constant assignments, group discussions, in-group activities and assessments can help the faculty to track the student's performance.

Finally, the teacher takes up a passive role and becomes the side-guide or facilitator without directly controlling the learning that happens for students thus making the student the sole driver. While online education though blended learning is an ambiguous model which though it has been proven to be reliable, the effectiveness of it is still under speculation. The Covid-19 phase definitely demands immediate intervention because of the element of uncertainty, which it carries along its side. Since learning and education does not stop, the modulations and transformations in the system will also enable the sector to take the leap for future technologies like Artificial Intelligence and Data Analytics, whenever they become the *new normal*.





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