Good morning, graduating students, Dignitaries on the Dias- Dr Gandhi, Dr Meena Chintamaneni, Dr Alka Mahajan, Dr Ashish Dapthadar, HOD Geetha Iyer, my family friend Meena Saxena, proud teachers in the room, prouder parents on the live stream, ladies, and gentlemen.

Good morning, congratulations and thank you for choosing me as your convocation speaker for 2023. I am an Engineer and MBA, but I took more time than you for the two degrees. You are an integrated degree batch and you have done this in five years. Times do change!

I hear there are teachers in the room. Can I pls request all the teachers to stand up so that we can give them a round of applause.

Thank you, we rarely thank our teachers who do so much for us.

I want to chat with you on Technology, its impact on Management with reference   to the individual, family, and society over the next 20 minutes. I have 8 points for you to think about.

1. Is technology good or bad?

There is a perennial debate on the benefits and downsides of technology. I am a believer in technology, I have worked for more than a decade in technology and I recognize the downsides of some technologies. My first truism for you is that no technology is bad, it becomes bad when misused or in the hands of the wrong people with the wrong intentions.

The first use of technology in the world was about implements, about agriculture, about creating canals by diverting water, about creating fire, about swords and shields. The Romans conquered the world

because they could build cobbled streets and their chariots could travel faster than other armies. The British ruled the world because they could sail the high seas. The Americans then owned air, space, and technology since World War 2.

At a basic level, technology leads to increase in productivity and hence improvement in living standards and incomes.

The first mixture of technology and management was when artisans were allowed by royalty to sell their products to the masses. The artisan had to brand his shoe or belt or whatever and then have an outlet to sell it. The first signs of advertising through town criers started and open commerce was born.

2. Who opposes new technology?

Incumbents always oppose new technology or pooh pooh it.

When the Guttenberg printing press started, books became available. Royalty opposed the spread of books since they felt that commoners would have access to the same knowledge they had. Over years, books created a huge movement and the world got educated faster. To give you one data point – the literacy amongst 15 + population was 65 % in 1973, today it is more than 90 %.

Television started when governments realized that they needed to broadcast the good they were doing and influence citizens. People opposed television saying that people would stop reading books now. The early programming was dull and lifeless, and the first management business model came in when brands started sponsoring soap operas. Advertising led revenue models which were till then in the print medium came to television in a big way. Television bought things to life for many in the world. The world became audio visual literate first before becoming print literate in most parts of Africa, South America, Eastern Europe, and Asia.

Today's television is a far cry from the 90s when it ruled the world. Today's anchors and their shouting matches are the first example of the bad effects of technology. Today's television is not a debate, it's a diatribe. So, is technology to blame or the anchors to blame for this state of diatribe?

3. Technology leads to progress and affordability.

Technology has made things affordable for a larger set of people. Technology has made food availability, storage better. Technology has made car travel, train travel, flights safer, reliable, and cheaper. Technology has made education and healthcare more accessible to all.

Let me give you the progress thanks to technology in healthcare with one statistic: Average life expectancy in 1973 was 58 years and today it is 73 years, a full increase of 15 years in 50 years. Babies born in Western Europe will live to be 100 today. That's progress.

I mentioned at the outset that I will link technology to the individual, family, and society.

Let me take the two data points I gave.

As the world becomes more educated, one needs to be more insightful, the basics are a given. As the world gets educated, we need to create enough jobs in society. A more educated society looks for innovation and technology is key in that innovation.

Let's look at the life expectancy data. Basic products that keep us clean like soaps, like detergent powders etc. have increased life expectancy. The first implication of people living longer is that society will have to provide for amenities in most buildings for senior citizens. The second implication is that society will need the right mix

of retirees to workers to drive savings and investment. The third implication is that retirement age will need to change. If retirement age does not change, then the society will need to allow immigration to get in new workers.

Technology, mass manufacturing and lowered production costs led to globalization. Globalization led to shifting of lower end jobs in many developed countries. That hurt individuals, families, and societies and today we see the sons of soil theories and protectionism and the rise of nationalism everywhere. Most people blame technology for the turn of events. I don't think that's correct.

4. War time Technology benefitted society.

Let's look at World War 2 and what happened then. Most men were drafted by the allies to fight the Nazis. Women started working and they didn't stop when the men came back. By then new products came into the house that made life easier for the working woman, and the products were the refrigerator, the microwave oven, the dishwasher etc. We first heard the expression 'work life balance' around this time, and it was said in the context of women being able to work with technology to help them manage the household. Today, technology helps women multitask better than at any other time in history.

Technology brought a lot of wartime products into mainstream civilian life and benefitted society. Take Araldite as an example, it was the super glue used to fuse the wings of an aircraft. Take the aviator sunglasses which were used by pilots when taking off facing the sun, today President Biden has made the aviator sunglasses a standard item. Take the ball point pen, first used by navigators in the cockpit to map the flight path.

GPS technology was opened by President Clinton after a Korean airliner was shot for straying out of the flight path. Today, flying is so much safer thanks to the use of GPS.

One of the technology breakthroughs that helps women is the safety standards and minimum acceptable quality levels in every food product. I am sure people will say that the world has many poor nutritional value products out there leading to obesity and thus society is paying a higher price in healthcare cost for this. That is true, but technology is not to be blamed for that, a hurried lifestyle and lack of priorities is the real reason, technology is the soft target.

5. Does technology create a winner take all system?

There are worries that technology creates a winner takes all situation. This might be true in a few cases but not applicable over time in many industries. Technology creates markets, disrupts markets and reshapes them significantly. Music is a good example. Music belonged to Philips and Sony because of the cassette and Walkman innovations, then MP 3 came along, then streaming came along and the music industry is very different today and Sony and Philips have little say in the industry.

Technology has changed the news industry altogether. Editors in media were trusted in the past, today people trust people such as themselves because with a mobile phone, everyone is a journalist. The news industry has changed so much that it is difficult for us to distinguish between the truth, fake news, and false news. However, this has created a new industry which is VERIFY. You have BBC Verify and Times Verify, a technology-based answer to fake news and false news.

Yellow pages have given way to online shopping and ONDC is a few months away. If you look at it from a consumer point of view, the

shopper has benefitted immensely through range availability, lower prices, and better delivery timings with online commerce.

The best technology does not guarantee commercial success. I am sure all of us would agree that the Concorde was the most technologically advanced aircraft. Today, the Concorde doesn't fly as it was a commercial failure, mostly because of the sonic boom impact.

The iridium satellite phone from Motorola is another good example. A great product, but it was a commercial failure.

Joining that list will be the Airbus A 380, another great technology product but not a commercial success.

6. The future is all about digital technology.

Today's technology is all about digital and India is leading the way here. A combination of the computer, the mobile phone and Wi-Fi is redefining most business models in every industry. Today, 4.8 billion people are on social media, which is 60 %of the world population. Social media has changed the way we interact with each other, the way we consume content, the way we pay and whom we trust. Social media has brought in a new set of people called influencers and celebrities are losing to influencers. Social media has got in a bunch of haters and trollers into mainstream society. Individuals and families are worried about what these trollers do to their reputation. Reputation and trust are won and lost every 24 hours in a digital world.

Technology was either the privy of government or companies in the past. Today, an individual and family are more digitally savvy than the average company in India. This has never happened and will possibly never happen again. Companies and society can learn from individuals and families.

The top challenges of the internet and social media are:

1. Cyberbullying
2. Online identity theft
3. Piracy
4. Hacking

Today, we have ethical hacking as an honest profession. Parents worry about when they should give their child a phone and when they can allow the on social media. It is a valid concern.

Now to the issue at hand, which is Open AI, Chat GPT etc. In every industry, technology has reshaped work and forced the individual and society to go up the value chain. Mass automated manufacturing has done it, robots and drones will do it, outsourcing has done it.

7. Technology and Job losses

A lot has been written about how AI will lead to loss of jobs. As someone put it, doctors and lawyers will not vanish, however, a doctor who uses AI will always do better than a doctor who does not use AI. All of us need to be better at using the new technology.

The World Economic Forum said in a recent report that 25 % of all jobs will be reshaped and will alter in the next two to three years. The same report says that 45 % of skills will need to be updated. I would urge all of you and managers and technology people to think of the 5 Cs to stay relevant in a world full of technology. The first 3 are the hard skills and the last 2 Cs are the soft skills.

The first 3 are.

Creativity
Complex problem solving and

Critical thinking skills

The last 2 are.

Collaboration and
Communication.

These 5 C s are a must have in your armory if you need to succeed. We have more communication tools at work than ever before but that has not made us more collaborative. We have more tools of communication but that has not made us better communicators.

My point is that no technology exists in isolation, it is always in the hands of people, the more prevalent a technology, the more we must move up the chain and add value.

8. Technology solves the problems it created.

Now to the final point, technology has made a devastating impact on climate. July 2023 was the hottest July in the last many years. The developed countries have industrialized decades ago, and the developing countries are just hitting their stride. Again here, technology will come to the forefront in creating green technologies to save the planet.

A lot of you will want to know about the type of jobs to look for. I would say whatever you do, you must have a digital element to your role and a ESG element to your role and a public policy hat. This will be core to any industry and any job. They are core to the individual, the family and society. We have carbon emission data on every flight we take, awareness of all activities will go up much like MRP, nutritional facts and best before date.

I think we will see more self-regulation in every industry and governments will regulate technology for privacy and data

protection. Every tech company and every individual must learn to work within the framework.

You leave the convocation with a dual degree. So many people have so many expectations of you. Your parents more than anyone else will be super proud today. I am told that there are a few parents online. Can I request a round of applause for the parents who have do so much for you.

This degree is formal education and is the foundation for entry into many areas. A formal education does not guarantee anything. For you to succeed in life you need to self-educate yourself, you need new skills all the time. Technology helps you self-educate. Technology is a lifelong partner and not something alien now. Technology matters to the individual, family and society

Keep learning and do well.

Shiv
19 th August 2023
Mumbai