PROFESSIONAL BUSINESS SKILLS

B.Com/BBA

III Semester

COMMON COURSE (BCM3 A12/BBA3 A12)

(2019 ADMISSION ONWARDS)

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UNIVERSITY OF CALICUT

SCHOOL OF DISTANCE EDUCATION

Study Material

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MODULE 1

PROFESSIONALISM

In last decade or so, an abundance of evidence has been produced that skillful management – especially those competent in the management of people in organization – is a key determinant of organizational success. These studies have been conducted across numerous industry sectors, international settings, and organization types. The research findings now make it almost unquestionable that I for organizations want to succeed, they must have competent, skillful managers.

Today's workplace I indeed undergoing immense and permanent changes. Organizations have been "reengineered" for greater speed, efficiency and flexibility. Teams are pushing aside individual as the primary building block for organizations. Command-and control management is giving way to participative management and empowerment. Employees are increasingly viewed as internal customers. All these kinds of mandate creates a new kind of managers in 21st century.

Being a professional in your chosen field means much more than wearing a coat and tie or possessing a college degree and a noted title. Professionalism also has to do with how you conduct yourself during your business affairs. True professionals possess a number of important characteristics that can apply to virtually any type of business.

Meaning

Professionalism is the conduct, aims, or qualities that characterize or mark a profession or a professional person. In simple words, the following of a profession for gain or livelihood. A profession requires specialized knowledge and often long and intensive academic preparation. The attributes for professionalism include:

1. Specialized Knowledge

First and foremost, professionals are known for their specialized knowledge. They've made a deep personal commitment to develop and improve their skills and where appropriate, they have the degrees and certifications that serve as the foundation of this knowledge. Not all business areas have a stable core of knowledge (and the academic

qualifications that go with this); not all areas demand extensive knowledge to practice successfully; and not all professionals have top degrees in their field.

2. Competency

Professionals get the job done. They're reliable, and they keep their promises. If circumstances arise that prevent them from delivering on their promises, they manage expectations up front, and they do their best to make the situation right.

3. Honesty and Integrity

Professionals exhibit qualities such as honesty and integrity. They keep their word, and they can be trusted implicitly because of this. They never compromise their values, and will do the right thing, even when it means taking a harder road.

4. Accountability

Professionals hold themselves accountable for their thoughts, words, and actions, especially when they've made a mistake. This personal accountability is closely tied to honesty and integrity, and it's a vital element in professionalism.

5. Self-Regulation

They also stay professional under pressure. For instance, imagine a customer service employee who's faced with an irate customer. Instead of getting upset or angry in return, the employee exhibits true professionalism by maintaining a calm, business-like demeanor, and by doing everything that she can to make the situation right.

Professionalism includes standards for behavior and the employee's ability to embody the company's values and do what their employer expects of them. Professionalism is necessary for the long-term success of any business, large or small. It ensures that customer relationships are maintained, employee interactions are positive and that a company meets its goals and objectives.

Professionalism in the workplace can give a competitive advantage over other candidates and help to build a strong reputation within the company. Understanding the different professional characteristics can help to build awareness of the behavior at work. The few professional characteristics that portray self and organization include:

1. **Professional appearance**

Professionals should always strive for a professional appearance, including appropriate attire and proper hygiene and grooming. Clothing should always be clean and ironed properly. Pants, dresses and leather shoes are all appropriate for a professional's wardrobe.

2. **Reliable**

Professionals are dependable and keep their commitments. They do what they say they will do and don't overpromise. Professionals respond to colleagues and customers promptly and follow through on their commitments in a timely manner. Punctuality is a key aspect of this professional characteristic. It's always important to clarify any areas of uncertainty when dealing with customers or members of your team to ensure there are no mistaken assumptions or surprises.

3. **Ethical behavior**

Embodying professionalism also means to be committed to doing the right thing. Honesty, open disclosure and sincerity are all characteristics of ethical behavior. Many organizations include a commitment to ethical behavior in

their code of conduct. Professionals can adopt a personal code of conduct and make the same commitment on an individual basis.

4. **Professional Code of Ethics**

A professional keeps their workspace neat and organized so that they can easily find items when they need them. All files and paperwork should be in place and, if they have to deliver a presentation, all materials should be ready well in advance so there are no unexpected delays.

5. **Accountable**

Just as a professional accepts credit for having completed a task or achieved a goal, they also are accountable for their actions when they fail. They take responsibility for any mistakes that they make and take whatever steps necessary to resolve any consequences from mistakes. They are accountable and expect accountability from others.

6. **Professional language**

People who behave with professionalism monitor every area of their behavior, including how they talk. They minimize the use of slang and avoid using inappropriate language in the workplace. They even are conscientious of the language they use in informal settings.

7. **Separates personal and professional**

Professionals understand the importance of separating their personal lives from their professional lives. While professionals may experience the same challenges in their personal lives as others, they maintain a clear separation between their professional lives and workplace demeanor.

8. **Positive attitude**

Part of being a professional means maintaining a positive, can-do attitude while working. A positive attitude will improve a professional's overall performance and increase the likelihood of a positive outcome. It will also impact the behavior and performance of others, improving employee morale in the office.

9. **Emotional control**

Emotional control is another key characteristic of professionalism. Professionals understand the importance of maintaining their composure and staying calm in all situations. By remaining calm, even during challenging moments, others can rely on them to be rational and of sound judgment.

10. Effective time management

An employee who knows how to manage their time well is viewed by their peers as a professional. Some characteristics of time management abilities include showing up at the office on time in the morning, being on time for meetings and letting someone in the office know if they suspect that they might be late.

11. Focused

A professional is clear about their goals and understands what they need to accomplish to achieve them. They know how to stay focused on their work to maintain their productivity. Professionals recognize the importance of maintaining focus to improve the quality of their work and be as efficient as possible.

12. Poised

Professionals should demonstrate poise, a calm and confident state of being. Being poised means maintaining a straight posture, making eye contact when communicating and helping establish a friendly and professional presence. Being poised means also staying calm during times of heightened pressure.

13. **Respectful of others**

Professionals always treat others with respect. They understand that though humor is appropriate in the workplace, they should always use it with respect to others. The only time that professionals engage in conversations about other people is if they are evaluating their performance and looking for constructive ways to improve their performance in the workplace.

14. **Strong communicator**

A professional must have strong communication skills. This means that they not only can effectively and efficiently convey messages to others but also that they can actively listen to and understand what others are telling them. By engaging in open and constructive communication with others, professionals can collaborate more effectively and accomplish a lot.

15. **Possesses soft skills**

Soft skills are personal attributes that allow someone to interact effectively with others. Soft skills include things like leadership, critical thinking, teamwork and people skills. Soft skills help professionals to behave courteously

when addressing colleagues and managers, use the right language when communicating and respect the opinions of others.

Professionalism in Communication

The term professional communication refers to the various forms of speaking, listening, writing, and responding carried out both in and beyond the workplace, whether in person or electronically. From meetings and presentations to memos and emails to marketing materials and annual reports, in business communication, it's essential to take a professional, formal, civil tone to make the best impression on your audience, whether its members be your colleagues, supervisors, or customers.

❖ Verbal Communication

It refers to the production of spoken language to send an intentional message to a listener. In other words**,** Verbal Communication is a type of oral communication wherein the message is transmitted through the spoken words. Here the sender gives words to his feelings, thoughts, ideas and opinions and expresses them in the form of speeches, discussions, presentations, and conversations. The domain

of verbal communication can be divided into several component areas: semantics (vocabulary), syntax (grammar), and pragmatics (the social uses of language).

Professional Presentation

When it comes to effective presentations, there are basically three breeds of presenters that you may come across:

- The purebred
- The designer
- The mutt

THE PUREBRED

The purebred presenter thinks very highly of himself/herself. He/She believes that as long as he/she is on the dias, the presentation is not relevant. Afterall the audience has come to hear/her speak. Such individuals have good communication skills, but their overemphasis and focus on themselves can become problematic in overall effectiveness. Such vanity can spell trouble because the audience will remember the presenter but not the presentation.

THE DESIGNER DOG

Presenters who suffer from designer dog syndrome believe that as long as they have a knockout presentation, the content is not relevant. Such individuals invest a lot of time in preparing the perfect presentation (the right animation, graphics, colours, patterns, etc.). However, they fail to focus on the content of their speech and believe that the grand presentation in itself will become visual treat for the audience. Such short –sightedness can spell trouble because the audience will remember the presentation but not the presenter.

THE MUTT

We finally, come to mutt. A mutt does not have preconceived notions and believe that both the presenter and presentation are equally important. Therefore, they focus on (a) what they will show, and what they will speak. Their presentation can be diverse, different, colourful, striking and unexpected. They alter their style to suit their audience and therefore, are more effective in making presentation.

Ralph C. Smedley once said, “A speech without a specific purpose is like a journey without a destination.” Therefore, just like a building, a good presentation too needs a solid foundation. The objective helps you lay that foundation. There may be one or several objectives that necessitate making a presentation, such as:

1. Conveying good news
2. Conveying bad news
3. Proposing
4. Persuading
5. Informing
6. Brand building
7. Updating
8. Introducing
9. Instructing
10. Motivating
11. Damage control

Therefore, once we have outlined the purpose, it becomes easy to structure and style the presentation to achieve the objective. Once the objective is outlined, the next step is to analyze or research the audience.

Different Presentation Postures

It's easy to spend a long time agonizing over what to say when it comes to giving a presentation. However, it's important to remember that a great presentation is about much more than just content. Body language can make all the difference between a dull, static presentation and a dynamic, engaging one. Of course, body language has many different elements, and so we've broken it down into five categories:

1. Facial expressions
2. Eye contact
3. Posture
4. Gestures
5. Position and movement

Some of these may seem like small details, but they have a big impact on how your presentation comes across. When your body language is working hand in hand with the other aspects of your presentation, such as content and tone of voice, then you're sure to win over your audience.

Whether you're sitting or standing, the way in which you hold yourself is incredibly important and sets the tone for the whole presentation before it's even begun. The art of speaking and presenting is a result of continuous effort. Adequate planning and preparation are essential for a successful presentation because it shall avoid nervousness.

Written Communication

Most people, today, prefer to pay more attention to oral communication and reserve little attention for written communication. American author Isaac Bashevis Singer had famously remarked, "The waste basket is the writer's best friend." Even the greatest of writers have dueled with writer's block and found it difficult to put pen to paper. Therefore, writing is much more than simply putting words onto the paper.

Written communication comes in handy and helps overcome the short comings of oral communication in the following ways:

1. Written communication has a "wider reach" than oral communication.

2. Written communication helps in "maintaining records".

3. Written communication can be "carefully planned".

4. Written communication can be "reproduced" exactly.

5. Authority is better asserted in written communication.

❖ Email

The internet has revolutionized the way the world communicates. Letters have become obsolete! They are regarded as the devices primarily used by the government, courts of law, old – school institutions etc.

Emails are a form of computer –mediated Communication (CMC) in the form of mails (which are letters written on computers) that are sent over internet, to one –or-many recipients. Therefore, like any other forms communication, emails too have their standard protocols or etiquette.

Significance of E-mail in business

E-mail is the modern and widely used business communication system that is supported by Information technologies. The importance and uses of e-mail in business communication are greater than any other communication tool.

Almost all kinds of occupations, professionals, trades, and works e-mail messages are one the easiest and low-cost business communication methods. Nowadays emails work like legal agreements.

In daily business works such as buying and selling, marketing, trading, and call, e-mail is a quick method to exchange information by speaking, writing, subscribing, sharing, reporting, and presenting the information. And obviously, it's the prime method to handle and test customer queries. Communication is important in business and its importance is very high when it's through digital methods.

The importance of emails in business include:

1. E-mail is a widely used online communication system for business.

2. It can be used in all kinds of businesses and professions.

3. Used to access any kind of public application on the internet. Such as social media websites.

4. Used to verify people when they subscribed to the news later or want to download eBooks.

5. E-mail communication is used by businesses to promote products and services.

6. E-mail is helpful to manage communication in the business network.

7. Sharing and collaboration can be done through email.

8. Notification and important updates are informed by business to its customers.

9. Emails are the prime operators for online stores and internet marketing companies.

10. E-mail marketing is one of the popular digital marketing practices for business.

11. Private and recorded communication.

Business communication means when you share information about your products and services with the people and reply to their questions and inquiries. This also means your promotions, marketing, and exchange of information related to the business by using e-mail Ids.

❖ E-mail etiquette

It can be understood as the code of conduct associated with e-mail communications sent over the Internet. E-mail communication has pervaded our personal and professional lives and has become a tool to initiate, develop, nurture and sustain relationships. Therefore, it is important to know the dos and don'ts of e-mail etiquette.

Just as a letter, the structure of emails is also fairly consistent and includes the following components:

- From
- To
- Cc
- Bcc
- Subject
- The priority/salutation

- Body
- Closing/valediction
- Signature
- Attachments
- Reply/Reply all/Forward

An e-mail lacks intonations, facial expressions and body languages, therefore it is always susceptible to misinterpretation. While an e-mail is like a letter, the spontaneity and the speed at which you can hit the "Send" button makes an e-mail more lethal than conventional letters.

The Dos and Don'ts of Email Communication

The Dos:

a) Double –check the recipient's email addresses

b) Proofread the email before pressing the "Send" button

c) Use small paragraphs instead of one large paragraph

d) Keep your sentences short and to the point

e) Request the recipient, if you may, for an acknowledgement mail.

f) Include the original message thread when replying to messages

g) Protect yourself from viruses, spams and e-mails frauds

h) Scan attachments for viruses before sending and/or opening

i) Include a suitable opening and closing

The Don'ts:

a) Do NOT use ALL CAPS when composing an email, for CAPITALIZED text is verbal equivalent of shouting and will offend your reader.

b) Do NOT send confidential data over email. Remember, email communication are not private.

c) Do NOT use "Request Read Receipt" unless necessary.

d) Do NOT reply to an email when angry. Give yourself a "cooling-off" period before you compose a reply to an email.

e) Do NOT use complex acronyms and sms language to compose the email

f) Do NOT use official email for personal use

g) Do NOT use weird colours and fancy fonts. Stick to the conventional when sending formal emails

h) Do NOT use the "Reply All" feature to congratulate individuals.

i) Do NOT use Bcc too often as it is sneaky old habit and may cause mistrust.

DOCUMENTATION

It serves as a permanent record of information and care. Documentation is defined as written evidence. The interaction between and among the organizational members. A good practice in managing terminations is to maintain written documentation so that employers can demonstrate just cause when terminating an employee. If it's a case of poor performance, the employee would be warned in advance that his or her current level of performance could result in termination and then be permitted an opportunity to improve performance. The methods of documentation include – Narrative Charting, Source oriented charting, pie charting, focus charting, charting by exception (CBE), computerized documentation and case management with critical paths.

MODULE-2

E-LEARNING

E-learning, also referred to as online learning or electronic learning, is the acquisition of knowledge which takes place through electronic technologies and media. In simple language, e-learning is defined as "learning that is enabled electronically". Typically, e-learning is conducted on the Internet, where students can access their learning materials online at any place and time. E-Learning most often takes place in the form of online courses, online degrees, or online programs.

Online learning has numerous advantages over traditional learning methods. Some of these include the possibility for students to make use of self-paced learning and to choose their own learning environments. Additionally, e-learning is both cost-effective and cost-efficient, as it removes the geographical obstacles often associated with traditional classrooms and education.

A learning system based on formalized teaching but with the help of electronic resources is known as E-learning. While teaching can be based in or out of the

classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

E-learning has proved to be the best means in the corporate sector, especially when training programs are conducted by MNCs for professionals across the globe and employees are able to acquire important skills while sitting in a board room, or by having seminars, which are conducted for employees of the same or the different organizations under one roof. The schools which use E-learning technologies are a step ahead of those which still have the traditional approach towards learning.

BENEFITS AND DRAWBACKS OF E-LEARNING

E-learning is a process of learning/teaching that is carried out through a platform that integrates information and communication as central themes, being characterized by the physical separation between the teacher and the students. The advantages of E-Learning are:

1. Greater flexibility

E-learning offers greater flexibility when compared with the conventional way of learning in a traditional classroom setting. This is because a set schedule is not necessary. Once the course has been configured, students can do it at any time of the day and they can set their own pace in learning in accordance with the time that they dispose of and the goals that they have defined for themselves.

2. 24-hour access

This advantage is closely related to the aforementioned one, as students can easily access the course content at any time. The only thing needed is a connection to the internet in order to be able to gain access to the course content, contact tutors, and do exams.

3. Adaptation to the learning pace

Online courses have a duration that is broad enough for students to be able to finish training at whatever pace they like.

4. Unlimited virtual resources

The majority of online courses have a virtual platform, also known as a Virtual Campus, where the students have

access to all the training content, where they can get in touch with tutors and mates, where they can upload their work, etc.

5. Up-to-date content

Course content can be updated immediately. In e-learning courses, any change can be made at any time so that students can access information that is always up to date. This is practically unthinkable in the conventional form of learning.

6. Reduction of cost

The previous advantages bring about this last one: reduction of costs. This is true for both the school and for the student. This reduction can reach up to 30% less when compared with traditional, face-to-face instruction.

The disadvantages of E-Learning are:

- Online student feedback is limited
- E-Learning can cause social Isolation
- E-Learning requires strong self-motivation and time management skills
- Lack of communicational skill development in online students

- Cheating prevention during online assessments is complicated
- Online instructors tend to focus on theory rather than practice
- E-Learning lacks face-to-face communication
- E-Learning is limited to certain disciplines
- Online learning is inaccessible to the computer illiterate population
- Lack of accreditation & quality assurance in online education

E-LEARNING IN INDIA

The e-learning, though reached India late of course, but it is being fast accepted in a big way. The India perhaps has watched the success of west in adopting e-learning and is trying hard to implement it. Over the past few years, the Ministry of Human Resource Development has been trying to achieve the target of making education accessible to every corner of the country. Still there are many parts of the country, which are in darkness about e-learning (MALIK, 2009). Due to the growing Indian economy, India has a chance to become heart of e-learning programs.

There are many e-learning classes which are coming to India to build and develop e-learning infrastructure. The e-learning does not seem to replace the conventional classrooms with black boards but it seems to coexist with the already existing system. This system rather promises to reach too far off rural areas in India where education is still a looming darkness. This objective can be achieved by providing PCs at low cost with broadband connection. The chances of e-learning to strengthen the educational system in India are very high. Furthermore the Government has also come forward undertaking the programs of upgrading the technical quality of the fresh graduates inciting them to go into research and teaching professions. The e-learning is fast growing and seems to take control of the world because of its educational advantages (SAHA, 2010). The scope of e-learning is much wider in India with many e-learning companies stepping forward in providing the service. Though nothing can actually outrun the popularity of traditional classroom teaching, e-learning only gives more value to the process, independent of the distance factor. In India, e-learning scenario is still growing and at an experimental stage. The traditional mindsets are changing, with the corporate and business sector leading the way in embracing technology based learning networks.

Many institutions have started augmenting teacher-led programmes with content-rich e-learning modules. Government initiatives are not far behind either. The projection for further development of distance e-Learning in India is positive. Several efforts are currently progressing towards providing quality distance learning to more people in urban and rural areas, through the utilization of more effective web resources and practices. The major hindrance to the acceptance of e-learning can be attributed to the Indian mindset that is more inclined to traditional classroom teaching (HANSEN, 2008). The visibility of e-learning is currently limited to IT and educational CDs, but With PC penetration and overall online accessibility increasing in the country, the future of e-learning looks promising, provided the organization of content and delivery is well-structured

The future of E-learning industry in India seems to be vibrant as number of Internet users is growing in the country, at quite a reasonable rate and more, and more reputed players are showing their interest in the e-learning business.

ONLINE EDUCATION

Online education is a form of education which is delivered and administered using the internet. Online education can be divided into several categories depending on the amount of online learning that is incorporated into the course, ranging from traditional face-to-face learning to blended learning to exclusive online courses. Discover the difference between synchronous and asynchronous online learning and how each impacts the instructor and students.

In simple, an educational experience that has no physical boundary, allows for students to take part in classes and interact with peers from any location.

DIGITAL AGE LEARNERS

The digital era requires individuals to be lifelong learners. It also stresses the importance of creative problem solving and the ability to make connections across domains in order to drive innovation. In the digital age, individuals must not only be able to find and navigate information but they also must be able to critically interpret that information. They must also be able to express their ideas effectively through digital media. In the digital age individuals must be digitally fluent.

Additionally, when thinking about digital age learners, we must understand that they are more overwhelmed, distracted and impatient than ever before. Today, digital age learners want to be empowered and collaborative. The digital age is the age of the empowered customer, who can now make intelligent choices about the right product for the right situation with all of the relevant data, just in time. In this new age the consumer, rather than the brand, controls the interaction. In order to survive and remain relevant, companies now need to quickly adapt to a constantly changing market. In this new era, being really good at learning how to do new things results in a competitive advantage.

KNOWLEDGE RESOURCES ON INTERNET

The use of knowledge resources and libraries is at the centre of the learning experience in traditional and online universities. In technology-enhanced learning methods prescriptors (professors, tutors, librarians and others) can easily link knowledge assets with every single learning unit, creating specific knowledge libraries bound to specific subject curriculums.

The term “Digital Knowledge Resources” is used in a wider perspective to include all sources where the

information is available in electronic formats and accessible with a help of computers. These sources are variously termed as automated library, electronic library, virtual library, paperless library, networked library, library without walls, and multimedia library and all of them are used interchangeably and synonymously. The term digital library has however become the preferred term due to growing interest and marries the missions, techniques, and cultures of physical libraries with the capabilities and cultures of computing and telecommunications. The advantages of digital information are well established and understood – it can be delivered direct to the user; multiple simultaneous use is possible with no degradation from use and with minimal storage costs; sophisticated searching techniques are available and retrieval is fast.

- E-books

An eBook is an *electronic* version of a traditional print book that can be read by using a personal computer or by using an eBook reader.Users can purchase an eBook on diskette or CD, but the most popular method of getting an eBook is to purchase a downloadable file of the eBook (or other reading material) from a Web site to be read from the user's

computer or reading device. Generally, an eBook can be downloaded in five minutes or less.

- Audio

Anything related to sound in terms of receiving, transmitting or reproducing or its specific frequency. In many cases, to use audio in e-Learning helps learners to not only acquire the content more efficiently, but to relate more effectively to the information too, so that they can store it for later use, which is the ultimate goal.

- Video

E-learning videos help educators take their courses to the next level. E-learning videos can help enhance the overall learning experience, giving a deeper explanation for certain concepts or providing students with easy-to-follow visuals that are simply not communicated as well by text.

E-education or e-learning is the delivery of education or any type of training by electronic teaching methods. This electronic method can be a computer or a smartphone where teaching material is accessed by use of the internet usually. Other than the internet, CDs, DVDs, television and other similar tools can also be used for E-learning. There are several E-learning portals offering

online courses in India and abroad now. Many people avail these professional certificate courses to enhance their learning and career.

E-CONTENT DEVELOPMENT AND TOOLS

E-content is a very power full tool of education. E-content is valuable to the learners and also helpful to teachers of all individual instruction systems; E-content is the latest method of instruction that has attracted more attention to gather with the concept of models. Education is to enrich the qualities of head, hand and heart. Education is one of the basic needs of men and women. The rule of the education is the attainment of human excellence and perfection not just in the field of knowledge or activity but life in totality. Teaching plays a vital role in formal education system.

E-learning is a process and E-content is a product. This approach of teaching has become an answer to the complicated modern, social, economic condition and an exploding population. E-content lesson is generally designed to guide students through information or to help them perform specific tasks. An E-content package can be used as teacher in the virtual classroom situation. Using E-

content, the time and finance involved in the teaching process can be minimized. E-content is facilitating individualized instruction.

E-content is termed as Electronic content that include text, image, graphics, animation, audio and video, sometimes e-content will be single element carrying anyone of the above element or all of the above together to display offline or online web-pages and also to be transferable to computer to another computer and internet.

Features Of E-Content

- E-content is technologically friendly to pupil for downloaded text materials and used on any computer in independently for the purpose of learning process.
- E-content is having learner friendly for easy navigation.
- Another important feature of e-content is learner centric, it is useful in self-instructional model.
- E-content is also teachers friendly, it is used in various teaching learning methods such as classroom, lecturing to a group, lab session.

ONLINE LIBRARIES

They are digital libraries referred to as electronic libraries, virtual libraries, systems, libraries without walls or hybrid libraries. The electronic extension of functions users typically perform and the resources they acess in a traditional library.

MOOC

A massive open online course (MOOC) aimed at large-scale interactive participation and open access via the web. In addition to the traditional course materials such as videos, readings and problem sets, MOOCs provide interactive user forums that help build community for the students, professors and teaching assistants (TAs). MOOCs are a recent development in distance education.

A MOOC is an online course with the option of free and open registration, a publicly-shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources and are facilitated by leading practicers in the field of study. Most significantly, MOOCs build on the engagement of learners

who self-organize their participation according to learning goals, prior knowledge and skills, and common interests.

MAJOR TECHNOLOGIES USED IN E-LEARNING

Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. Technology has been the major aspect to drive this concept of e- learning. Technology has affected society and its surroundings in a number of ways. In many societies, technology has helped develop the education system. In India technology has helped improve and develop the education system. New advanced tools, techniques developed has enhanced the for learning systems.

- Computers, tablets and mobile devices

Recent technology has resulted in development of Desktops, laptops, I – pads, Tablets, Macbooks which are been used extensively in market. These devises have been contributed at large extent in learning. Paper is now being

replaced by E-learning. Computers and tablets allow students and teachers' access to websites and other programs, such as Microsoft Word, PowerPoint, Excel, PDF files, and images. These tools help learners to express their ideas. Excel helps the mathematical working of the study. PowerPoint helps the presentation of the study done by the learner. Graphs, Pie charts, diagrams helps learner to analyse the data studied which helps to give a better result.

- Blogging

A blog (a truncation of the expression web log) is a discussion or informational site published on the World Wide Web and consisting of discrete entries ("posts") typically displayed in reverse chronological order (the most recent post appears first). The blogs can be single user or multiple users. A majority is interactive, allowing visitors to leave comments and even message each other on the blogs, and it is this interactivity that distinguishes them from other static website. Bloggers do not only produce content to post on their blogs, but also build social relations with their readers and other bloggers.

Students and teachers can post their thoughts, ideas, and comments on a website. Blogging allows students and

instructors to share their thoughts and comments on the thoughts of others which could create an interactive learning environment.

- Webcams

Creation of virtual classroom has been facilitated by these Webcams. A webcam is a video camera that feeds or streams its image in real time to or through computer network. When "captured" by the computer, the video stream may be saved, viewed or sent on to other networks via systems such as the internet, and email as an attachment. When sent to a remote location, the video stream may be save, viewed or on sent there. Unlike an IP camera (which uses a direct connection using Ethernet or Wi-Fi), a webcam is generally connected by a USB cable, FireWire cable, or similar cable, or built into computer hardware, such as laptops.

Other popular uses include security surveillance, computer vision, video broadcasting, and for recording social videos. Webcams are known for their low manufacturing cost and flexibility, making them the lowest cost form of video telephony. They have also become a source of security and privacy issues, as some built-in

webcams can be remotely activated via spyware. This web classroom is easy to set up and reduces the travel expense and is a solution oriented program. Hence these technologies is now becoming more and more popular.

- Whiteboards

A whiteboard (also known by the terms marker board, dry-erase board, dry-wipe board, pen-board, and the misnomer grease board) is a name for any glossy, usually white surface for nonpermanent markings. Whiteboards are analogous to chalkboards, allowing rapid marking and erasing of markings on their surface. This is a common feature of many virtual meeting, collaboration, and instant messaging applications. The term whiteboard is also used to refer to interactive whiteboards. This method allow teachers and students to write on the touch screen, so learning becomes interactive and engaging.

- Screen casting

A screencast is a digital recording of computer screen output, also known as a video screen capture, often containing audio narration. The term screencast compares with the related term screenshot; whereas screenshot generates a single picture of a computer screen, a screencast is essentially a movie of the changes over time that a user

sees on a computer screen, enhanced with audio narration. Screencasts can help demonstrate and teach. Educators may also use screencasts as another means of integrating technology into the curriculum. Students can record video and audio as they demonstrate the proper procedure to solve a problem on an interactive whiteboard.

This method allows users to share their screens directly from their browser and make the video available online so that the viewers can stream the video directly.

E-LEARNING IN INDIA

We are in an era of digitization and technological advancements have an impact on almost every aspect of our lives on an ongoing basis. From the way we communicate to how businesses are run. The impacts of digitization are also visible in the field of education and have effected major changes in how education is being imparted and consumed. Rote learning and reliance on printed material or book based learning are fast becoming a characteristic of the past.

Till the end of the last century, the education system in India was working on the traditional classroom-based

learning, where the students didn't get the opportunity to participate in the interactive sessions. To face the challenges of the changing time, it became necessary to make concepts more clear and students competent enough to cope up globally. Hence, the concept of Digital Learning evolved in 2002 - 2003. With technology spreading its wing to the education sector, the typical classroom which was once characterized by boring hour-long sessions now transforms into an interesting, fun-filled environment. Digital education made life easier for both, students and educators.

With a network of more than 1.5 million schools and 18,000 higher education institutes, the market for digital education in India is enormous. Today, digital learning is no longer a luxury but the implementation of digital tools of learning has become a necessity in schools. The key factors leading to the growth of the digital market in India are rising demand from various segments, growing number of smartphone users, improving penetration of internet, and increasing participation at the government level. New age technology platforms help in assessing the performance of

students, teachers and institutions as a whole and are increasingly being adopted by educational institutions in India. Cloud-based platforms which help classroom go paperless are also finding takers. Also apart from the latest developments in ICT classrooms, Augmented Reality and Virtual reality is being adopted in the field of education.

Further, the launch of a plethora of IT related platforms has generated huge entrepreneurship opportunities and many education startups have sprung up with new and improved versions of e-learning modules in line with the demands and ever-changing needs of the students. E-learning contents are designed to present a holistic picture with audio supplements, which makes learning lot more interesting as learners now utilize both visual and audio senses. These became instrumental since last one decade to take e-learning to schools and students in various forms and today we support more than a million learners across the country with digital content.

However, it must be noted that technology is just an enabler, requiring a human to operate it and make use of it. Thus the perceived advantages or for that matter

disadvantages of technology when it comes to students is merely an outcome of the way technology is used or handled. The outcome of any technological intervention is dependent on the manner and purpose with which they are put to use. What is important is the responsible use of technology. Students should use it intelligently to learn more effectively. It will help in mapping the requirement of a child, assess his/her learning outcomes as well as make learning more receptive.

The online learning has gained prominence as the world fights with Covid-19 pandemic. As most of the nations have adopted for online learning, many Indian edutech companies are also offering free online classes while some are doing it on subsidized rates.

MODULE 3

BUSINESS DATA ANALYSIS

Database technology has been described as “one of the most rapidly growing areas of computer and information science. The data stored in the system is partitioned into one or more databases. A database is a repository for stored data.

Why should an enterprise choose to store its operational data in an integrated database? The answer to this question is that - a database system provides the enterprise with centralized control of its operational data – which is a valuable asset. This is in sharp contrast to the situation that prevails in many enterprises today – which typically each application has its own private files.

Computer applications have moved from transaction processing and monitoring activities to problem analysis and solution applications, and much of the activity is done with cloud-based technologies, in many cases accessed through mobile devices.

Business data analysis includes the activities to help managers make strategic decisions, achieve major goals and solve complex problems, by collecting, analyzing and reporting the most useful information relevant to managers' needs. Information could be about the causes of the current situation, the most likely trends to occur, and what should be done as a result.

Features of New Generation Computers

Ist Generation: (1940 -1956)

- Vacuum tubes were used in circuits
- These computers are very large in size
- They require a large amount of electricity
- They produce more heat
- They are less revival
- Ex: ENIAC, UNIVAC

IInd Generation: (1940 -1956)

- Vacuum tubes were replaced by transistors in circuits
- Small size as compared to Ist Generation computers
- Less amount of heat Generation

- Less electricity consumption
- Ex.: IBM 350

IIIrd Generation: (1963 -1972)

- Transistors were replaced by I.C. in circuits (I.C. – Integrated circuits)
- Small size as compared to IInd Generation computer
- Less amount of heat as compared to IInd Generation computer
- Less electricity consumption
- Faster and more accurate than IInd Generation computer
- Ex.: IBM 360/370

IVth Generation: (1963 -1972)

- LSI and LSVI technologies are used
- LSI- Large scale integration
- LSVI – Very large integration
- Microprocessors are developed
- Apple-II, STAR 1000

Vth Generation: (Present & Beyond)

- It is based on the technique of Artificial Intelligence (AI)
- Computer can understand spoken words
- Scientist are constantly working to increase the processing powof computers
- They are trying to create a computer with real IQ with the help of advanced programming and technologies
- Ex.: IBM Watson

Concept of data analysis

Data is the main ingredient for any BI, data science and business analysis initiative. In fact, it can be reviewed as the raw material for what these popular decision technologies produce – information, insight and knowledge. Data can be a small or it can be very large, it can structured or it can be unstructured. It can come in smaller batches continuously or it can pour in all at once as a large batch.

Business Data Analysis

Business Data Analysis is the process by which businesses use statistical methods and technologies for analyzing

historical data in order to gain new insight and improve strategic decision-making. In other words, a data management solution and business intelligence subset, refers to the use of methodologies such as data mining, predictive analytics, and statistical analysis in order to analyze and transform data into useful information, identify and anticipate trends and outcomes, and ultimately make smarter, data-driven business decisions.

The essentials of business data analysis are typically categorized as either descriptive analytics, which analyzes historical data to determine how a unit may respond to a set of variables; predictive analytics, which looks at historical data to determine the likelihood of particular future outcomes; or prescriptive analytics, the combination of the descriptive analytics process, which provides insight on what happened, and predictive analytics process, which provides insight on what might happen, providing a process by which users can anticipate what will happen, when it will happen, and why it will happen.

Data Analyst

A data analyst is someone who uses technical skills to analyze data and report insights. Data Analysts are professionals who translate numbers, statistics, and figures, into understandable values. A Data Analyst collects, stores,

and interprets data to transform it into valuable business insights that can be used to improve business operations and foster data-driven decision making. Since this job role involves parsing through data, analyzing it, and interpreting it, it is primarily analytical.

Types of Analysts

An analyst is a person who analyzes and is skilled in analysis. Business Analysts (BA) are required to find, analyze and report business data to support business optimization.

Importance of data quality

Impoved data quality leads to better decision – making across an organization. Data quality is important because without high-quality data, you cannot understand or stay in contact with your customers. In this data-driven age, it is easier than ever before to find out key information about current and potential customers. This information can enable you to market more effectively, and encourage a loyalty that can last for decades. Rest assured that if you are not convinced of the importance of data quality, your competitors are, and they will not hesitate to strive for the best data to improve their own competitive advantage. Maintaining data quality is a difficult but necessary task. In order to achieve consistent and reliable customer data,

businesses must constantly manage data quality so that they build trust and enable quicker, more knowledgeable decisions.

General Steps for Analysis with Missing Data

1. Identify patterns/reasons for missing and recode correctly

Attrition due to social/natural processes, Example: School graduation, dropout, death ; Skip pattern in survey, Example: Certain questions only asked to respondents who indicate they are married ; Intentional missing as part of data collection process; Random data collection issues; Respondent refusal/Non-response

2. Understand distribution of missing data

Consider the probability of missingness; Are certain groups more likely to have missing values?; Example: Respondents in service occupations less likely to report income } Are certain responses more likely to be missing?; Example: Respondents with high income less likely to report income; Certain analysis methods assume a certain probability distribution

3. Decide on best method of analysis

Use what you know about; Why data is missing; Distribution of missing data; Decide on the best analysis

strategy to yield the least biased estimates; Deletion Methods; Listwise deletion, pairwise deletion; Single Imputation Methods; Mean/mode substitution, dummy variable method, single regression; Model-Based Methods; Maximum Likelihood, Multiple imputation

Social Networking Analysis

Social network analysis is an ideal tool for gaining insights into our increasingly connected world. Social media has the potential to improve social priorities such as government transparency, disaster response, education, and citizen science. However, it also has been increasingly used for nefarious purposes in recent years through misinformation campaigns, profiling, election meddling, and anti-vaccine propaganda. Researchers in social network analysis have provided a set of concepts and metrics to systematically study these dynamic processes. Innovators in information visualization have also contributed to helping users to discover patterns, trends, clusters, gaps, and outliers, even in complex social networks. Each day solutions for better network insights are being found that bring competitive advantages to business product developers, opportunities for government agency staffers, and new possibilities for nongovernmental social entrepreneurs.

Social network analysis uses mathematical tools to systematically understand networks, which are made up of vertices (e.g., people) that are connected to one another via edges (e.g., friendship ties). Network metrics help identify who is most important or central in a network, subgroups (i.e., network clusters) of tightly connected people, and the overall network structure (e.g., the density of a network). Social scientists have developed social network analysis and visualization techniques for decades. Network data is represented as an edge list or matrix. Directed edges have a clear origin and destination, while undirected edges do not. Weighted networks include a value associated with the edge. The scope of a network determines if it is an ego network, partial network, or full network. Multimodal networks include vertices of different types, while multiplex networks include edges of different types. Affiliation networks connect people based on shared affiliations (e.g. club)

Big Data Analysis

Big Data, which means many things to many people, is not a new technological fad. It has become a business priority that has the potential to profoundly to change the competitive landscape in today's globally integrated economy.

Traditionally, the term Big Data has been used to describe the massive volumes of data analyzed by huge organization like Google or research science projects at NASA. The point is more about finding new value within and outside conventional data sources. Pushing the boundaries of analysis uncovers new insights and opportunities and "big" depends on where you start and how you proceed.

Big data has become a popular term to describe the exponential growth, availability and use of information both structured and unstructured. Use of the term Big Data is usually associated with technologies.

The role of data scientist is becoming more pivotal to even traditional organizations who didn't previously invest much of their budgets in technology positions. Big data is changing the way old-school organizations conduct business and manage marketing, and the data scientist is at the centre of that transformation.

Role of Data Scientist in Business & Society

Data scientist help companies interpret and manage data and solve complex problems using expertise in a variety of data niches. They generally have a foundation in computer science, modeling, statistics, analytics and math-coupled with strong business sense It's this merging of estoric

intelligence and practical knowledge that makes the data scientist so valuable to a company. The growing importance of data analytics in business is leading to the appointment of senior data scientists to provide company-wide insights.

Role of Artificial Intelligence and Intelligent Agents in e-business

In recent years the World Wide Web has become largest market place due to its exponential growth enabled extensive progress in new information society functions such as electronic commerce. Electronic commerce, known as e-commerce, is a type of industry where buying and selling of product or service over electronic systems such as the Internet and other computer networks. Simply e-commerce is buying and selling over the internet medium. Electronic commerce involves business to business (B2B), business to customer (B2C) and customer to customer (C2C) transactions. It covers a wide variety of issues including security, trust, reputation, law, payment mechanisms, advertising, ontologies, electronic product catalogs, intermediaries, multimedia shopping experiences, and back office management. Agent technologies can be applied to any of these areas in e- commerce. In the system, either on its own initiative or under the direction of a user. Each intelligent agent can be readily replicated and then

distributed as needed. This agent-based approach to information management is both scalable and cost-effective.

Ethical and Legal considerations in Business Analytics

The power of Data can be used for nefarious purposes and this is raising ethical concerns in data analysis businesses. This fear has led to an active discussion on ethics in data analytics. With the well-known case of Cambridge Analytical scandal and the roll-out of GDPR, data analytics ethics is too often an afterthought. In the modern digital society, where social data seems to spread at the sped of light, we are seeing controversial and sometimes downright illegal use of sensitive data. Some individuals are taking a stand and even resigning their jobs to avoid perpetuating misleading facts.

MODULE 4

SOCIO – CYBER INFORMATICS

As the main engine of social development, education must adapt its new technological advancements to the benefit of the citizens and their need s by taking into account the building of a modern society that is based on knowledge. Computer technology becomes the most appropriate technical support given the new challenges of the knowledge society. Within this context, the social informatics takes on new dimensions. Nowadays, information security is strongly connected to the investigation area of social informatics. Knowledge society and social informatics are being addressed in this scenario. Information security in the contemporary society within the context of building the knowledge society, is addressed as another significant texture to the subject. Its purpose is primarily the awareness of the importance of security systems, taking into consideration the new challenges of social informatics in the modern society.

Social informatics is an area of research that examines social aspects of computerization. A more formal definition would be ‘inter-disciplinary study of the design, use and consequences of information technology in

interdependence with institutional and cultural environments. According to Kling, social informatics is a field that is defined by its content (fundamental questions on it) rather than by a set of techniques and methods very similar to urban studies. Social informatics is a research object with systematics, analytical and critical character, helping to develop theories that are relevant to the design, development and operation of information systems, including intranets, electronic forums, virtual libraries and electronic publications.

IT AND SOCIETY

Advances in computer hardware and software have allowed information technology to penetrate into and firmly establish itself within our society. The technology affects the performance of our organizations, how we perform our jobs, and how we conduct our everyday lives. Beyond our borders, the technology has debatable value to developing countries and has most certainly aroused conflicts between nations with respect to trade and broadcasting.

In the past few decades there has been a revolution in computing and communications, and all indications are that technological progress and use of information technology will continue at a rapid pace. Accompanying and supporting the dramatic increases in the power and use of new information technologies has been the declining cost of communications as a result of both technological improvements and increased competition. These advances present many significant opportunities but also pose major challenges. Today, innovations in information technology are having wide-ranging effects across numerous domains of society, and policy makers are acting on issues involving economic productivity, intellectual property rights, privacy protection, and affordability of and access to information. Choices made now will have long lasting consequences, and attention must be paid to their social and economic impacts. One of the most significant outcomes of the progress of information technology is probably electronic commerce over the Internet, a new way of conducting business. Though only a few years old, it may radically alter economic activities and the social environment. Already, it affects such large sectors as communications, finance and

retail trade and might expand to areas such as education and health services. It implies the seamless application of information and communication technology along the entire value chain of a business that is conducted electronically. The focus on the impacts of information technology and electronic commerce on business models, commerce, market structure, workplace, labour market, education, private life and society as a whole is seemingly important way in which information technology is affecting work is by reducing the importance of distance. In many industries, the geographic distribution of work is changing significantly. For instance, some software firms have found that they can overcome the tight local market for software engineers by sending projects to India or other nations where the wages are much lower. Furthermore, such arrangements can take advantage of the time differences so that critical projects can be worked on nearly around the clock. Firms can outsource their manufacturing to other nations and rely on telecommunications to keep marketing, R&D, and distribution teams in close contact with the manufacturing groups. Thus the technology can enable a finer division of labour among countries, which in turn

affects the relative demand for various skills in each nation. The technology enables various types of work and employment to be decoupled from one another. Firms have greater freedom to locate their economic activities, creating greater competition among regions in infrastructure, labour, capital, and other resource markets. It also opens the door for regulatory arbitrage: firms can increasingly choose which tax authority and other regulations apply. Computers and communication technologies also promote more market-like forms of production and distribution. An infrastructure of computing and communication technology, providing 24-hour access at low cost to almost any kind of price and product information desired by buyers, will reduce the informational barriers to efficient market operation. This infrastructure might also provide the means for effecting real-time transactions and make intermediaries such as sales clerks, stock brokers and travel agents, whose function is to provide an essential information link between buyers and sellers, redundant. Removal of intermediaries would reduce the costs in the production and distribution value chain. The information technologies have facilitated the evolution of enhanced

mail order retailing, in which goods can be ordered quickly by using telephones or computer networks and then dispatched by suppliers through integrated transport companies that rely extensively on computers and communication technologies to control their operations. Nonphysical goods, such as software, can be shipped electronically, eliminating the entire transport channel. Payments can be done in new ways. The result is disintermediation throughout the distribution channel, with cost reduction, lower end-consumer prices, and higher profit margins. The impact of information technology on the firms' cost structure can be best illustrated on the electronic commerce example. The key areas of cost reduction when carrying out a sale via electronic commerce rather than in a traditional store involve physical establishment, order placement and execution, customer support, staffing, inventory carrying, and distribution. Although setting up and maintaining an e-commerce web site might be expensive, it is certainly less expensive to maintain such a storefront than a physical one because it is always open, can be accessed by millions around the globe, and has few variable costs, so that it can scale up to meet

the demand. By maintaining one 'store' instead of several, duplicate inventory costs are eliminated. In addition, e-commerce is very effective at reducing the costs of attracting new customers, because advertising is typically cheaper than for other media and more targeted. Moreover, the electronic interface allows e-commerce merchants to check that an order is internally consistent and that the order, receipt, and invoice match. Through e-commerce, firms are able to move much of their customer support on line so that customers can access databases or manuals directly. This significantly cuts costs while generally improving the quality of service. E-commerce shops require far fewer, but high-skilled, employees. E-commerce also permits savings in inventory carrying costs. The faster the input can be ordered and delivered, the less the need for a large inventory. The impact on costs associated with decreased inventories is most pronounced in industries where the product has a limited shelf life (e.g. bananas), is subject to fast technological obsolescence or price declines (e.g. computers), or where there is a rapid flow of new products (e.g. books, music). Although shipping costs can increase the cost of many products purchased via electronic

commerce and add substantially to the final price, distribution costs are significantly reduced for digital products such as financial services, software, and travel, which are important e-commerce segments. Although electronic commerce causes the disintermediation of some intermediaries, it creates greater dependency on others and also some entirely new intermediary functions. Among the intermediary services that could add costs to e-commerce transactions are advertising, secure online payment, and delivery. The relative ease of becoming an e-commerce merchant and setting up stores results in such a huge number of offerings that consumers can easily be overwhelmed. This increases the importance of using advertising to establish a brand name and thus generate consumer familiarity and trust. For new e-commerce start-ups, this process can be expensive and represents a significant transaction cost. The openness, global reach, and lack of physical clues that are inherent characteristics of e-commerce also make it vulnerable to fraud and thus increase certain costs for e-commerce merchants as compared to traditional stores. New techniques are being developed to protect the use of credit cards in e-commerce

transactions, but the need for greater security and user verification leads to increased costs. A key feature of e-commerce is the convenience of having purchases delivered directly. In the case of tangibles, such as books, this incurs delivery costs, which cause prices to rise in most cases, thereby negating many of the savings associated with e-commerce and substantially adding to transaction costs. With the Internet, e-commerce is rapidly expanding into a fast-moving, open global market with an ever-increasing number of participants. The open and global nature of e-commerce is likely to increase market size and change market structure, both in terms of the number and size of players and the way in which players compete on international markets. Digitized products can cross the border in real time, consumers can shop 24 hours a day, seven days a week, and firms are increasingly faced with international online competition. The Internet is helping to enlarge existing markets by cutting through many of the distribution and marketing barriers that can prevent firms from gaining access to foreign markets. E-commerce lowers information and transaction costs for operating on overseas markets and provides a cheap and efficient way to

strengthen customer-supplier relations. It also encourages companies to develop innovative ways of advertising, delivering and supporting their product and services. While e-commerce on the Internet offers the potential for global markets, certain factors, such as language, transport costs, local reputation, as well as differences in the cost and ease of access to networks, attenuate this potential to a greater or lesser extent. Workplace and Labour Market Computers and communication technologies allow individuals to communicate with one another in ways complementary to traditional face-to-face, telephonic, and written modes. They enable collaborative work involving distributed communities of actors who seldom, if ever, meet physically. These technologies utilize communication infrastructures that are both global and always up, thus enabling 24-hour activity and asynchronous as well as synchronous interactions among individuals, groups, and organizations. Social interaction in organizations will be affected by use of computers and communication technologies. Peer-to-peer relations across department lines will be enhanced through sharing of information and coordination of activities. Interaction between superiors

and subordinates will become more tense because of social control issues raised by the use of computerized monitoring systems, but on the other hand, the use of e-mail will lower the barriers to communications across different status levels, resulting in more uninhibited communications between supervisor and subordinates. That the importance of distance will be reduced by computers and communication technology also favours telecommuting, and thus, has implications for the residence patterns of the citizens. As workers find that they can do most of their work at home rather than in a centralized workplace, the demand for homes in climatically and physically attractive regions would increase. The consequences of such a shift in employment from the suburbs to more remote areas would be profound. Property values would rise in the favoured destinations and fall in the suburbs. Rural, historical, or charming aspects of life and the environment in the newly attractive areas would be threatened. Since most telecommuters would be among the better educated and higher paid, the demand in these areas for high-income and high-status services like gourmet restaurants and clothing boutiques would increase. Also would there be an

expansion of services of all types, creating and expanding job opportunities for the local population. By reducing the fixed cost of employment, widespread telecommuting should make it easier for individuals to work on flexible schedules, to work part time, to share jobs, or to hold two or more jobs simultaneously. Since changing employers would not necessarily require changing one's place of residence, telecommuting should increase job mobility and speed career advancement. This increased flexibility might also reduce job stress and increase job satisfaction. Since job stress is a major factor governing health there may be additional benefits in the form of reduced health costs and mortality rates. On the other hand one might also argue that technologies, by expanding the number of different tasks that are expected of workers and the array of skills needed to perform these tasks, might speed up work and increase the level of stress and time pressure on workers. A question that is more difficult to be answered is about the impacts that computers and communications might have on employment. The ability of computers and communications to perform routine tasks such as bookkeeping more rapidly than humans leads to concern that people will be replaced

by computers and communications. Even if computers and communications lead to the elimination of some workers, other jobs will be created, particularly for computer professionals, and that growth in output will increase overall employment. It is more likely that computers and communications will lead to changes in the types of workers needed for different occupations rather than to changes in total employment. A number of industries are affected by electronic commerce. The distribution sector is directly affected, as e-commerce is a way of supplying and delivering goods and services. Other industries, indirectly affected, are those related to information and communication technology (the infrastructure that enables e-commerce), content-related industries (entertainment, software), transactions-related industries (financial sector, advertising, travel, transport). E-commerce might also create new markets or extend market reach beyond traditional borders. Enlarging the market will have a positive effect on jobs. Another important issue relates to interlinkages among activities affected by e-commerce. Expenditure for e-commerce-related intermediate goods and services will create jobs indirectly, on the basis of the

volume of electronic transactions and their effect on prices, costs and productivity. The convergence of media, telecommunication and computing technologies is creating a new integrated supply chain for the production and delivery of multimedia and information content. Most of the employment related to e-commerce involves around the content industries and communication infrastructure such as the Internet. Jobs are both created and destroyed by technology, trade, and organizational change. These processes also underlie changes in the skill composition of employment. Beyond the net employment gains or losses brought about by these factors, it is apparent that workers with different skill levels will be affected differently. E-commerce is certainly driving the demand for IT professionals but it also requires IT expertise to be coupled with strong business application skills, thereby generating demand for a flexible, multi-skilled work force. There is a growing need for increased integration of Internet front-end applications with enterprise operations, applications and back-end databases. Many of the IT skill requirements needed for Internet support can be met by low-paid IT workers who can deal with the organizational services

needed for basic web page programming. However, wide area networks, competitive web sites, and complex network applications require much more skill than a platform-specific IT job. Since the skills required for e-commerce are rare and in high demand, e-commerce might accelerate the upskilling trend in many countries by requiring high-skilled computer scientists to replace low-skilled information clerks, cashiers and market salespersons. Education Advances in information technology will affect the craft of teaching by complementing rather than eliminating traditional classroom instruction. The greatest potential for new information technology lies in improving the productivity of time spent outside the classroom. Making solutions to problem sets and assigned reading materials available on the Internet offers a lot of convenience. E-mail vastly simplifies communication between students and faculty and among students who may be engaged in group projects. Although distance learning has existed for some time, the Internet makes possible an large expansion in coverage and better delivery of instruction. Text can be combined with audio/video, and students can interact in real time via e-mail and discussion groups. Such technical

improvements coincide with a general demand for retraining and upskilling by those who, due to work and family demands, cannot attend traditional courses. Distance learning via the Internet is likely to complement existing schools for children and university students, but it could have more of a substitution effect for continuing education programmes. For some degree programmes, high-prestige institutions could use their reputation to attract students who would otherwise attend a local facility. Owing to the Internet's ease of access and convenience for distance learning, overall demand for such programmes will probably expand, leading to growth in this segment of e-commerce. As shown in the previous section, high level skills are vital in a technology-based and knowledge-intensive economy. Changes associated with rapid technological advances in industry have made continual upgrading of professional skills an economic necessity. The goal of lifelong learning can only be accomplished by reinforcing and adapting existing systems of learning, both in public and private sectors. The demand for education and training concerns the full range of modern technology. Information technologies are uniquely capable of providing

ways to meet this demand. Online training via the Internet ranges from accessing self-study courses to complete electronic classrooms. These computer-based training programmes provide flexibility in skills acquisition and are more affordable and relevant than more traditional seminars and courses. Private Life and Society Increasing representation of a wide variety of content in digital form results in easier and cheaper duplication and distribution of information. This has a mixed effect on the provision of content. On the one hand, content can be distributed at a lower unit cost. On the other hand, distribution of content outside of channels that respect intellectual property rights can reduce the incentives of creators and distributors to produce and make content available in the first place. Information technology raises a host of questions about intellectual property protection and new tools and regulations have to be developed in order to solve this problem. Many issues also surround free speech and regulation of content on the Internet, and there 5 continue to be calls for mechanisms to control objectionable content. However it is very difficult to find a sensible solution. Dealing with indecent material involves understanding not

only the views on such topics but also their evolution over time. Furthermore, the same technology that allows for content filtering with respect to decency can be used to filter political speech and to restrict access to political material. Thus, if censorship does not appear to be an option, a possible solution might be labeling. The idea is that consumers will be better informed in their decisions to avoid objectionable content. The rapid increase in computing and communications power has raised considerable concern about privacy both in the public and private sector. Decreases in the cost of data storage and information processing make it likely that it will become practicable for both government and private data-mining enterprises to collect detailed dossiers on all citizens. Nobody knows who currently collects data about individuals, how this data is used and shared or how this data might be misused. These concerns lower the consumers' trust in online institutions and communication and, thus, inhibit the development of electronic commerce. A technological approach to protecting privacy might by cryptography although it might be claimed that cryptography presents a serious barrier to criminal

investigations. It is popular wisdom that people today suffer information overload. A lot of the information available on the Internet is incomplete and even incorrect. People spend more and more of their time absorbing irrelevant information just because it is available and they think they should know about it. Therefore, it must be studied how people assign credibility to the information they collect in order to invent and develop new credibility systems to help consumers to manage the information overload. Technological progress inevitably creates dependence on technology. Indeed the creation of vital infrastructure ensures dependence on that infrastructure. As surely as the world is now dependent on its transport, telephone, and other infrastructures, it will be dependent on the emerging information infrastructure. Dependence on technology can bring risks. Failures in the technological infrastructure can cause the collapse of economic and social functionality. Blackouts of long-distance telephone service, credit data systems, electronic funds transfer systems, and other such vital communications and information processing services would undoubtedly cause widespread economic disruption. However, it is probably impossible to avoid technological

dependence. Therefore, what must be considered is the exposure brought from dependence on technologies with a recognizable probability of failure, no workable substitute at hand, and high costs as a result of failure. The ongoing computing and communications revolution has numerous economic and social impacts on modern society and requires serious social science investigation in order to manage its risks and dangers. Such work would be valuable for both social policy and technology design. Decisions have to be taken carefully. Many choices being made now will be costly or difficult to modify in the future.

DIGITAL DIVIDE

A developing country or nation or other related phrases such as an emerging country refers to a country where access to high-quality research information has historically ranged from being extremely limited to altogether non-existent Some countries may be considered underdeveloped in terms of the overall quality and quantity of information available to its citizens and researchers through academic institutions, hospitals, and other research centers. It is important to note that a country's lack of information

resources is not necessarily in direct proportion to its economic wealth or lack thereof and that, there is no universal, agreed-upon criteria for what makes a country developing versus developed and which countries fit these two categories. The concept of the digital divide can be explained from two perspectives namely: the gap that exists between the countries that have full access to electronic research information and those that do not; and the difference in Internet literacy and aptitude between the citizens of developed versus underdeveloped countries (Brooks, Donovan, & Rumble, 2005). This divide is categorized (Norris, 2001) into its three constituent elements: the global divide between advanced industrialized countries and developing countries, the social divide between information rich and information poor within advanced industrialized countries, and the democratic divide between those within the online community who does and do not use digital resources to engage, mobilize and participate in public life. Relevant indicators were adapted and others were created to be used as benchmarking tools for assessing the progress achieved to bridge this divide at the national and regional levels. The

importance of finding appropriate solutions to the problem of the digital divide, as defined herein, cannot be overstated. Most of the countries and regions that comprise the developing world are falling far behind the more developed nations in many areas, with education ranking among the most notable (WEF, 2013).

The dynamic transformation process of the industrial society into the information society promises a fundamental change in all aspects of our lives, including knowledge dissemination, social interaction, business practices, political engagement, media, education, health, and entertainment. Many Significant differences exist in the capacity of countries to adapt to changes in technology and knowledge. Consequently, the move towards the information society constitutes a real challenge to developing countries, particularly in view of the expanding digital divide with developed countries, thereby making them increasingly vulnerable to reduction in productivity and economic capacity. This leads, in turn, to unemployment, poverty, and further marginalization. The pace of global technological and economic transformation demands urgent action to turn the present digital divide into digital opportunities for all.

To sum up, the Digital Divide, or the digital split, is a social issue referring to the differing amount of information between those who have access to the Internet (especially broadband access) and those who do not have access. The term became popular among concerned parties, such as scholars, policy makers, and advocacy groups, in the late 1990s.

DIGITAL NATIVES

Technology made big change for the new generations. It became a very popular topic for psychologists and sociologists. That resulted in the use of labels such as 'digital native', 'the net generation', 'Google generation' or 'the millennials'. These highlights are defining the lives of young people at the age of new technologies. Digital Natives are used to receiving information really fast. They like to parallel process and multi-task. They are generally born after the 1980s and they are comfortable in the digital age, because they grew up using technology, but 'digital immigrants' are those who are born before 1980s and they are fearful about using technology. 'Digital immigrants' are the older crew, they weren't raised in a digital environment. The term digital immigrant mostly applies to individuals

who were born before the spread of the digital technology and who were not exposed to it at an early age. Digital natives are the opposite of digital immigrants, they have been interacting with technology from childhood. According to Prensky, digital natives are the generation of young people who are “native speakers” of the digital language of computers, video games and the Internet.

Digital natives see everyone on the equal level and are not dividing the world into hierarchies, they view the world horizontally. They cross boundaries and embrace the benefits of sharing with each other. Those values exist because of what they are driven by. We can learn a lot about digital native generations because their world is a genuine democracy and equality. They reject centralized and control-based forms of governance. More aggressive, competitive and result-obsessed generation, the advantage is their productivity. The difference between digital natives and digital immigrants is that digital immigrants are goal oriented and digital natives are value oriented. Digital natives like to parallel process and multi-task.

The thing is that digital natives first check their social platforms, not TV. They would rather be engaged than marked to something, they do not care if the content is professionally produced, but that it is authentic and on their level. They develop their culture — IT culture.

CYBER SPACE

Two decades ago, the term cyberspace seemed right out of a science fiction movie. In the second decade of the twenty-first century, cyberspace is probably the place where most of us spend a major part of our lives. It has become an inseparable element of our existence. Cyberspace refers to the virtual computer world, and more specifically, an electronic medium that is used to facilitate online communication. It typically involves a large computer network made up of many worldwide computer sub networks that employ TCP/IP protocol to aid in communication and data exchange activities.Cyberspace's core feature is an interactive and virtual environment for a broad range of participants. It allows users to share information, interact, swap ideas, play games, engage in discussions or social forums, conduct business and create

intuitive media, among many other activities. In many ways, cyberspace is what human societies make of it.

NEW OPPORTUNITIES AND THREATS

In a very short time, individuals and companies have harnessed cyberspace to create new industries, a vibrant social space, and a new economic sphere that are intertwined with our everyday lives. At the same time, individuals, subnational groups, and governments are using cyberspace to advance interests through malicious activity. Terrorists recruit, train, and target through the Internet, hackers steal data, and intelligence services conduct espionage. Still, the vast majority of cyberspace is civilian space used by individuals, businesses, and governments for legitimate purposes. Cyberspace and National Security brings together scholars, policy analysts, and information technology executives to examine current and future threats to cyberspace. Policymakers and strategists will find the oppurtunities an invaluable resource in their efforts to ensure national security and answer concerns about future cyberwarfare.

Traditionally, the technologies and security tools that have been used to mine data and prevent cyber attacks have been more reactive than proactive and have also created a large number of false positives, creating inefficiencies and distracting from actual threats. The main concern lays on two aspects;

- Protecting sensitive and personal information
- Data rights and ownership

The age of big data and cyber security is here. And that means both opportunity and risk for most businesses. If you are in the cyber security field you are likely very familiar with big data, which is the term used to describe a very large data set that is mined and analyzed to find patterns and behavioral trends. It is generally defined as being dense in variety, velocity and volume. From a cyber security standpoint big data has ushered in new possibilities in terms of analytics and security solutions to protect data and prevent future cyber attacks. But just as big data has opened up new possibilities for cyber security teams, it has also given cyber criminals the opportunity to access mass

quantities of sensitive and personal information through the use of advanced technologies.

As technology continues to evolve so also do the opportunities and challenges it provides. We are at a crossroads as we move from a society already entwined with the internet to the coming age of automation, Big Data, and the Internet of Things (IoT).

CYBER ETHICS

With the increase of young children using the internet, it is now very essential than ever to tell children about how to properly operate the internet and its dangers. It is especially hard to talk to teens because they do not want to be lectured about what is right and wrong. They seem to think they have it all sorts out. That is why is it is important to instill appropriate cyber etiquette at an early age.

Cyber ethics is the study of ethics pertaining to computers, covering user behavior and what computers are programmed to do, and how this affects individuals and society. For years, various governments have enacted regulations while organizations have explained policies about cyber ethics. Cyber ethics concerns to the code of

responsible behavior on the Internet. Just as we are taught to act responsibly in everyday life. The responsible behavior on the internet in many ways aligns with all the right behavior in everyday life, but the results can be significantly different. Some people try to hide behind a false sense of obscurity on the internet, believing that it does not matter if they behave badly online because no one knows who they are or how to search them. That is not all the time true; browsers, computers and internet service providers may keep logs of their activities which can be used to spot illegal or inappropriate behavior. This is a growing problem on using the resources available nothing can be done to prepare future generations of internet users from being safe online.

Some of the major issues that led to the concept of cyber ethics include:

- Copyrighting or Downloading
- Crime and Punishment
- Internet Hacking
- Cyberbullying

The extensive availability of computers and Internet connections provides unprecedented opportunities to communicate and learn. The word cyber ethics refers to a code of safe and responsible behavior for the Internet community. Practicing good cyber ethics involves understanding the risks of harmful and illegal behavior online and learn how to protect ourselves, and other Internet users, from such behavior.

CYBER-CRIMES

Cybercrime is criminal activity that either targets or uses a computer, a computer network or a networked device. Most, but not all, cybercrime is committed by cybercriminals or hackers who want to make money. Cybercrime is carried out by individuals or organizations. Rarely, cybercrime aims to damage computers for reasons other than profit. These could be political or personal. Here are some specific examples of the different types of cybercrime:

- Email and internet fraud.

- Identity fraud (where personal information is stolen and used).
- Theft of financial or card payment data.
- Theft and sale of corporate data.
- Cyberextortion (demanding money to prevent a threatened attack).
- Cyberespionage (where hackers access government or company data).

Most cybercrime falls under two main categories:

- Criminal activity that *targets*
- Criminal activity that *uses* computers to commit other crimes.

Cybercrime that *targets* computers often involves viruses and other types of malware. Cybercriminals may infect computers with viruses and malware to damage devices or stop them working. They may also use malware to delete or steal data. Cybercrime that *uses* computers to commit other crimes may involve using computers or networks to spread malware, illegal information or illegal images. Sometimes cybercriminals conduct both categories of cybercrime at

once. They may target computers with viruses first. Then, use them to spread malware to other machines or throughout a network.

Examples of cybercrime

1. Malware attacks

A malware attack is where a computer system or network is infected with a computer virus or other type of malware.A computer compromised by malware could be used by cybercriminals for several purposes. These include stealing confidential data, using the computer to carry out other criminal acts, or causing damage to data. A famous example of a malware attack is the WannaCry ransomware attack, a global cybercrime committed in May 2017.

2. Phishing

A phishing campaign is when spam emails, or other forms of communication, are sent en masse, with the intention of tricking recipients into doing something that undermines their security or the security of the organization they work for. Phishing campaign messages may contain infected attachments or links to malicious sites. Or they may ask the

receiver to respond with confidential information. Another type of phishing campaign is known as spear-phishing. These are targeted phishing campaigns which try to trick specific individuals into jeopardizing the security of the organization they work for.

3. Distributed DoS attacks

Distributed DoS attacks (DDoS) are a type of cybercrime attack that cybercriminals use to bring down a system or network. Sometimes connected IoT (internet of things) devices are used to launch DDoS attacks. A DDoS attack overwhelms a system by using one of the standard communication protocols it uses to spam the system with connection requests.

CYBER LAWS

As explained above, cyber crime is unlawful acts wherein the computer is either a tool or a target or both. Cyber crimes can involve criminal activities that are traditional in nature, such as theft, fraud, forgery, defamation and mischief, all of which are subject to the Indian Penal Code. The abuse of computers has also given birth to a gamut of

new age crimes that are addressed by the Information Technology Act, 2000.

Cyber law is a term used to describe the legal issues related to use of communications technology, particularly "cyberspace", i.e. the Internet. It is less a distinct field of law in the way that property or contract are as it is an intersection of many legal fields, including intellectual property, privacy, freedom of expression, and jurisdiction. In essence, cyber law is an attempt to integrate the challenges presented by human activity on the Internet with legacy system of laws applicable to the physical world. Cyberlaw is important because it touches almost all aspects of transactions and activities on and concerning the Internet, the World Wide Web and Cyberspace. Initially it may seem that Cyberlaws is a very technical field and that it does not have any bearing to most activities in Cyberspace. But the actual truth is that nothing could be further than the truth. Whether we realize it or not, every action and every reaction in Cyberspace has some legal and Cyber legal perspectives.

Cyber Laws in India prevents any crime done using technology, where a computer is a tool for cybercrime. The laws for cybercrime protects citizens from dispensing sensitive information to a stranger online. Ever since the introduction to cyber laws in India happened, IT Act 2000 was enacted and amended in 2008 covering different types of crimes under cyber law in India. The Act explains the types of cybercrime and punishment. Cyberlaw in India is not a separate legal framework. Its a combination of Contract, Intellectual property, Data protection, and privacy laws. With the Computer and internet taking over every aspect of our life, there was a need for strong cyber law. Cyber laws supervise the digital circulation of information, software, information security, e-commerce, and monetary transactions. The Information Technology Act, 2000 addresses the gamut of new-age crimes. Computer technology, mobile devices, software, and the internet are both medium and target of such crimes. All Traditional criminal activities are such as theft, fraud, forgery, defamation, and mischief are part of cyberspace. These were addressed in the Indian Penal Code already.

Cyber laws in India or cybercrime law in India are important because of the prime reason that cybercrime act in India encompasses and covers all the aspects which occur on or with the internet - transactions, and activities which concern the internet and cyberspace.

With an increase in the dependency on the use of technology, the need for cyberlaw was necessary. Much like every coin has two sides, therefore, the dependency on technology has its pros and cons. The rise of the 21st century marked the evolution of cyberlaw in India with the Information Technology Act, 2000 (popularly known as the IT Act). The first-ever cybercrime was recorded in the year 1820. The **objective of the Information Technology Act** in India is as follows:

- To provide legal recognition for all e-transactions
- To give legal recognition to digital signatures as a valid signature to accept agreements online
- To give legal recognition to keeping accounting books in electronic form by bankers as well as other organizations

- Protection of online privacy and stopping cyber crimes

The Indian IT law updated the Reserve Bank of India Act and the Indian Evidence Act. With the evolution of cyberlaw, almost all online activities came under scrutiny. When the emphasis was on the need for cyber law or cybersecurity laws, then, it was imperative to implement an IT law in India. Thus, the Information Technology Act, 2000 or also known as the Indian Cyber Act or the Internet Law came to force in India. Since the enactment, the Indian Internet Laws were drafted to bring in view all the electronic records and online/electronic activities to legal recognition. The IT Act also addresses the important issues of security, which are critical to the success of electronic transactions.

As crime has adverse impact on society and its impact is far and far different sections for human activity. Due to advancement of human civilization and adding new tools and technology the nature of crime changed with new advancement. The 21st century world is techno savvy. More and more people are using INTERNET. Internet

made the world a global village. This resulted in people coming together and resulted in so many disadvantages and misuse of the technology in cyber crime. Internet fraud cases increases in Indian Context and needed to enact cyber law.

IT Act is a cyber security law which amendment from time to time to suit the present situation. It law was a cyber security law enacted to secure cyber security amended under IPC 1860, Indian evidence act 1872, the banker's Book evidence act 1891, and reserve Bank of India Act 1934.IT act 2000 went through amendments in 2008 and law of cyber crime added in it. The law came into force in 2009 to strength the cyber security with modification and addition some new. There are many sections and sub sections mentioning clearly crime and punishment.

❖Section – 43 Deals with compensation for damage of computer and computer system.

- ❖Section – 43 A Deals with compensation for failure to protect data.
- ❖Section -65 Tampering with source documents.
- ❖Section – 66 Computer related offence.
- ❖ Section – 66 A Sending offensive message.
- ❖ Section - 66 B Receiving stolen computer.
- ❖ Section - 66 C Electronic signature, theft password.
- ❖ Section - 66 D Cheating.
- ❖ Section - 66 E Privacy violation.
- ❖ Section - 67 Deals with publishing and transmitting obscene materials in e form.
- ❖ Section - 67 A Transmitting of materials like sexually explicit.
- ❖ Section - 67 B Child pornography.
- ❖ Section - 69 Empowered Govt. agency to intercept , Monitor, Computer Resources.

21st century world is techno savvy. More and more people are using INTERNET. Internet made the world a global village. This resulted in people coming together and resulted in so many disadvantages and misuse of the technology in cyber crime. Internet fraud cases increases in Indian Contest and needed to enact cyber law. The mid 90 decade witness more and more application of computer in the global world. This was a global Phenomena. Earlier printed documents and fax were means of fast communication. As the e-application is spreading like wide spread it is tough to make society crime free or it is a dreamland .Only awareness and protective measure can minimize the cyber crime. Technology is a doubled edged sword, which can be used for good or bad.

CYBER ADDICTIONS

Cyber addiction is the excessive, compulsive non-productive use of the Internet by an individual desperately relying on it to occupy free time for recreation or social purposes. It is often fueled by the overuse and lack of time regulation in online gaming and/or the use of mobile apps and social media networks.

INFORMATION OVERLOAD

Information overload describes the excess of information available to a person aiming to complete a task or make a decision. This impedes the decision – making process, resulting in a poor (or even no) decision being made. When designing products (e.g., websites or apps), designers should be especially careful to ensure they prevent information overload from affecting the users' experience.

HEALTH ISSUES

The contribution of IT to individuals and institutions is undeniably big. Moreover, its frequently-criticized negative effects on humans are even much fewer in number than its benefits. It is known that such daily activities are quite dangerous for human On the other hand, there also occur problems resulting from over-use of or inappropriate use of IT, which makes it possible to reach unlimited information faster and more economically. Scientific research has also proved that such situations might bear certain risks for human health. It shouldn't be forgotten that the possible illnesses will decrease to the minimal level if computers are used according to their principles of operation. The increasing use of computers is accompanied

by new health problems. One of the reasons for computer-based health problems is lacking information about the ergonomic use of computers and underestimating the problems encountered. The illnesses likely to be caused by inappropriate use of and poor use of computers can be grouped under two headings.

These are physical problems and psychological problems:

Physical Problems

1. Repetitive Strain Injury:
2. Computer Vision Syndrome:
3. Radiation
4. Sleeping Disorders and Decrease in Productivity
5. Loss of Attention and Stress
6. Computers And Printers Problems Due To Inactivity

Psychological Problems:

Inappropriate use of computer technologies, affecting the psychological developments and social relationships of individuals, might decrease their level of academic achievements. Individuals spending a lot of time on computers cannot get socialized because they

become introvert and don't have any relationships with others. Some of the problems caused by inappropriate

1. Fear of technology
2. Computer anxiety
3. Internet addiction

Today, computer technologies provide people with many benefits; educational activities can be designed; online shopping is available; it is possible to get in touch with people overseas and to chat with them; it is possible to search for anything; and sometimes, it is even possible to do one's job at home without going to his or her office. If these technologies, which dominate our lives more each passing day, are not used carefully, it is inevitable for people to end up with certain illnesses. In order to avoid these problems, one should learn how to use these technologies without experiencing any problem rather than avoiding using them. Some of the users of computer technologies are not even aware of their health-related problems that they have. Some of those who are aware of their illnesses see a doctor for various reasons. Users of computer technologies should immediately take education on the healthy use of these technologies.

E-WASTE AND GREEN COMPUTING

E-waste is a popular name for electronic products nearing the end of their “useful life.” E-Waste for short - or Waste Electrical and Electronic Equipment - is the term used to describe old, end-of-life or discarded appliances using electricity. It includes computers, consumer electronics, fridges etc which have been disposed of by their original users.

"e-waste" is used as a generic term embracing all types of waste containing electrically powered components. E-Waste contains both valuable materials as well as hazardous materials which require special handling and recycling methods. This guide covers all categories of e-waste but Examples: Computers, LCD / CRT screens, cooling appliances, mobile phones, etc., contain precious metals, flame retarded plastics, CFC foams and many other substances.

Green computing is a recent trend and an evolving field aiming towards a sustainable future. Different approaches have been established as possible directions

towards green computing. Virtualization, Cloud computing, Energy minimization, reduction in use of hazardous substances in electronic items etc are a few approaches. Though major focus has shifted towards energy minimization, other approaches have churned themselves out as new subjects – cloud computing. Green computing encompasses a wide range of things. One of them is e-waste management. These electronic items are the hardware part of the computer. The proper management of e-waste hence leaves a good potential to implement green computing.

A green computing is an eco-friendly and environmentally responsible way of using the computers. It is also defined as the designing, usage and disposing of the e-waste in such a manner that it leaves a minimal impact on the environment.

Green computing comprises of basic objectives that can be achieved by every individual involved right from manufacturing to using the electronics.

1. **Minimizing energy consumption** – This objective aims at reducing the energy consumption of computers (including peripherals) and other IT gadgets while using it in an environmentally friendly way. For example, a PC should be put to hibernate or sleep mode when not in use.
2. **Utilizing the green energy** – IT manufacturing companies should focus on designing energy-efficient computers, printers, servers and other devices. All the more, they should aim at using green energy and minimizing waste during the manufacturing process of devices and other subsystems.
3. **Minimizing the equipment disposal requirements** – This is one of the most significant among all as it decides the fate of a used digital device. Obsolete equipment with unwanted materials should be recycled. And, used computers that can be still put to use should be refurbished or repaired and reused again.
4. **Recycling is one of the most significant green practice that contributes to green computing**. Recycling falls in the green disposal category of green computing. The end-of-life products constitute various

types of raw materials including metals and other elements that can be recycled and put to use.

RECENT E-GOVERNANCE INITIATIVES IN INDIA

The "e" in e-Governance stands for 'electronic'. Thus, e-Governance is basically associated with carrying out the functions and achieving the results of governance through the utilization of ICT (Information and Communications Technology). While Governance relates to safeguarding the legal rights of all citizens, an equally important aspect is concerned with ensuring equitable access to public services and the benefits of economic growth to all. It also ensure government to be transparent as part of good governance. However, this would require the government to change itself – its processes, its outlook, laws, rules and regulations and also its way of interacting with the citizens. It would also require capacity building within the government and creation of general awareness about e-Governance among the citizens.

Types of Government Interaction in e-governance

1. G2G: Government to Government

2. G2B: Government to Business
3. G2C: Government to Citizen
4. G2E: Government to Employee

Government to Citizen (G2C) Initiatives

1. Computerization of Land Records: Ensuring that landowners get computerized copies of ownership, crop and tenancy and updated copies of Records of Rights (RoRs) on demand.
2. Bhoomi Project: Online delivery of Land Records. Self-Sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka.
3. Gyandoot: It is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people.

4. Lokyani Project in Uttar Pradesh: Lokyani is a public – private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self-sustained e-Governance solution with regard to handling of grievance, land record maintenance and providing a mixture of essential services.
5. Project FRIENDS in Kerala: FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services) is a Single Window Facility providing citizens the means to pay taxes and other financial dues to the State Governemnt. The services are provided through FRIENDS *Janasevana Kendrams* located in the district headquarters.
6. e-Mitra Project in Rajasthan: e-Mitra ia an integrated project to facilitate the urban and the rural masses with maximum possible services related to different state government departments through Lokmitra-Janmitra Centers/Kiosks.

7. e-Seva (Andhra Pradesh): This project is designed to provide Government to Citizen and e-Business to Citizen services. The highlight of e-Seva project is that all the services are delivered online to customers/citizens by connecting them to the respective government departments and providing online information at the point of delivery.

Government to Business (G2B) Initiatives

1. e-Procurement Project in Andhra Pradesh and Gujarat: To reduce the time and cost of doing business for vendors and government.
2. MCA 21: By the Ministry of Corporate Affairs. The project aims at providing easy and secure online access to all registry related services provided by the Union Ministry of Corporate Affairs to corporates and other stakeholders at any time and in a manner that best suits them.

Government to Government (G2G) Initiatives

1. Khajane Project in Karnataka: It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted

in the computerization of the entire treasury related activities of the State Government and the system has the ability to tract every activity right from the proposal of the State Budget to the point of rendering accounts to the government.

2. SmartGov (Andhra Pradesh): SmartGov has been developed to streamline operations, enhance efficiency through workflow automation and knowledge management for the implementation in the Andhra Pradesh Secretariat.

MODULE 5

DIGITAL MARKETING

Introduction to Digital marketing Environment

The strategic importance of marketing has increased in the last few years. The trend in marketing is to identify each customer and target them individually. The more you address a customer personally, the more you can bind them to the company and therefore add value. The challenge is how to obtain information about your customers and how to interact with them individually.

Digital marketing is often confused with online marketing. Digital marketing is the process of promoting a brand, service or product on the internet. Put simply, Digital marketing differs from traditional marketing in that it involves the use of online channels and methods that enable businesses and organisations to monitor the success of their marketing campaigns, often in real time, to better understand what does and doesn't work.

Most corporations have stumbled in their e-initiatives for various reasons. New approaches need to

integrate click and mortar, involve senior management, focus on business design and business execution, and make technology an enabler, not a solution. A strategic business design should assess the opportunity, design the blueprint and deploy the plan quickly in order to be successful.

Need for digital marketing

Today, more than ever, companies are expected to increase revenues and profitability in a complex international marketplace. To increase sales, many companies rely on an Elaborate Web of sales partners – resellers, distributors and other business partners – who act as intermediaries bet a company and its customers. Marketers need to figure out how the Internet can lead to a real value for consumers and companies. They can use the net as a potent marketing tool by building a profiled database of customers' portals.

It is sometimes difficult to grasp the vastness of the Internet as it links country with country, culture with culture, buzzing metropolis. These technological changes, which only promise to become more advanced as bandwidth increases and provides more richly – textured opportunities for advertisers to tell their stories, are

fundamentally changing the way advertisers relate to their customers. Customization has serious implications for the marketing business and the greater objective of brand development.

Advantages and disadvantages of digital marketing

Digital marketing benefits businesses of all sizes by giving access to the mass market at an affordable price. Unlike TV or print advertising, it allows truly personalised marketing. Digital marketing also comes with a number of challenges you should be aware of.

The main advantage of digital marketing is that a targeted audience can be reached in a cost-effective and measurable way. Other digital marketing advantages include increasing brand loyalty and driving online sales.

The benefits of digital marketing include:

- **Global reach** - a website allows you to find new markets and trade globally for only a small investment.

- **Lower cost** - a properly planned and well targeted digital marketing campaign can reach the right customers at a much lower cost than traditional marketing methods.
- **Track able, measurable results** - measuring your online marketing with web analytics and other online metric tools makes it easier to establish how effective your campaign has been. You can obtain detailed information about how customers use your website or respond to your advertising.
- **Personalization** - if your customer database is linked to your website, then whenever someone visits the site, you can greet them with targeted offers. The more they buy from you, the more you can refine your customer profile and market effectively to them.
- **Openness** - by getting involved with social media and managing it carefully, you can build customer loyalty and create a reputation for being easy to engage with.

- **Social currency** - digital marketing lets you create engaging campaigns using content marketing tactics. This content (images, videos, articles) can gain social currency - being passed from user to user and becoming viral.
- **Improved conversion rates** - if you have a website, then your customers are only ever a few clicks away from making a purchase. Unlike other media which require people to get up and make a phone call, or go to a shop, digital marketing can be seamless and immediate.

Together, all of these aspects of digital marketing have the potential to add up to more sales. Some of the downsides and challenges of digital marketing you should be aware of include:

- **Skills and training** - You will need to ensure that your staff have the right knowledge and expertise to carry out digital marketing with success. Tools, platforms and trends change rapidly and it's vital that you keep up-to-date.

- **Time consuming** - tasks such as optimising online advertising campaigns and creating marketing content can take up a lot of time. It's important to measure your results to ensure a return-on-investment.
- **High competition** - while you can reach a global audience with digital marketing, you are also up against global competition. It can be a challenge to stand out against competitors and to grab attention among the many messages aimed at consumers online.
- **Complaints and feedback** - any negative feedback or criticism of your brand is can be visible to your audience through social media and review websites. Carrying out effective customer service online can be challenging. Negative comments or failure to respond effectively can damage your brand reputation.
- **Security and privacy issues** - there are a number of legal considerations around collecting and using customer data for digital marketing purposes. Take care to comply with the rules regarding privacy and data protection.

Types of digital marketing

The corporate brush with Digital marketing was initially characterized by a dose of innovation and low clarity on job roles with chaos reigning supreme. But gradually the clarity emerged out of the chaos. With a rapid maturation process an appreciation of the ground realities had set in. Companies realized that technology is, after all, subservient to the needs of a customer. Thus, technology with customer – centric focus became the watchword. To reap rewards from digital marketing one should have shrewd understanding of the companies that have helped themselves to big slice of the internet kitty. Companies like Amazon and e-Bay qualify as benchmarks for commercialism of the digital markets.

Business models in digital marketing

The business market is huge because a higher proportion of firms are connected to the Internet than consumers, especially in developing countries. Marketers who grasp what Internet technologies can do will be better poised to capitalize on information technology.

Business to Business (B2B)

Business-to-business – "B2B" – refers to commerce between two businesses rather than to commerce between a business and an individual consumer. Transactions at the wholesale level are business-to-business. In simple, it refers to any marketing strategy or content that is geared towards a business or organization. Any company that sells products or services to other businesses or organizations (vs. consumers) typically uses B2B marketing strategies.

Business to Customer (B2C)

B2C is an acronym for "business-to-consumer." A B2C business is one that sells products or services directly to the consumer. With the ability to sell directly to consumers, the B2C model, in essence, got rid of the middleman and, often times, eliminates the need for eBay, Amazon, and others entirely. The challenge of the business-to-consumer model is that businesses need to maintain a steady sales steam to stay viable. When the economy gets tough, consumers may make changes in their spending, and that can affect a B2C business.

Customer to Customer (C2C)

C2C, customer to customer, or consumer to consumer, is a business model that facilitates the transaction of products or services between customers. Consumer to consumer, or C2C, is the business model that facilitates commerce between private individuals. Whether it's for goods or services, this category of e-commerce connects people to do business with one another.

Business to Employees (B2E)

An approach in which the focus of business is the employee, rather than the consumer (as it is in business-to-consumer, or B2C) or other businesses (as it is in business-to-business, or B2B). The B2E approach grew out of the ongoing shortage of information technology (IT) workers. In a broad sense, B2E encompasses everything that businesses do to attract and retain well-qualified staff in a competitive market, such as aggressive recruiting tactics, benefits, education opportunities, flexible hours, bonuses, and employee empowerment strategies.

Business to Government (B2G)

A business model that refers to businesses selling products, services or information to governments or government agencies. B2G networks or models provide a way for businesses to bid on government projects or products that governments might purchase or need for their organizations. This can encompass public sector organizations that propose the bids. B2G activities are increasingly being conducted via the Internet through real-time bidding.

ONLINE ADVERTISING

Online advertising is a marketing strategy that involves the use of the Internet as a medium to obtain website traffic and target and deliver marketing messages to the right customers. Online advertising is geared toward defining markets through unique and useful applications.

Since the early 1990s there has been an exponential increase in the growth of online advertising, which has evolved into a standard for small and large organizations.

A major advantage of online advertising is the quick promotion of product information without geographical

boundary limits. A major challenge is the evolving field of interactive advertising, which poses new challenges for online advertisers.

Examples of online advertising include banner ads, search engine results pages, social networking ads, email spam, online classified ads, pop-ups, contextual ads and spyware.

TYPES OF ONLINE ADVERTISING

In fact, today, there are many different types of advertising that you can integrate into a digital marketing strategy. As the landscape of digital advertising changes online, its important to stay up to date on the latest trends, techniques, and strategies. These different online advertising options can be combined to form a 360° campaign, or they can be used alone.

1. Native Advertising: This term is associated with more unconventional online advertising. In other words, it uses a strategy which shies away from banner formats or sponsored content in an attempt to win a user's trust by offering them solutions to their problems. The best thing about these formats is that they're in no way intrusive and, therefore, are more highly valued by both the general public and by those who resort to using ad blockers.

2. SEM (Search Engine Marketing): With this type of campaign, the goal is to achieve increased brand awareness in a very short amount of time. All it takes is an ad with a title, a description and a call to action; not to mention, make sure to heavily rely on the use of keywords.

3. Display Advertising: Among the more 'visual' online advertising formats are display ads. They are called this because they, generally, contain images or videos and are published on designated places within any given website. It could be a blog, journal or a site aimed at a specific group.

4. Mobile Advertising: Although there are many formats of mobile advertising, it's recommended that all advertising campaigns should also be adapted to mobile platforms or at least follow a responsive typology which allows for pages to be formatted to the size of any given screen. Nowadays, everyone has a phone and/or a tablet that they constantly use. Moreover, they use these devices to access the internet.

5. Social Ads: Social media is an incredibly important part our everyday lives; it is made up of channels through when people connect multiple times a day and

where they frequently communicate, share and give opinions. Creating ad campaigns on these platforms, therefore, is necessary for generating brand awareness and for acquiring potential new clients. Furthermore, the wide segmentation possibilities social networks offer, can also be the perfect places to launch new products/services geared towards very specific audiences.

6. Retargeting and Remarketing: Reminding repeat customers/users who have shown interest in your company is a solid strategy for making conversions. Remarketing works to make banner appear on the whichever website those who have previously visited the website are actively visiting (provided that these sites offer remarketing spaces). These types of ads are good for making sales but also are helpful in gaining brand awareness, which improves a company's presence within the consumer's buying process.

7. Email Marketing: This format of marketing isn't anything new but it has resurfaced with a renewed potency. The many automatization tools available have led to achieve highly profitable conversion goals. Getting a new client is over 7 times more

expensive than maintaining a current one, it can be ensured through email marketing.

8. Digital Signage: Although the name may be not as well known, it's slowly creeping in to the lives of users and will soon to be a shared reality in the coming years. To put a definition with the name, we could say that this is the technological evolution of traditional outdoor advertising. They are used on billboards, MUPIs, window displays or any other stand that has a screen. The efficiency of this type of advertising resides in its capability to grab the attention of potential clients during the most mundane parts of their day.

9. Videos Marketing: Video content is an incredibly entertaining resource for users. This being said, using videos as an advertising strategy is a fantastic idea. Another idea is to partner up with YouTubers who feature and discuss your product/service (similar to native advertising). You can also come up with original video content to help you get a better and more organic position on SEO. Furthermore, by

sharing these videos, you can gain more direct web traffic and increase your chances of one or more of them going viral. With videos, there are countless possibilities, even more so if you bear in mind that soon, if not already, an estimated 80% of the internet will be video-based content.

These are the types of advertising which exist right now. However, they could easily multiply in the coming years. With the combined progress of technology and the internet, we could see growth in the number of future business advertising options. This being said, it's crucial to be on the front lines of both the internet and new technologies.

PPC (PAY PER CLICK) ADVERTISING

PPC is an online advertising model in which advertisers pay each time a user clicks on one of their online ads. There are different types of PPC ads, but one of the most common type is the paid search ad. These ads appear when people search for things online using a search engine like Google – especially when they are performing commercial searches, meaning that they're looking for

something to buy. This could be anything from a mobile search (someone looking for "pizza near me" on their phone) to a local service search (someone looking for a dentist or a plumber in their area) to someone shopping for a gift ("Mother's Day flowers") or a high-end item like enterprise software. All of these searches trigger pay-per-click ads. In pay-per-click advertising, businesses running ads are only charged when a user actually clicks on their ad, hence the name “pay-per-click.”

SEARCH ENGINE ADS

Search-engine advertising is a branch of online marketing. Advertisements in the form of a text or images are posted on search engines such as Google or Bing. These ads then appear prominently in the SERPs (Search Engine Result Pages). This method belongs to the main source of income for search engine providers. Search engine advertising is a cost-effective way to improve businesses and brands, as appearing high up in the SERPs makes brands and products more visible.

SOCIAL MEDIA CHANNELS AND ADS

Social media marketing is the use of social media platforms to connect with your audience to build your brand, increase sales, and drive website traffic. This involves publishing great content on your social media profiles, listening to and engaging your followers, analyzing your results, and running social media advertisements.

The major social media platforms (at the moment) are Facebook, Instagram, Twitter, LinkedIn, Pinterest, YouTube, and Snap chat etc. There are also a range of social media management tools that help businesses to get the most out of the social media platforms. For example, Buffer is a platform of social media management tools, which can help achieve success with social media marketing. Social media ads are one of the quickest and most effective ways to connect with your target audience**.** These ads provide plenty of profitable opportunities and are a great way to boost digital marketing campaigns.