# Living in the IT Era

# *Overview*

**Course Title:**

Living in the Information Technology (IT) Era

**Course Description:**

This course examines the science, culture, and ethics of information technology, as well as its diverse applications and uses, as well as its impact on modern life and human interactions. This will allow students to investigate communication and information technologies, with a focus on the Internet and its components, as well as how millennials and generation Z use them. The course's purpose is to help students comprehend how communication and information technologies change, as well as its cultural, economic, political, and social repercussions.

The course will also cover how individuals, families, and businesses use the Internet to their advantage. This course is designed to give students a wide grasp of the social, cultural, and economic implications of emerging communication technologies, as well as to promote critical thinking about technology. The course begins with an overview of media settings, with a focus on how millennials are affected by technological advancements. The students will next walk through the various technologies that have progressed from the old age to current advances. Then there's a focus on weighing the dark and light aspects of technology, as well as its influence on human health and improvements to the global health system. This will be followed by a discussion of internet policies and good online etiquette.

Students will learn to understand the growing information ecology as it affects individuals, families, and businesses through tests, activities, and exercises in this module.

**Course Guide:**

This module *Living in the IT Era* is a product of collaborative efforts of IT and General Education instructors of the whole Eastern Samar State University system designed for self – learning of freshman college students during these trying times of COVID-19 pandemic.

This module is composed of five Modules, to wit:

MODULE 1: Media Environments
MODULE 2: From the Old to the New Technologies
MODULE 3: The Dark and Light Side of the Internet
MODULE 4: Human Health in the Internet Age
MODULE 5: Policing the Internet

Each Module could be learned in a self – paced or individual format and it is the responsibility of the students to maximize their time and exert with determination

in completing the course with the best learning outcomes. However, contents presented in this module may not be enough for their learning needs, so it is suggested to consider reading other references related to the topics. For each Module, there are discussion, examples, and exercises as a course requirement to contribute 50% of students' grades. Ideally, all of the activities and exercises should be done and compiled to be submitted during major exams. Students may contact their instructor for any concern or clarifications about the topics, tasks, and outputs to be done.

Midterm examination will cover Module 1, 2 and half of Module 3, while final examination will cover the other half of Module 3 until Module 5.

**Course Learning Outcomes:**

Having completed the module, the students are anticipated to meet the following outcomes:

1. Explain the relationship between information technology and the modern society, and identify how the Internet affects individuals;
2. Describe and relate the transition of information technology from the old media to the new;
3. Identify the dark and light sides of an internet-driven society;
4. Examine issues involving convergent media and the impact to human health of its intensive use;
5. Discuss the different policies over responsible social media use and apply these to personal experiences.

**Course Requirements:**

Students are expected to submit the following requirements or outputs during major exam.

| Module | Module Title | Requirement/Output |
|---|---|---|
| **1** | Media Environments | |
| **2** | From the Old to the New Technologies | Module Exercises<br>Midterm Examination |
| **3** | Dark Side of the Internet | |
| | Light Side of the Internet | |
| **4** | Human Health in the Internet Age | Module Exercises<br>Final Examination |
| **5** | Policing the Internet | |

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# MODULE 1
# MEDIA ENVIRONMENTS

**LEARNING OUTCOMES:**

At the end of this module, you are expected to:

1. Describe who the Millennials are and how they differ from other generations and how do they adapt to the constantly changing technologies;
2. Explain the principles and theories of Mediamorphosis and how it transforms our perceptions of new media; and
3. Identify the benefits of media convergence and its implications to the society

**INTRODUCTION**

According to Douglas Rushkoff, author and host of Team Human on Quora, a "media environment" is the social, mental, and economic environment created by a particular medium or technology. The smart phone is not just the device in your pocket; it is also the environment it creates - from people walking down the street without looking up, to surveillance, to never being truly alone - and how it enhances or changes our daily lives. Thus, in this module, we will examine how traditional and new media have converged to create the level of media effect and experience that exists in the modern world.

But before we start our lesson proper we should learn what new and traditional media means; traditional media are older media forms like radio, television, newspaper, magazine, cinema and books while new media forms refer to all internet-enabled platforms signaled by the emergence of new information and communication technologies. Such new media forms include cell phones, social networking sites like Facebook, YouTube, Tweeter , IG wikis, blogs, E-books, online newspapers, webcasts, video streaming and the likes, are also inclusive.

So is it interesting to hear the term new and traditional media? Why is it called the new media? What's new in new media? Who are the users of new media? This module will assist you in answering essential questions and discuss about the media environment that we live in.

But before we begin our lesson proper, first do the activity below:

**Activity 1:** On a separate sheet of paper write your answer to following activity:

1. Below are two sets of pictures, what can you observed about the picture in set A and B?
2. In set A name a gadget from the past and to its equivalent present form and describe the difference of its appearance and usage.

Set A.

SOURCE: https://www.totalhipaa.com/hipaa-compliance-must-be-updated-as-technology-evolves/evolution-technology-graphic/

Set B

SOURCE: https://tinyurl.com/3t92537r

## LESSON 1: MILLENNIALS AND THE RISE OF THE INFORMATION SOCIETY

### Who are the Millennials?

Millennial is a word used to describe the generation of people who are now in their twenties. Millennials are people in their late teens to early 30s who were born between 1980 and 1995. To give you an indication of generational distinctions, Generation X is made up of people who were born between 1961 and 1979 and are in their mid-30s to early 50s, whereas Baby Boomers were born between 1946 and the early 1960s and are in their early 50s to late 60s.

We all mature, and each generation does so uniquely. They are capable of expressing themselves in a variety of ways. The Baby Boomers were a generation that changed the world in the mid-twentieth century with the 1960s protest movements. From the Civil Rights and Feminist movements to the Anti-War Movement's opposition to the Vietnam War, the rise of recreational drug use, the sexual revolution, Motown records, and the British invasion, the 1960s were arguably the most innovative and transformative decade in modern history. Generation X, their successors, were the first generation to be raised on MTV and VH1 music. They grew up during a technologically advanced era, from the introduction of cable television to the advent of video games.

Generation X was regarded as a more rebellious generation. They were preoccupied with becoming "cool," "popular," and "in with the proper crowd." Coming of age during the AIDS crisis made partnerships more cautious, and in the end, one of the most important lessons learned from that generation was to do something you love.

Millennials are individuals born after September 11, 2001, and have grown up in a post-9/11 society. While Generation X members were required to learn these new technologies, they were born and raised with them, and thus were already acquainted with them. They are more health conscious, and through community service, they serve as heroes to those in need. There are numerous challenges facing children today that they must overcome as they mature, ranging from the 2008 economic meltdown to contentious issues such as global warming, gay marriage, abortion, and the war on terror. Millenials embrace the concept of being authentic and true to oneself. Generation Y is defined by its insatiable desire to share everything on the Internet via a variety of social media platforms, including Facebook, Twitter, Tumblr, and YouTube, as well as any new platform that emerges. Millennials are motivated by Generation X's maturity in their careers and relationships, while Generation X is inspired by Millennials' zeal, youthfulness, and desire to improve the world in which they live.

While kids born in the 1990s often claim in popular Tumbler posts and viral tweets that they were the last generation to grow up before the Internet's explosive growth, they are used to having some sort of technology around them, whether it's a computer or a cell phone, unlike the generation before them. Although the younger members of the generation are more accustomed to Wi-Fi than their elders, the millennial generation has been the first to spend the majority of their life in the twenty-first century age of technology.

The drive to share everything is one of the most fascinating characteristics of a typical Millennial. In the age of social media, it's almost as if an event isn't considered official until it's widely posted online. Let's pretend you have front-row seats to your favorite band's sold-out tour. It's almost as if it never occurred unless you tweet about it or create a new Facebook photo album of your night's exploits. “Facebook official” appears to be becoming more common, and it's an intriguing concept.

Even said, there are bad side effects that might come with any beneficial thing. While technology is gradually replacing more basic aspects of people's daily lives, human interaction is steadily vanishing. When someone really calls another person on the phone, it is such a meaningful gesture. This was a given ten years ago. Phone calls appear to be falling into oblivion in the age of text messages and Facebook discussions. When someone went out on a date before, the initial interaction was the best way to learn about them—what they liked, what they didn't like, and a list of their favorite things. Now all you have to do is go to Facebook and discover their profile, add them, and you'll know all of these things and more.

People become so accustomed to conversing with others through letters on a screen that they become even more awkward when they are in the company of another human being. Why can't there be a method to quickly communicate with so many people on such a fantastic platform while retaining a sense of mystery? The more people, particularly Millennials, understand how much sharing is too much sharing, the better all levels of social interaction will be.

Another significant problem with the Internet is the rise in cyberbullying. Many people are harassed and told unspeakably nasty things on platforms where users can post anonymous questions. This is a new phenomena that has arisen as a result of technological advancements, and it must be swiftly addressed. Why is it necessary to speak such nasty things while hiding behind an anonymous icon? Why aren't they brave enough to speak it out loud to someone? Why do people feel compelled to communicate such hatred in the first place? Many people forget that there are other

individuals behind these icons and profile images, and that such a powerful tool may be used for good to form friendships with people that would not have been possible a few decades ago.

There have been fresh developments with each generation. Millennials can be defined as the generation that has grown up in a world where technology and its advancements are the norm in nearly every aspect of life, from the mid-20th century protests of the Baby Boomers to a search for identity and a hint of a rebellious attitude among members of Generation X. While technology has made the world smaller, faster, and easier, it is still necessary to ensure that the qualities of basic human interaction are preserved. As long as Millennials can balance the beauty of technological advancements while remaining grounded in the reality of the living world that surrounds them, the future looks very positive, bright, and exciting.

**Adapting to New Technology**

With nearly everything becoming digital and technological advancements accelerating, adaptation is critical. This ability comes naturally to millennials as a result of their exposure to gadgets and smartphones. This is evident in interactions with Generation X and Baby Boomers in the workplace. On both a personal and professional level, previous generations frequently seek the assistance of millennials for training on untapped features and shortcuts. Trainings are conducted, and these processes are sometimes simplified for the younger generation. This type of humble collaboration can result in the development of a stronger, more dynamic team.

While it is rational to assume that not everyone understands everything, experiencing this in the workplace was initially eye-opening. Finally, this technological/generational divide provides an opportunity for all of us to learn, and sometimes we just have to laugh about it. It's fostered a positive atmosphere and open communication among the staff. There is no segregation or condemnation – we simply accept one another's strengths and weaknesses and do our best to assist one another.

Access to technology has also increased our productivity and responsiveness. From any device, you can contact whomever you need to–coworkers or peers. You can access documents from any location. Multitasking is simplified, and deliverables are completed on time. Without access to resources such as WiFi, laptops, or tablets, you would be compelled to work in the office or on-campus. Or, worse, you would be required to mail documents via the United States Postal Service– is this truly daunting? Yes, technology is a wonderful thing for someone accustomed to efficiency.

Millennials are frequently associated with instant gratification. Because the internet and society's beloved Google are so easily accessible via a quick search on any device, having an immediate answer is so simple. Impatience and boredom accompany this instant gratification. However, curiosity and a strong desire to learn accompany it. These characteristics result in a desire for success and the ability to multitask. Having multiple devices and access to the internet enables rapid problem solving and the discovery of new perspectives. Due to the vast amount of information available, this generation is gaining knowledge at a faster rate than any previous generation.

A disadvantage of this technology immersion is that interpersonal skills are harmed. Although millennials are more accepting of the world (thanks to multiple social media platforms), it can be difficult for them to connect with the person standing five feet away. Constantly hiding behind a device, whether it's a computer, tablet, or smartphone, has harmed a previously mastered social skill. Millennials will strategically choose what they post in order to shape how they are perceived on social media. Rather than having in-person conversations, they share snippets of their lives online. Are millennials capable of developing these interpersonal skills? Yes, as is the case with the majority of things. It does not, however, come as naturally as it did in the past.

At the end of the day, millennials' intimate relationship with technology is irreversible. Having a generation raised in an age of technology has a number of advantages and disadvantages, but each generation brings something unique. Despite the negative connotations attached to millennials, technology reveals new positive attributes.

**Overview of New Technological Development**

Technology development is the use of scientific approaches to attain technological goals in the Department of Defense (DoD), commercial, or industrial sectors. The Technology Maturation & Risk Reduction (TD) Phase of the Acquisition Process produces and shows prototype designs to decrease technical risk, validate designs, validate cost estimates, evaluate manufacturing processes, and refine requirements.

During the TD phase or independently from an acquisition program, a lot of technology projects take place. These programs are aimed at advancing technology from the concept stage to the mature stage. Typically, the process begins with a

concept demonstration and progresses to a more advanced technological development phase, such as prototyping.

Citizens' employment and personal lives are becoming increasingly reliant on information technology. Computers, communications, digital information, and software are all ubiquitous in the information era.

Many people, both those who actively seek opportunities to learn more about information technology and those who choose not to learn anything at all, recognize the potential value of information technology in their daily lives and recognize the benefit of gaining a better understanding of it. This conclusion is based on a number of factors:

Information technology has exploded into our lives in a relatively short period of time, with little forewarning and no formal educational preparation for the vast majority of people. Many people who use technology today have a limited comprehension of the tools they use and the (usually right) notion that they are underusing them. When confronted with information technology, many citizens lack confidence and control, and they wish to be more assured of themselves.

Many people have made spectacular claims about the potential benefits of information technology, and many of them would like to see those benefits realized. Some citizens are concerned that developments brought about by information technology may pose a threat to social ideals, liberties, or economic interests, requiring them to become informed.

These numerous reasons for wanting to learn more about information technology pose the question, "What should everyone know about information technology in order to use it more effectively today and in the future?" The fact that information technology is continuously changing complicates the solution to this question. The electronic computer is more than 50 years old, the "PC," as in personal computer, is less than 20 years old, and the World Wide Web is less than 5 years old. It is difficult to deliver a permanent, once-and-for-all course that will remain current and effective in the face of fast change.

In general, "computer literacy" has taken on a "skills" connotation, implying proficiency with a few modern computer applications like word processing and e-mail. In the face of fast change, literacy is an inadequate objective because it lacks the essential "staying power." Existing talents become obsolete when technology

advances at a breakneck pace, and there is no way to upgrade to new abilities. Individuals who plan to adapt to technological developments are a better solution. This entails studying enough core content to enable one to pick up new abilities on one's own after completing formal schooling.

The committee chose "fluency" as a term to denote a greater level of skill because it conveyed a deeper understanding than the rudimentary term "computer literacy." People who are proficient in information technology (FIT) may express themselves creatively, reformulate knowledge, and synthesis new data. Fluency with information technology (FITness), as defined in this research, is a lifelong learning process in which people utilize what they know to adapt to change and acquire new knowledge in order to be more effective at using technology to their work and personal lives.

Proficiency in information technology requires three types of knowledge: current abilities, fundamental principles, and intellectual capacities. These three types of knowledge all contribute to a person's FITness in unique ways. Individuals with contemporary capabilities, such as the ability to operate today's computer applications, can immediately begin utilizing information technology. In today's labor market, skills are a critical component of job readiness. Most importantly, skills establish a foundation of practical experience upon which new abilities can be developed. The technology is based on fundamental concepts, such as the fundamental principles and ideas underlying computers, networks, and information. Concepts describe how and why information technology works, as well as the benefits and drawbacks of the technology. Concepts serve as the foundation for grasping emerging information technology.

Higher-level thinking is encapsulated in the context of information technology by intellectual capacities, or the ability to apply information technology in complicated and persistent settings. Capabilities enable people to take use of the medium and deal with unforeseen and unanticipated challenges as they arise. The ability to think abstractly about information and how to manipulate it is facilitated by intellectual capacities.

The ten highest-priority things for each of the three types of knowledge in terms of specificity. The skills, which are intimately tied to today's computer usage, will evolve throughout time, but the principles and capabilities will remain constant.

## LESSON 2: MEDIA THEORIES: UNDERSTANDING THE NEW MEDIA

According to new media forecaster Paul Saffo, we learn from experience that our short human memories often confuse surprise with speed. However, he claims that when it comes to developing technology, he finds that sluggish development is the rule rather than the exception. Most ideas take considerably longer than anyone is willing to accept to become "overnight successes. The lesson we most often forget is: *"You should never mistake a clear view for a short distance. It's that sense of standing on a ridge, looking out across a great forest at a distant mountain goal. The peak is so close it seems you could reach out and touch it. That is, until you get in among the trees and start beating your way towards the mountain".*

Saffo argues that the reason life feels so much faster today is not that individual technologies are advancing at a faster rate or because events are occurring at a faster rate than in the past. Instead, what is happening is that "more technologies are emerging concurrently.

In Media, there are different theories this includes ***Mediamorphosis***. The second theory in Media by Roger Fidler states that mediamorphosis is not so much a theory as it is a unified way of thinking about the technological evolution of communication media. Instead of studying each form separately, it encourages us to examine all forms as members of an interdependent system and note the similarities and relationships between past, present, and emerging forms. By studying the communication system, we will see that new media do not arise spontaneously and independently — they emerge gradually from the metamorphosis of old media. And that when newer forms of communication media emerge, the older forms of media usually do not die. They tend to adapt and evolve continuously."

FM's delayed success is a case in point, while radio's transformation from a mass-audience medium to a niche-audience medium exemplifies this critical principle of mediamorphosis. While television began its meteoric rise, general-audience radio experienced a steep decline, prompting some analysts to predict the medium's impending demise. However, the radio did not perish. Neither was AM completely absorbed by FM. Rather than that, AM adapted and has steadily increased its competitiveness with FM by adopting new technologies and marketing strategies. The rapid spread of television also wrought significant changes in the newspaper, magazine, and film industries. Each was declared a dying medium incapable of competing with television's immediacy and compelling images, but each proved to be

more resilient and adaptable than anticipated. This also highlights a crucial corollary to the metamorphosis principle: traditional means of communication must develop in reaction to introducing a new medium or die. The metamorphosis principle is drawn from three concepts: coevolution, convergence, and complexity, as are several other essential principles of mediamorphosis.

**Coevolution**

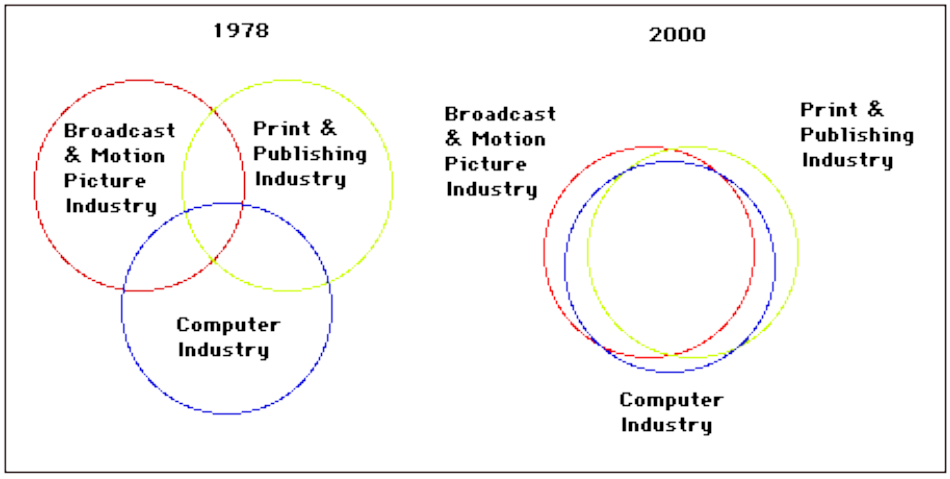
As we have seen, all modes of communication are inextricably linked to the human communication system and cannot exist independently in our culture. Each new form that emerges and develops affects all other existing forms to varying degrees and over time. Coevolution and coexistence, rather than sequential evolution and replacement, have been the norm since the formation of the first creatures on earth. The abundance of communication technologies that we now take for granted would not have been possible if the demise of an older medium accompanied the birth of each new medium.

**Convergence**

Almost every personal computer sold today enables users to play CD-ROMs that combine text and still images with audio and video clips and connect to global networks and vast access stores of textual and audio/visual information. This is just one of the more obvious manifestations of the media convergence concept. The idea that disparate technologies and media forms are merging now seems almost mundane, but it was once considered visionary. Few people grasped the notion of convergence when Nicholas Negroponte began popularizing it in 1979 during his lecture tours to collect funds for a facility to house the Massachusetts Institute of Technology's Media Lab. Negroponte's revelation that "all communication technologies are undergoing a common metamorphosis, which can only be fully understood if treated as a single subject" frequently astounded audiences. Negroponte drew three overlapping circles labeled "broadcast and motion picture industry," "computer industry," and "print and publishing industry" to illustrate this concept. Since then, the idea that these industries are merging to create new forms of communication has shaped much of the discussion about the future of mass media and human communication.

Negroponte and others at MIT are credited with recognizing that the convergence of media industries and digital technologies would eventually result in

new forms of so-called multimedia communication. Multimedia, or mixed media, is a broad term that refers to any medium that incorporates two or more modes of communication.




With these diagrams Negroponte made the case for the creation of a Media Laboratory at MIT.

**Source:** http://www.world.std.com/~mehopper/Media/Media.htm

**Complexity**

During periods of massive change, such as the one we are currently experiencing, everything around us may be in disarray, which is a significant part. Change necessitates the presence of disorder. The universe would be a barren wasteland without it, and life would be impossible. New ideas emerge from turbulence, transforming and revitalizing systems. Chaos Theory is the idea that seemingly unimportant events or small starting changes in chaotic systems, such as the weather and the economy, can set off a chain reaction of escalating, unexpected events that can lead to consequential or disastrous outcomes.

Anarchy is at the heart of chaotic systems. They have practically complete unpredictability with no discernible long-term trends, which explains why accurate long-range weather and economic projections are nearly impossible. It also explains why no one will ever be able to precisely forecast which new media technologies and modes of communication will thrive and which will fail in the long run.

Chaos is more critical to our knowledge of mediamorphosis and the formation of new media because of its relationship to another related notion, complexity. In this sense, the term "complexity" refers to the events inside seemingly chaotic systems.

**Fidler identifies six principles of Mediamorphosis:**

1. **Coevolution and coexistence:** Adapt or perish, all media forms coexist and evolve in an ever-expanding, complex manner. A system that adapts. As each new form emerges and develops, it has a cumulative and varying effect on the development of all existing forms.
2. **Metamorphosis:** This term refers to the gradual emergence of new media from older forms.
3. **Propagation**: explains how media inherit dominant characteristics from older forms and pass them on to new media. For instance, newspapers and television stations are transformed into websites that feature articles, headlines, and video segments.
4. **Survival:** This is the point at which traditional media continue to adapt and evolve in response to the changing conditions of time, rather than dying.
5. **Opportunity and necessity**: new media are not widely adopted solely based on their technical merits. There must be a market opportunity and compelling social, political, and economic reasons for the development of new media technology.
6. **Delayed adoption:** It is always more difficult for new media technologies to achieve commercial success than anticipated.

And there are three great Mediamorphosis theories in human communication they are:

1. **Spoken language** The evolution of "broadcast" storytelling and ritual performances. Contributes to the formation of social groups and the development of complex problem-solving abilities
2. **Written Language.** Contributed to the invention of portable documents, mechanical printing, and mass media.
3. **Digital Language.** This enables human-to-human communication via technology or machines. Human interactions are facilitated by technology on a global scale.

By combining the principles of mediamorphosis with an understanding of the attributes that have shaped the development of communication media in the past, we can gain valuable insights into the new forms that could appear early in the twenty-first century and how existing conditions may adapt and continue to evolve**.**

## LESSON 3: CONVERGENCE AND INTERACTIVITY

Diverse academic areas use the term convergence to describe and study various processes of development toward homogeneity. The phrase "media convergence" is used to characterize its application in the communication business. It also includes practical approaches for describing, representing, analyzing, and comprehending the digital creative economy. Publishing, music, radio, advertising, cinema, and games are some sub-sectors that fall under the communication and digital creative industries. Because of convergence, these subsectors are even expanding. Beyond that, the effects of media convergence may be seen in various creative professions, such as museums, libraries, and design, to name a few. In addition, the creative industries are being propelled forward by new digital media technology and services. As a result, understanding the digital creative economy necessitates a thorough examination of media convergence, both in terms of tactics and outcomes. As a result, this course delves into the specifics of how traditional and new media modes of communication combined to achieve the current degree of media effect and experience.

### Convergence

What is convergence? It's the coming together of computing, telecommunications, and media in a digital environment. Convergence shows how different aspects of media are parts of the whole and examines how they influence each other.

The three common types of convergence are;

1. Technological

   According to Papadakis (2007), the term technological convergence is frequently used in very broad and simplistic terms to refer to the process by which new media powered by information technology and traditional media that were previously largely independent of one another are merging. This implies that technological convergence has a technical as well as a functional component. The technical side refers to any infrastructure's ability to transport any type of data, while the functional side refers to consumers being able to seamlessly integrate


SOURCE: https://www.shutterstock.com/image-vector/hands-holding-computer-tablet-online-library-713923852

computation, entertainment, and voice functions into a single device capable of performing a variety of tasks.

2. Economic

   This strategy is comprised of three components: 1) digitization; 2) corporate concentration, in which fewer large companies own a greater proportion of media properties; and 3) government deregulation, which has increasingly permitted media conglomerates to own multiple types of media (e.g., television and radio stations, and newspapers) in the same markets, as well as content carriage companies (e.g., cable and satellite) (e.g., specialty TV channels).

3. Content

   Refers to a series of processes of convergence, integration, and intersection of media across their content range throughout their creation process, from planning to creating and supplying to using.

**Benefits of Media Convergence**

The benefits of media convergence can be submerged in the following areas:

- Convergence is beneficial because of the role it can play in national economic and social development growth. It has the potential to impact on all segments of society. It can shape the delivery of government services (education and health included) and redefine the way businesses operate.
- Media Convergence has greatly impacted circulation outreach; this has a great impact on media and contributes to high degree of appreciation of news stories. This has further empowered producers and media entrepreneurs towards reaching out to wider audiences.
- This growing trend of communication has an edge over the previous ways of circulating news and information strictly on hard copies for an information. Media firms have now gained stronger circulation power. This is made possible as people can assess information by visiting various websites from anywhere in the world.

**Implications of Convergence**

1. Media organization changes

   Centralized vs. converged media organizations

   - Centralized: functions of media - including production, distribution, marketing & advertising - are controlled by a single individual or unit

- Converged: Functions of media may be de-centralized via the Internet, inviting more diffuse methods of production, distribution, marking and advertising

2. Media type changes

   How we engage with media in a state of flux: Where do we listen to the radio? Different media are regulated differently and enjoy different freedoms and restrictions

3. Media content changes
   - Traditional content: Broadcast through a pre-determined, pre-arranged schedule with little if any consultation with audiences
   - On-demand content: Audiences have more control over when they attend to content
   - Digitized content: Through digital production & distribution methods, content can be available at any time of day
   - Wiki content: Audiences contribute to production and distribution of content
4. Media use changes
   - “24/7” media environment: Always able to be “on” and “connected”
   - Mobile technology: We can take our media “everywhere”
   - Assumes equal access to, and knowledge of, variety of advanced technologies
5. Media distribution changes
   - Internet enables a global dialog; content can be more fluid, dynamic and rapidly transmitted
   - Audiences increasingly active in media use and distribution, bypassing corporate control, through:
     - Viral marketing: Rapid information travel; Internet equivalent of ‘word-of-mouth’
     - Peer-to-peer (P2P): Individual file sharing
     - User-generated content: Digital media enables audiences to develop own content Media audience changes
6. Media profession changes
   - Traditional mass communication: One way communication from source - large, anonymous, heterogeneous audience
   - Converged audience communication: Interactive model, able to create and distribute own content, if desired

- ‘Producers’: How audiences use and consume contemporary media; can be both passive recipients and active creators
- Journalists and advertisers, for example, have increased competition with rapid changes in technologies and market place
- Citizen journalism: interactive relationship where audiences contribute to story content and/or correction (with no corresponding formal training in principles of journalism)

7. Attitude and value changes
    - With increased global, digital communication comes increased desire for transparency and methods for gaining trust
    - Confusion over traditional notions of privacy for individuals and companies
    - Behavioral targeting: Advertising technique drawn from information we readily share through our digital footprint
    - Cookies: Digital tracking of our web habits, automatically archived

**Interactivity**

Interactivity appears to be at the heart of modern media technologies, and understanding it in the context of networked communication has far-reaching ramifications for society. Indeed, according to Van Dijk (1999), the development of mediated interactive communication is a major structural change brought about by the communications revolution, made possible by the convergence or integration of telecommunications, data communications, and mass communications into a single medium.

The concept of interactivity has been identified as a key component of new media. "Interactivity" in the context of new media is defined by the Oxford English Dictionary as "enabling a two-way flow of information between it (a computer or other electronic device) and a user, responding to the user's input." People can engage with others through interactive media, whether it's people or organizations, making them active participants in the media they consume. Our engagement with the common issue of interaction is frequently used to measure interactivity, particularly in relation to technology. A lecture, for example, is not interactive until the audience asks questions or provides feedback in some form to the professor.

**How Does Interactive Media Work?**

Interactive media's goal is to engage and interact with the user in a way that non-interactive media cannot. Traditional media such as television and radio did not require active participation at first. Consumers become more passive as a result of these types of media, with no meaningful method to move through their experiences other than changing the channel.

That began to alter in the 1990s with the introduction of the internet. Consumers were provided numerous instruments through which interactive media was offered as technology progressed. The internet has evolved from a costly service that could only be accessed via dial-up to a wireless tool that can be accessed with the touch of a finger. Computers and laptops were commonplace in homes and offices, and mobile devices made connecting with media simple and handy.

**Examples of Interactive Media**

People are surrounded by interactive media in today's digital environment. You may find examples of this type of communication almost anywhere.

Interactive media includes social networking sites like Facebook, Twitter, and Instagram. Users can post images and information about themselves, communicate, and play games on these sites, which use visuals and text.

Another form of interactive media is video games. Players respond to visual and audio cues on the screen supplied by a computer program using controllers. You utilize apps or applications if you have a mobile device like a smartphone, which you almost certainly do. These types of interactive media can assist you in determining the weather, directing you to your preferred location, selecting and responding to news stories of interest, and allowing you to shop. The options are limitless.

Virtual reality, or VR, is another type of interactive media. VR provides users with a truly immersive experience, allowing them to immerse themselves in a world that is nearly identical to reality. The only difference is that we now live in a digital environment.

**The Influences of Interactive Media**

Interactive media has a very important role in today's world. Not only does it make people more active, but also it gives them the power to communicate with others

(people, companies, organizations) with whom they would normally have no contact. It also allows the free-flow and exchange of ideas and information.

Interactive media also has an educational component, making it a very powerful learning tool. It allows (and encourages) people—especially students—to become more active in their learning experience, more collaborative and to be more in control of what they're learning.

**ASSESSMENT:** Write your answer on a separate sheet of paper

**Test I:** Enumerate the following;

1. Give five (5) the characteristics of millennials.
2. State what are the advantages and disadvantages of millennials against the older generations when it comes to technological advancement and adaptability?
3. The benefits and implications of media convergence.

**Test II:** Essay; explain briefly

4. Explain how mediamorphosis enables us to see the inextricable and dynamic relationship between new media and traditional media formats.
5. What is media convergence?
6. Explain how media convergence leads to interactivity.

# MODULE 2
# FROM THE OLD TO THE NEW TECHNOLOGIES

## LEARNING OUTCOMES

At the end of this topic, the students are supposed to perform the following:

1. Summarize the transition of information technology from the old to the new;
2. Describe how modern society has changed in terms of information technology utilization
3. Extrapolate the advances of the new technologies of information technology in the future

## INTRODUCTION

Information technology is like a living organism—always growing and changing at a remarkable pace. We have seen how the technologies have evolved from decades ago, and how it affected humanity. We'll look at how society has also been affected by the transition from old to new technology in this topic.

After the overview of the advancements in information technology, we will look at how the modern world live with the presence of the key features in computers and communication today. This would lead to the emerging technologies that we expect to affect the modern world in the next years to come.

### Activity

#### Techno-guess It

The pictures below were used decades ago in sending, receiving and storing information such as, texts, pictures, and sounds. Can you name them?

Credits: sutori.com

Credits: Wikipedia.com

WIKIPEDIA

**Questions: 1**. Based on the pictures shown above, which of the gadgets have you witnessed change over the years?

_____

2. What were the changes that you have observed in the said gadgets?

_____

3. In your opinion, what is the main reason why technologies are improved by developers?

_____

**DISCUSSION**

**A. From the Old to the New**

Information technology has progressed further and further with humans. Computers of the 1970s, as illustrated in the first image above, made significant advancements. Messages were formerly sent using the "beeper," which looked like the image in the middle. As shown in the image to the right, today's flash drives were formerly known as floppy disks. IT has changed drastically in less than six decades.

This section of the curriculum would examine the evolution of information technology across time, focusing on advancements in computer technology and communication development and their effects on society.

Because of the necessity for society to communicate effectively, advancements in information technology have been made feasible. People needed to transmit their thoughts to specific people, at a specified time and in a specific location. As humanity figured out how to communicate at any cost, technical advancements made newer forms of media available, displacing others. The technological developments in computers and communication that enabled the shift from old to new are listed below.

**The Print Age**. Before this age, texts were handwritten by the scribes in the old days, which is called the manuscript age. This was how communication was until the German inventor Gutenberg invented the printing press in Europe around 1450. It was the significant technological upgrade that moved humanity from the manuscript era to the print era. When this happened, paper and bookbinding materials became affordable, leading to books being spread worldwide. People began to know how to read and write, which paved the way to more literate societies. It was the time when paper became cheaper, more printing presses became advanced and faster, and more reliable transportation technologies became progressive, which also paved the way for newspapers and magazines to be known as print media.

**The Audiovisual Age**. Wireless telegraphy or radiotelegraphy invented by Guglielmo Marconi, who transmitted telegraph signals by radio waves, opened the door for radio and television broadcasts. The concept of passing signals then prompted the enhancement to signal transmission and reception. Because of this, the vacuum tube technology was even upgraded, leading to televisions and radios being more reliable and compact. However, the upgrade did not end there as cable and satellite television competed with broadcast television. They provided access to more channels and service in areas where broadcast signal reception was unreliable, like in mountainous regions.

**The Internet and Digital Media Age**. The Internet and digital communication were made feasible by creating digital coding, microprocessors, and fiber-optic connections, among other technological developments. The World Wide Web was born out of rapid innovations in the 1990s, such as the invention of HTTP and HTML coding and Internet browsers.

The innovations that occurred in each technological period had a significant impact on society. People became literate due to the printing of books, which enabled them to develop abilities in obtaining knowledge for themselves rather than relying on what they hear from teachers or clergy. Consider the ease with which new ideas may be discovered during a time when books were widely available. Newspapers became a public arena for information sharing and debate, as well as a chronicle of society's daily existence. Before the invention of television, images were distributed to the general public through the publication of magazines. When television finally hit the market, people's homes became more informed, entertained, and well-rounded participants in the nation's affairs. Radio eventually became outmoded, and television provided superior entertainment to homes. Finally, the Internet arrived, bringing with it a broader and more collaborative form of communication. People can simply be involved in what is going on everywhere, at any time, in anyone's life. However, it has enabled the creation of user-generated material, which has raised concerns about the legitimacy of information transferred between individuals.

As new forms of media and information technology are developed, electronic media, in particular, has had to adapt. For example, when consumers underestimated radio, it lost advertising revenue as a result of television. As a result, the radio began to broadcast not just news and entertainment but also music. Radio also attempted to increase consumer demand by being portable and easy to carry along. Because cable and satellite providers offered many more channels, broadcast television had to

expand its programming. All of these communication technologies, including print, had to adjust to the digital age's arrival. When old media content gets digitized, making it more easily reproduced and sharable, copyright violations—piracy—become an issue.

## B. A Closer Look to the New Technologies of IT

The digital age became the gateway to more innovations in information technology. Computers have been restructured and reprogrammed to meet the needs of humanity to communicate efficiently, leading to their continuing upgrade until today. This part of the module will look at certain features that marked the new information technology's upgrades.

### Features of Computer Technology in the Modern Society

### Miniaturization

The miniaturization of electronic components has made it possible to build small portable and handheld computing devices that can be carried almost anywhere and at any time. Decades ago, a computer filled a room until it was reduced to a desktop complete with the CPU and other peripherals. Today, people are using an even more reduced type of computers in the laptops, netbooks, and smartphones used daily.

*Figure 1. The Michigan Micro Mote, the smallest computer dwarfed by a grain of rice.*

In 2018, the University of Michigan launched the smallest computer called the Michigan Micro Mote measuring just 0.3 mm—smaller than a grain of rice. Its applications range from glaucoma diagnosis, cancer studies, oil reservoir monitoring, biochemical process monitoring, surveillance, to tiny snail studies (Arbor, 2018).

A more usable miniature computer is the Raspberry Pi Zero launched on February 2012, which is a single-board computer without a monitor, mouse and keyboard (Cellan-Jones, 2015). It is being used in classrooms to help students in their programming skills. Its main selling point is that it is so cheap at $5 or more or less 2500 pesos in the Philippines.

*The Raspberry Pi Zero, compared to a card.*

Nowadays, we have the Google glass and the Fitbit which are examples of wearable computers. Google glass is a head-mounted computer while the Fitbit, is a wearable fitness technology that tracks steps, calories burned and sleep patterns. Users can easily upload data to the company's website for analysis. We also now have wearable jackets which help doctors to communicate while they are in their medical suits.

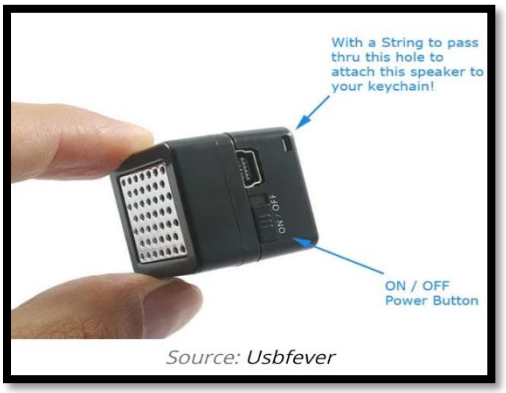
Below are more products of the miniaturization process in information technology:

Griffiths (2015) wrote how **Nipper** is the world's smallest emergency phone charger, which is 1.7cm across, just like a dice. It is designed to fit a keyring. Users can buy two AA batteries and insert them into the device, using it to charge their phone.

(https://www.vistacollege.edu/blog/careers/it/trends-in-information-technology-for-2019/)


This is the photo of a digital camera which could fit a computer chip and can be held by a single finger. It is capable of taking 2 megapixel images, weighs 10 grams and includes a microSD card. There is no mini screen so that when viewing images, users need to remove the SD card to view on a computer.

Source: *https://interestingengineering.com*




The tiny cube speaker can fit on the end of your finger, weighing only 482 grams and is compatible with iPhones, iPods and Nanos. It can be charged using a USB cable and can be played around four hours. It costs only 10 dollars or five hundred pesos in the Philippines.

**Affordability**

Computers have gone to the minute level, which means that there is a lesser amount of materials for its production and therefore a lesser demand for the materials needed to assemble one unit. As a result, processor costs today are only a fraction of what they were 15 years ago. A state-of-the-art processor costing less than US$1,000 or PHP 50 000 provides the same processing power as a vast 1980s computer costing more than $1 million or 50 million in Philippine peso of today's rate.

**Speed**

Computer technology's miniaturization did not just affect the affordability of computers. It also improved the processing speed and data storage capacity because computers can fit in a tiny space and are made from newer materials.

**Communication Development Today**

We once had the voice telephone system—a one-to-one communication medium. You could communicate with a relative, and they could share with you, and with special arrangements (conference calls), more than two people could communicate. Additionally, we had radio and television systems—multimedia systems that connected one to many (or mass media). For example, newscasters can share with you on a single medium, such as television, but you cannot communicate with them.

There have been three recent developments in communications:

**CONNECTIVITY**. Modern society has never been this connected before. Computers are connected and can provide online information access and/or sharing of peripheral

devices. With this expansion of computer networks, we can now join a university across the country by emailing and shopping abroad.

Connectivity enables human-to-human communication, the exchange of information between people, between people and machines, and the recognition and engagement of devices. Connectivity is essentially the world's nervous system, and it is rapidly expanding across the globe to the point of becoming ubiquitous.

**INTERACTIVITY**. Television programs in the past did not know our reactions to what they were showing on the screen. Today, however, we can easily comment on the news and programs we are watching by just going online. Thus, SMS voting and Internet polls became popular in the present times.

The interaction between technology and humans has become more two-way and interactive, allowing users to respond to information they receive and modify the actions of a computer. For example, an exchange or dialogue between user and computer, and the computer responds to the user's requests, similar to how video games are played. Increased interactivity enables users to participate actively rather than passively in the technological process.

Today's television networks, for example, allow viewers to immediately connect to the Internet and respond to broadcast anchors' news. In addition, the majority of application software today is interactive. According to De Vries (2018), "even automobiles demonstrate this advancement (interactivity) through in-car speech recognition systems that incorporate computers into the dashboard."

**MULTIMEDIA**. Radio was initially a two-dimensional medium (sound), but we now have "teleradyos," or hybrids of television and radio, such as DZMM and DZBB. Multimedia is a term that refers to technology that incorporates multiple media—such as text, images, video, sound, and animation—into a single integrated communication. For example, the development of the World Wide Web expanded the Internet's capabilities to include images, sound, and music in addition to text. Not only can you see visual media such as videos, photos, and animation on billboards, but you can also hear music. Others have improved multimedia by incorporating 3D technology, which allows for viewing 3D images, videos, and even audio. Who knows what senses will be catered to in the multimedia future?

**When Computers and Communications Combine**

Computers and communications began to converge in the 1990s, ushering in a new era within the Information Age. As a result, society today benefits from five additional developments.

**CONVERGENCE** is the quality wherein different kinds of communication technologies are coming closer to each other. It means one terminal device, where anybody can use a mobile phone or digital television for different services. It also means that industries started to fuse as well in one technology.

Computers, communications, consumer electronics, entertainment, and mass media are the industries. Convergence has resulted in multifunctional electronic products, such as televisions with internet access, cellphones that double as digital cameras, and a refrigerator that can send an email.

**PORTABILITY**. Portability, or mobility, in the 1980s, meant preceding computing power and convenience in exchange for a smaller size and weight. Today, however, we are on the verge of not having to make any sacrifices. As a result, small, powerful, wireless personal electronic devices are transforming our lives at a rate far greater than the personal computer ever did. Our Smartphones are an example of this. You can store an entire library of books on the memory card as pdfs and e-books. We can now have a nearly complete entertainment component, keeping playlists, movies, and video games with this phone. It can add a touch of pleasure to business, such as when you're in a bowling alley but still using wireless headphones to communicate with the other end via Google Meet, with your microphone muted and your camera turned off.

The risk this brings is that, unless we're careful, work will completely invade our time because the gadgets that we use for working are readily available anytime, and everywhere we go.

**PERSONALIZATION**. We have our digital footprints recognized by the Internet. This includes the comments in social media, Skype calls, app use, email records, and the cookies left by retailers and product review sites. This digital footprint helps companies target content at specific markets and consumers, helps employers look into your background, and helps advertisers track your movements across multiple websites. (https://www.internetsociety.org/tutorials/your-digital-footprint-matters/.)

Your digital footprint generates information tailored to your preferences—for example, programs that automatically scrape the Internet for recent news and information on the topics you specify. For example, have you ever wondered why your YouTube suggested videos are exclusively science fiction? This is because you visited websites devoted to science fiction. The Internet discovered that a portion of your digital footprint is fiction. That is also why e-commerce companies can send you messages about upcoming products based on your purchasing, usage, and other criteria. Alternatively, they will create products (cars, computers, and clothing) tailored to your preferences based on the websites you visit.

**COLLABORATION**. A more recent trend is mass collaboration, in which more—are rapidly transforming into an unprecedented collective force of power. Examples include file-sharing and photo-sharing websites, calendar-sharing services, collaboratively edited websites known as wikis, social networking services, and so-called citizen journalism sites. Ordinary people write their news items and comment on what others post—an interactive, democratic form of mass media. For example, pooled ratings enable individuals to create personalized internet radio stations or access Lazada's thousands of customer-generated product reviews.

**CLOUD COMPUTING: THE GLOBAL COMPUTER**. Not all agree on the precise definition of "cloud computing." Previously referred to as on-demand computing, grid computing, or software as a service, cloud computing means that you store your software or data on internet servers rather than on your PC or company's computers. You don't care where the servers are physically located; they're "in the cloud." The idea is that businesses could tap into computers as needed, similar to how they do now with the electric power grid, by distributing their computing workload across multiple data centers located throughout the world. The technology community hopes that businesses will find cloud computing more cost-effective and reliable than managing their PCs, servers, and software.

### C. The Future of Information Technology

We have seen how computer and communication technology has evolved from the manuscript age until today—the age where smart machines will create huge ripples in our society. As we face the future with this technology, let us look at the top emerging technologies from Trends in Information Technology for 2019 (https://www.vistacollege.edu/blog/careers/it/trends-in-information-technology-for-2019/).

## 1. Artificial Intelligence and Smart Machines

Ever heard of personal assistants called Alexa and Siri? They are voice-activated personal assistants that you can ask for your schedule, the nearest restaurants in the vicinity, and almost everything searchable on the Internet. These are examples of Artificial Intelligence, and they are present in nearly all fields. This technology allows less human effort to do several things like typing in search of a word's meaning in a dictionary or even finding people's addresses.

Intelligent machines take human decision-making out of the equation, so intelligent machines can instigate changes and bring forward solutions to fundamental problems.

Artificial intelligence in the workplace allows employees to use their abilities for the most worthwhile tasks and manage these intelligent machines for a more successful work system.

The military of the US uses the predictive software of artificial intelligence to reduce periodic maintenance and hone in on machine components that are more likely to deteriorate or get damaged. It is predicted that the civilians will use this predictive power of artificial intelligence in the years to come.

Have you ever seen the movie "Mission Impossible," where the spies hack into the CCTV cameras when they trace the footsteps of their target? That is Artificial Intelligence doing the work of scanning faces and comparing patterns of people in the CCTV databases. AI face recognition is beginning to help with missing people reports, and it even helps identify individuals for criminal investigations when cameras have captured their images.

## 2. Virtual Reality

How would you like to train as a surgeon, wherein instead of buying a cadaver to determine parts and operate on cases, you will just put on some gear where the system will show you the visual environment to train on? This is the beauty of virtual reality.

The software of virtual reality is making many industries prepared for various scenarios before entering them. Virtual training sessions for companies can cut costs, fill in personnel, and increase education.

Virtual-reality professionals will be in high demand in the coming years as technology catches on in various industries. Specialized fields are the main places where virtual reality has caught on, but experts project it will become more applicable to other technological advances.

### 3. Augmented Reality

Augmented reality is a more versatile and practical version of virtual reality, as it does not fully immerse individuals in an experience. The popular game Pokemon Go is just one game that uses augmented reality wherein the real-world images are just enhanced with images and sounds, thereby creating an altered reality.

### 4. Blockchain Data

Like the new cryptocurrency Bitcoin, blockchain data is a secure method that will continue to grow in popularity and use in the years to come. This system enables you to add new data without altering, replacing, or deleting any existing data. With the proliferation of shared data systems such as cloud storage and resources, it is critical to safeguard original data.

For transactional purposes, blockchain data enables a secure and transparent method of interacting with suppliers and customers. Private data is incredibly safe with blockchain technology, and the medical and information technology industries can benefit from increased protection.

### 5. Internet of Things

The Internet of Things (IoT) is a rapidly growing movement of products equipped with built-in Wi-Fi and network connectivity. Automobiles, homes, appliances, and other products can now connect to the Internet, enhancing indoor and outdoor activities. For example, the Internet of Things enables people to control music hands-free with a simple command and lock and unlock their doors remotely.

## APPLICATION FOR STUDENT PRODUCTIVITY

Hundreds of digital education technologies have been developed to give students more autonomy, enhance academic process administration, foster collaboration, and improve communication between professors and students. We've compiled a list of the most popular productivity apps.

**Edmodo**

Edmodo is a social network that integrates an educational tool that connects teachers and students. Teachers can use this one to create online collaborative groups, administrate and supply instructional materials, assess student performance, and interact with parents. Edmodo has over 34 million users who connect to build a more enriched, personalized, and aligned learning process that takes advantage of the opportunities provided by technology and the digital environment.

Tutorial link: https://tinyurl.com/3pe98yrb

**Socrative**

Socrative is a system that allows teachers to build exercises or educational games that students may complete using mobile devices such as smartphones, laptops, or tablets. It was created by a group of entrepreneurs and engineers that are passionate about education. Teachers can view the outcomes of the exercises and, based on this information, adapt following sessions to make them more personalized.

Tutorial Link: https://tinyurl.com/2rcbxn6p

**Google Meet**

Google has your back if you want video calls from a bit more established business. You may be familiar with free Google Hangouts calls, but today we'll talk about Google Meet. Although it's aimed at corporations and educators, Google is releasing a free version this month that could be a viable alternative to Zoom.

The meet is simply the G Suite equivalent of Hangouts for businesses. However, unlike Hangouts, video conversations can accommodate up to 100 people, and it includes features like screen sharing and live closed captioning for those who require them. Other new enhancements include the ability to block out surrounding keyboard sounds if you don't like hearing endless clacking.

Tutorial Link: https://tinyurl.com/c7mzuffx

**Messenger**

It's hard to imagine a digital corporation with a more publically shady privacy record than Facebook, yet that hasn't stopped them from getting on board with video chat.

The company's newest initiative is Facebook Messenger Rooms, which launched late last month.

Messenger Rooms appears to be a completely reliable service on its terms. It's free and open to everyone, just like the rest of Facebook. You may invite anyone to a call using a URL, even if they don't have a Facebook account, and rooms can hold up to 50 people. It's the most entertaining of the three apps we're discussing today, allowing users to experiment with AR effects to give themselves bunny ears and other accessories.

Tutorial Link: https://tinyurl.com/2zpx9z7e

**Zoom**

Zoom, without a doubt, has gained the most from the pandemic. Before March, many people had probably never heard of the business-grade videoconferencing program, but its rapidly growing user base shows that it has changed. Zoom is a great choice for individuals who miss their pals, but a few things to keep in mind.

Zoom offers both free and premium options, and if you use the free version long enough, you may decide to upgrade. Zoom meetings can hold up to 100 participants and last up to 40 minutes for free. When the time restriction expires, you may start a new meeting and distribute the link to everyone again, although this is inconvenient. It's worth mentioning that in the free edition, one-on-one sessions have no time limit.

Tutorial Link: https://tinyurl.com/terk78zf

**ASSESSMENT**

1. Graphic organizer of your design or choosing, show the advancements of information technology from the old to the new and its effects on society.

2. Write your reflection on what society has lost and gained in its IT transition and utilization.

3. After reading about the features of computer and computer technology in the IT era, what do you think will be the problems you will encounter as an individual living with this in your everyday life? How will you be able to stop or at least alleviate the negative effects?

**Creative Thinking.** Think like an investor. With your knowledge of how computer and communication technology have evolved, considering their features and the emerging ones, what features would you add to the existing ones? Focus on one technology in mind and think about what it can do in the future. Choose your medium of creativity (drawing, photography, scrap-art, etc.)

# MODULE 3: DARK AND LIGHT SIDE OF THE INTERNET

## THE DARK SIDE

### Lesson 1: Utopian and Dystopian Views of the Internet

### INTRODUCTION

The Internet has had a profound effect on the way modern society functions. Its meteoric rise has had a profound effect on numerous facets of how we learn and interact. It is self-evident that the Internet has the potential to transform how people interact and to expand access to information. While neither of these factors is known to have an effect on the social landscape, this has not deterred many from forecasting the effects of technology on society. The last decade has seen significant change on a global scale. All of this is made possible by the expansion of broadband internet connectivity and the availability of a diverse set of software and hardware tools. In other words, technology has become inextricably linked to the way people live. Technology has altered our way of thinking, communicating, and planning events with family and friends. This lesson provides context for several of the most contentious Internet issues.

### LEARNING OUTCOMES:

At the end of this lesson, you should be able to:

1. Know the usage of the Internet.
2. Enumerate challenges in making materials available in public through the World Wide Web.
3. Understand the utopian and dystopian views of the internet.
4. Analyze the impact of internet to the society.

### LESSON PROPER

Science and technological advancements have always elicited both hope and fear in society. Science fiction, by fusing the rigors of science with the imagination of fiction, contributes significantly to the expression of these emotions. At the dawn of the Internet era, there was great hope that the new medium's interconnectedness of information would result in a more diverse discussion agenda. It would be an ideal forum for discussion and dissemination, providing everyone with completely free and instant information.

**The World Wide Web**

The creation of the World Wide Web accelerated the Internet's growth in popularity. Tim Berners-Lee, the Web's creator, originally proposed the Web as a documentation system for CERN, the Swiss particle physics research center, but the development of simple-to-use Web browsers made the Web accessible to "ordinary" computer users as well. The Web is a hypertext system: a dynamic database of information that enables the linking of Web pages in any way. People can easily navigate this hypertext system using web browsers such as Chrome, Internet Explorer, Firefox, and Safari.

Two characteristics contributed to the Web's evolution into a global tool for information exchange. To begin, it is a decentralized system. Without the permission of a central authority, an individual or organization can add new information to the Web. Second, each Web object has a unique address. By referencing another object's address, any object can establish a link to another object. The address of a Web object is referred to as a URL (uniform resource locator).

**The Rise of the App**

Individuals are spending increasing amounts of time on smartphones and tablets and decreasing amounts of time on laptops and desktop computers. Utilizing Web browsers on mobile devices can be inconvenient, which is why businesses are developing mobile apps: software programs that are downloaded and installed on mobile devices. While some mobile apps operate independently, others connect to the Internet, enabling users to download and upload data. Mobile apps are becoming an increasingly popular method of Internet access due to their ability to optimize the use of a mobile device's resources (limited screen size, touch interface, etc.).

**How We Use the Internet**

With the advent of intuitive Web browsers and mobile applications, the Internet has become accessible to individuals with little or no formal computer training. Millions of people use the Internet for a variety of purposes these days. The following are a few examples of how people use the Internet.

1. We shop.
2. We socialize.
3. We contribute content.
4. We blog.
5. We help each other avoid traffic jams.
6. We learn.
7. We explore our roots.

8. We enter virtual worlds.
9. We control the Internet of Things.
10. We take humanitarian action.

**Censorship**

Censorship is the practice of attempting to prohibit or restrict public access to material deemed offensive or harmful. Historically, governments and religious institutions have exercised the majority of censorship. For instance, the Roman censors exiled poets Ovid and Juvenal for their works. Throughout the Middle Ages, the Inquisition prohibited the publication of numerous books, including Galileo Galilei's work.

With the invention of the printing press, censorship became a much more complicated issue. The printing press ended governments and religious institutions' virtual monopoly on material distribution to a large audience, and the increase in printed material resulted in an increase in the number of literate people. For the first time, private individuals had the ability to broadcast their ideas to a large audience.

The gradual separation of church and state in Western democracies left the government as the sole institution responsible for censorship. Religious institutions continue to play a significant role in determining what material should be accessible to the public in other parts of the world, such as the Middle East.

**Challenges Posed by the Internet**

Five characteristics of the Internet make censorship more difficult:

1. ***Unlike traditional one-to-many broadcast media, the Internet supports many-to-many communications.***
   While it is relatively easy for a government to shut down a newspaper or radio station, it is exceedingly difficult for a government to prevent an idea from being published on the Internet, where millions of people can create Web pages.
2. ***The Internet is dynamic.***
   Millions of new computers are being connected to the Internet each year.
3. ***The Internet is huge.***
   A team of human censors simply cannot keep track of everything that is posted on the Web. While automated tools are available, they are not impervious to human error. As a result, no attempt to control access to material stored on the Internet can be guaranteed to be completely effective.

4. ***The Internet is global.***
   National governments have limited authority to restrict activities happening outside their borders.
5. ***It is hard to distinguish between children and adults on the Internet.***
   How can an “adult” Web site verify the age of someone attempting to enter the site?

**Cyber Utopianism and Cyber-Dystopia**

**Cyber-utopianism** – he belief that online communication is emancipatory in and of itself – and that the Internet favors the oppressed over the oppressor – has accompanied the Internet since its inception, and was criticized by the Critical Art Ensemble as early as 1995. Utopians argue that cyberspace will facilitate communication on both political and non-political levels. The utopian position frequently argues that the communicative action that emerges as a result of this interaction can help limit the market's subversion of deliberative democracy.

While the Internet undoubtedly has an impact on society, it does not herald the dawn of a new era in human history. It is absurd to compare it to the industrial revolution, which displaced nearly everyone from the farm and deposited them in a radically altered urban environment. The "digital divide" is significantly easier to bridge than the divide between city and country in a society without telephones, televisions, or automobiles. If, on the other hand, the predictions are implausible, the humanist defense is superfluous.

The Internet can host a wide variety of social activities, as computer networking enables group communication across a range of topics, from work to education to hobby exchanges and the search for dating partners. These social interactions take place in word-based virtual worlds. The Internet's "written world" appears to be a place where humans and machines coexist peacefully.

Technical communities have been able to use the Internet to coordinate their demands for a more comprehensive representation of their interests. The new online politics has expanded the public sphere to include previously regarded as neutral issues that were left to experts to decide without consultation. This has resulted in the creation of a social and technical environment conducive to the recovery of agency in the traditional domain of politics, despite the Internet's increasingly centralized organization.

In contrast to the utopian perspective, which is concerned with the effects of the Internet on society, the dystopian perspective is concerned with the phenomenon of experience. Rather than viewing the Internet as a tool, the dystopian perspective emphasizes the medium's potential to affect communication in such a way that it may adversely affect communication practices and spaces. David Nye introduced the concept of cyber-dystopia in August 2007, which envisions a world made worse by technological advancements. Cyber-dystopias are based on the premise that the individual loses control, becomes dependent, and is powerless to halt change. Nye envisions a society in which the elite use technology to oppress and control large populations. Additionally, he portrays technology as a source of false hope, promising success and change but resulting in pain and inconvenience when those goals are not achieved.

The dystopian argument asserts that democracy erodes as society's social fabric fragments and people become increasingly isolated from one another. Along with the breakdown of strong bonds between society's members, many critics agree that the Internet will stifle connections between central and peripheral actors. Participants at the center of an information-based communicative structure will be less connected than ever before.

Today's Internet is no less replete with dystopian interpretations. Both privacy and content on the Internet have long been a source of social concern, serving as the focal points of two of the most heated debates about the potential negative consequences of this communication technology. There are numerous stories about cyberlurkers and the theft of personal information via the Internet. Internet users from all sectors of society face content-related concerns. At a recent conference, for example, an academic argued that, given the amount of indecent information and cybersmut on the Internet, it was debatable whether the Internet should be used for the publication or distribution of scholarly work. Similarly, the popular media have recognized the Internet's dystopian aspects.

Whether or not one views the Internet and all of its technological accoutrements as a panacea for democratic problems, the truth about the Internet's capabilities, like most truth, lies somewhere in between these utopian and dystopian interpretations. To grasp this technology's impact on society realistically, we must acknowledge the extreme readings of its effects for what they are: the result of a cultural lag between the spread of the Internet and the technology's adoption.

## ASSESSMENT

**Creative Work:** Create an infographic revealing the impact of the internet to your life, your family and environment in an A4 bond paper. Provide a brief explanation of your output.

**Agree or Disagree:** Is Google making us stupid or smart? Support your answer. Write it in a whole sheet of paper.

## LESSON 2: MEDIA ACCELERATION AND INFORMATION OVERLOAD

### INTRODUCTION

While the Information Age has benefited commerce, entertainment, work, communication, and education, it has also had serious negative consequences, including pornography, opportunities for hate groups to grow, sexual predators, and cyber bullies. However, for the average citizen, too much of a good thing is not always beneficial. Due to the vast amount of heterogeneous information available on the Internet, this medium may present difficulties for users. The difficulty of evaluating and selecting relevant information increases as the variety of sources and content available increases. As a result, information overload (IO) may occur. It has infiltrated our lives and is amplified exponentially when we are forced to sift through dizzying amounts of data in order to make simple daily decisions.

### LEARNING OUTCOMES

At the end of this lesson, you should be able to:

1. Understand the relationship of the usage of social networking sites (SNS), information overload, depressive symptoms, and well-being.
2. Identify examples and reasons of oversharing.
3. Discuss the relationship of media acceleration and information overload.
4. Identify effective strategies of dealing with information overload.

### LESSON PROPER

Adolescents described both positive and negative uses of social media in the journal of adolescence. Positive uses included looking for positive content (e.g., for entertainment, humor, or content creation) or connecting with others. Negative uses included sharing risky behaviors, cyberbullying, and comparing oneself to others. Adolescents elaborated on three distinct types of use, including "oversharing"

(frequent updates or sharing excessive personal information), "stressed posting" (sharing negative updates with a social network), and encountering "triggering posts" (Radovic et al., 2017).

Mobile social networking sites (SNS) are frequently blamed for perceived information overload, which has been shown to have a detrimental effect on an individual's well-being. According to research, the following findings demonstrated the cumulative effects of mobile SNS use, information overload, depressive symptoms, and well-being (Matthes et al., 2020).

1. YouTube use increased perceived information overload over time.
2. WhatsApp and Snapchat use only increased information overload for older adults.
3. Facebook as well as Instagram use were unrelated to information overload.
4. Information overload was significantly related to depressive symptoms over time.
5. Depressive symptoms decreased overall well-being over time.

In many ways social media does connect people-which overall is a good thing. It helps connect old friends, helps inform and gives sense of human connection when one is alone. It has given exposure for personalities who were surprisingly discovered by the whole world such as the famous “Carrot Man”, “Cabbage Man” and “Miss Everything”. Facebook Events allow consumers to make a movement in a quick and transparent way. Facebook Live can show an event or happening via live streaming video to the social media user’s network. While this technology is amazing and does bring people together, there have been some unanticipated occurrences with live streaming. Most notably, Diamond Reynolds, the girlfriend of Philando Castile who was fatally shot by police in 2016, posted a Facebook Live video showing the social media world a glimpse of the effects of the tragedy on a community and their loved ones. Of course, an argument can be made that this exposure made possible by live video and social media can help bring awareness to some important social problems.

Social media is a very useful tool. However, it, like every other tool people use in life, has its own set of risks. The dangers posed by the information people post and obtain on social media deserve special attention.

When someone disclose too much personal information with the public or a stranger, they are said to be oversharing. It can happen online as well as offline. It is, however, a significant issue on social media platforms, which make "posting yourself online" simple.

**Examples of Oversharing**

People overshare on social media in various ways. Here are a few examples:

- Posting intimate details about your relationships, friendships, family matters, or personal drama.
- Using social media as a soapbox or a way to vent your emotions.
- Posting photos or videos of things meant to be private.
- Posting embarrassing photos or videos of yourself or others.
- Regularly posting your meals.
- "Checking In" to everywhere you go.
- Posting about whatever you are doing at a given moment, multiple times a day.
- Sharing too much info about and photos of your children.

**Why Do We Share Too Much?**

For starters, excessive use of social media can lead to oversharing. Here are a few more reasons why people may overshare on the internet:

1. It is encouraged by social media.

Social media sites invite users to share everything about their personal lives. With the press of a button, you can submit a status update, a photo, an event, or a "check-in." Unfortunately, this can lead to FOMO, or fear of missing out, an uncomfortable emotion. FOMO is a lingering feeling that other people are doing things without you, or that things are going by without you.

Other people's lives on social media profiles can give the idea that their lives are so much better than ours. After all, we can peer into their lives in ways we couldn't previously. People may check on and look at other people's vacation images, then wonder why their lives are so monotonous. As a result, they may feel insecure about their own life. They may feel compelled to post their own "highlights" whenever possible in order to outdo their friends and appear "interesting."

2. To Let Go Of Negative Emotions And Stress

We've probably all seen someone's angry Facebook tirade at some point. It can be tempting to "spread your bad laundry" on social media because it provides everyone a voice and a place to express it. That temptation did not exist before to the internet.

3. To Get Rid of Their Anger

"Oversharing is fostered by our fears," according to this Huffington Post article. We are overly concerned with what others think of us and try to compensate for what we

believe others are judging us for. As a result, some people share far too much information.

4. To Attract Attention

Many people aspire to get their 15 minutes of celebrity. Getting likes, comments, and shares, as well as that extra push of attention, might make them feel famous. This might lead to a desire to share items that they know will attract attention, even if they are "too much."

Aaron Elliott listed six particular risks that can happen to anyone because of the information they post on social networks.

1. Social Engineering

It is the skill of persuading someone to provide sensitive information. The types of information these criminals seek can vary, but when you're targeted, they're usually trying to trick you into giving them your passwords or bank information, or into gaining access to your computer so they can secretly install malicious software that gives them access to your passwords and bank information as well as control over your computer. It can happen even if thieves have only the most basic information available to them through social media. However, the more information people share about themselves on the internet, the more well-crafted social engineering schemes will become. (Webroot)

2. Identify Theft

It is the intentional use of another person's identity, usually to gain a financial advantage or obtain credit and other benefits in the other person's name, and often to the prejudice or loss of the other person. (Wikipedia)

3. Cyber Bullying

It's also known as cyber harassment, and it's a type of bullying or harassment that takes place via the internet. As the digital environment has grown and technology has evolved, it has become more widespread, particularly among youth. Bullies might utilize what people write on social media to further their schemes.

4. Damaged reputation

It's possible that posting content about drinking, illegal substances, or profanity will harm your reputation. These can not only harm your reputation, but they can also deter recruits.

5. Targeted Ads

Targeted advertising is a type of advertising that is directed towards audiences with specific characteristics depending on the product or person the marketer is promoting, including online. Preferences that are posted and listed may result in targeted advertisements. (Wikipedia)

6. Real-world Threats

Posting upcoming activities on social media could expose you to real-world risks such as burglary or stalking.

**How to Avoid Oversharing?**

Oversharing has the potential to become a dangerous habit. It is, nevertheless, rather straightforward to break that habit. Here are a few pointers on how to avoid it.

1. Do not post if you are enraged.

Anger can cause you to speak things you wouldn't normally say. It can cause you to lose focus on what you're saying. Angry posts could also transmit a message that you didn't intend to send.

2. Pick and choose.

Take some time to consider whether sharing something on social media is actually a smart idea. When it comes to sharing information on social media, use your best judgment. Determine whether posting it is too intimate, private, or contentious. Also, consider whether this information could be used against you.

3. Keep in Mind That Social Media Is Not Your Life...

Or, for that matter, anyone else's

Social media is a valuable resource. But be wary of allowing it to take over your life. You shouldn't feel obligated to "prove" yourself on social media. In actual life, most individuals aren't as concerned with other people's personal lives as the internet would have you believe. Social media does not provide a complete view of other people's life.

It's more of a highlight reel than anything else. Rather than living vicariously through these websites, call your friends or family and spend some time with them.

4. Take a break for a while.

Finally, if you believe that these sites are impacting your mental health, try "disconnecting" from the internet for a bit and doing something else.

**Information Overload and Coping Strategies**

The majority of social media platforms do not encourage significant, timely debate. They fixate myopically on the information of the moment—the news—and inundate their customers with irrelevant data, robbing them of the time they need to think and create important, nuanced opinions.

The majority of news is sent in the form of chronological feeds. Current news is published on a regular basis by newspapers, periodicals, and journals. The news is carried live on television and radio as it happens. Trending topics are listed on websites like Reddit and Twitter, while Facebook feeds display your friends' updates in real time.

Because there is simply too much information to digest at any given time, we must compartmentalize information through feeds. The rate at which people consume news has accelerated in tandem with the pace of news. News feeds sift through the clutter, bringing together the most significant information from around the world. Despite this, according to a Pew poll, no single news audience is up to date on current events.

Students and other people have a difficult time dealing with information overload. There is simply a tremendous amount of data involved in many tasks and daily activities. It can feel impossible to stay on top of things at times. The ideas below can help you manage your overload by simplifying what comes your way and offering you strategies for dealing with the rest.

**Information Overload Coping Strategies**

1. News Avoidance
2. Reducing the Number of Information Sources
3. Reducing Information Volume
4. Filtering News Information Based on Relevance
5. Filtering Based on Privacy Concerns
6. Source and Content Personalization and Customization
7. Selecting “pull” over “push” media and topics\
8. Relying on socially curated information
9. Categorizing and sorting news topics, sources and channels
10. Seeking independence from, institutional media

**ASSESSMENT**

Experiential Task. Are you a netizen? How often do you engage yourself in social media? Below are some social media sites that people most frequently visit (Pew Research Center, 2015). Answer the following questions based on your understanding (and your usage experience) of these sites. Write your answer in a separate sheet of paper.

| |  Facebook |  Twitter |  Instagram |
|---|---|---|---|
| How often do you use the site? | | | |
| Always-7days/week; Most of the time-4-6/days; Sometimes-1-3days/week; Never | | | |
| Who do you think are using these social sites? | | | |
| What information does the site give you? | | | |
| What does it do? | | | |

**Reflection Paper:** Think of 5 HOT action words that will reflect on how you should handle the information you send and receive over the internet. Define each word operationally and reflect how it is applicable to you.

**LESSON 3: INTERNET ADDICTION AND ISOLATION**

**INTRODUCTION**

The internet is defined as “a system architecture that has revolutionized communications and methods of commerce by allowing various computer networks around the world to interconnect” (Kahn & Dennis, 2020). It developed in the 1970s at the United States. It wasn’t until the early 1990s that it became visible to the public.

This year (2020), an estimate of 4.5 billion people who have access to the internet has been listed. It has transformed from being a ‘want’ to becoming one of the necessities for daily living. However, even if the internet has provided ease and connected people through the web, it still has its own pros and cons. Addiction and isolation is one disadvantage the people have to be wary of and thus it is deemed important to be discussed in this Module.

## LEARNING OUTCOMES

1. Identify the different categories of internet addiction;
2. Determine causes of internet addiction and isolation;
3. Illustrate understanding in preventing antisocial internet behavior

## LESSON PROPER

### Internet Addiction

According to Hartney (2020), researchers have already formulated the diagnostic criteria of internet addiction but it is not yet an officially recognized mental disorder. There are at least three types of internet addiction specified by Hartney such as: 1)video game addiction; 2) cybersex or online sex addiction; and 3) online gambling addiction.

***1. Video Game Addiction***

- It is a compulsive or uncontrolled use of video games, in a way that causes problems in other areas of the person’s life.
- It is often considered as a form of computer addiction or internet addiction and has been an increasing concern for parents because it has become a commonplace and are usually targeted at children.
- It includes computer games, console games, arcade machine games, and even cell phone, including advanced calculator games.
- It can be embedded in social networking sites, such as Facebook and Google.
- One can be said to have a video game addiction if one has spent a considerable amount of time in video gaming and if it takes over as the person’s main way of coping with life, foregoing and neglecting other important areas of life.

### *2. Cybersex or Online Sex Addiction*

- It describes a group of activities that has one critical thing in common – taking place over the internet or another electronic work.
- Simply saying, it is fundamentally virtual and does not involve person-to-person physical contact.
- It can be an activity for one, two, or even more, and can be anything from sending a sexy text to exploring the use of sex toys.
- Although the interaction is purely virtual and has no risk of transmitting STDs, one must note and should be aware of the possible loss of privacy if the materials they share are passed on to others. Cybersex can lead a person to have online scandals which can possibly infuse loss of self-confidence and to some extent, depression. Furthermore, it is important to be aware of any local laws that may be relevant to cybersex activities.

### *3. Online Gambling Addiction*

- In order to fully understand the meaning of *online gambling addiction*, let us first determine the meaning of *problem gambling*.
- *Problem gambling* involves the continued involvement in gambling activities, despite the negative consequences. It is any gambling that disrupts your life. If one is preoccupied with gambling, spending more and more time and money on gambling, or gambling despite having serious consequences, then that person has gambling problems or is involved with problem gambling.
- *Gambling addiction is* then an impulse-control disorder in which victims cannot control the impulse to gamble despite the fact that it is causing problems in their lives, including the lives of their loved ones.
- *All gambling addicts are problem gamblers, although not all problem gamblers have gambling addiction.*
- Many things contribute to gambling addiction including but is not limited to biological, genetic, and environmental factors.
- Although this is defined in general, online gambling addiction happens when the person is gambling online or through the use of the internet. The same gambling characteristics and behaviour patterns can be seen on a general gambling addict as well as an online gambling addict.

**Categories of Internet Addiction**

Another author, Hing Keung Ma (2011), categorized internet addiction into five different categories such as:

1. ***Cybersexual Addiction*** – the addicts spend a lot of time on adult websites for cybersex and porn.
2. ***Cyber-relationship Addiction*** – the addicts involve themselves heavily in online relationships.
3. ***Net Compulsions*** – the addicts exhibit obsessive gambling and shopping, also called as compulsive online gamblers and shopaholics.
4. ***Information Overload*** – the addicts display compulsive web surfing and database searches.
5. ***Computer Game Addiction*** – the addicts are obsessive online game players.

**Symptoms (Hartney 2020)**

1. *Excessive Use of the Internet*
2. *Withdrawal* – too much dependence on the internet that shows anger, tension and depression when internet is not available
3. *Tolerance*- wanting and needing more and more computer-related stimulation
4. *Negative Repercussions* – (e.g. social interaction suffers, academics suffer, sleep deprivation)

**Characteristics of Internet Addicts (Hing 2011)**

1. *Excessive Use of the Internet* – spends more than triple number of hours in internet use compared to non-internet use
2. *Obsessive Thoughts About the Internet*- preoccupied with the internet (thinks previous online activity and anticipates next online session)
3. *Pleasant Feeling in Internet Use* – having a lot of fun by using internet
4. *Tolerance* – needs to use the internet with increased amount of time in order to achieve satisfaction
5. *Diminished Impulse Control* – tends to lose control of own behaviour (e.g. unable to cut back or stop internet use)
6. *Withdrawal* – refers to unpleasant feelings when the internet is being stopped or cut down.

7. *Impact on Daily Life* – sometimes risk loss of significant relationships, educational or career opportunities because of the internet
8. *Parental and Family Interactions – spends less time with parents and other family members.*
9. *Friendship and Romantic Relationships – less friends and romantic relationships*
10. *Health Problems – less healthy and less willing to seek medical attention*
11. *Academic Performance – grades negatively related to internet use*
12. *Lonely Character*

**Internet Isolation**

Addiction can bring about isolation – being disconnected to the real world due to internet addiction. This makes a person antisocial and might cause delinquent internet use. Hing (2011) lists major antisocial and delinquent behaviour of adolescents such as: 1) general deviance (theft, alcohol use, cheating on exams, and coming to school late; 2) drug use; 3) defying parents; 4) antisocial acts against one's teachers or school authority; 5) socially undesirable sexual activities; and 6) aggressive or hostile acts (bullying and fist fighting). These six listed antisocial behaviour are the ones adolescents do in the real world. The following then are regarded as antisocial internet behaviour:

1. *Illegal Downloading* – downloading film, music or video clips without permission
2. *Pornographic or Aggressive Information* – obtaining pornographic, obscene, or aggressive materials through the internet
3. *Cyberbullying* – use of internet to bully others especially in social media
4. *Cheating Behavior* – use of internet cheat others
5. *Online Gambling* – gambling online or taking part in online casinos (includes online poker, online sports betting, online lotteries, and online bingo)

The antisocial behaviour of adolescents online and offline are both serious matters that need to be attended to. Although online antisocial behaviour is virtual, the impact on adolescents is real and affects them physically and emotionally. This brings online/internet isolation to a serious note and must be dealt not only virtually but also behaviourally.

**Prevention of Antisocial Internet Use**

1. Self-respect or self-esteem

2. Respect for others
3. Social and civil responsibility
4. Global responsibility and world citizenship
5. Self-efficacy
6. Time management
7. Self-discipline or self-control

**SUGGESTED READINGS**


1. LaRose, R., Lin, C.A. & Eastin, M.S. (2003). Unregulated Internet Usage: Addiction, habit, or deficient self-regulation?. *Media Psychology*, 5(3), 225-253.
2. Kim, J., LaRose, R.,& Peng, W. (2009). Loneliness as the cause and effect of problematic internet usage: The relationship between internet use and psychological well-being. *Cyberpsychology & behaviour,* 12(4), 451-455.


**ASSESSMENT**

**Illustrative Conception**:

In a separate sheet of paper, do the following:

1. Using a Venn diagram, compare and contrast the characteristics/categories of internet addiction according to Hartney and Hing.
2. Choose one concept from the lesson and explain your understanding of the chosen concept in no less than 100 (own) words.

**Self- Evaluation and Creation:**

Think of an object that would best represent yourself and your internet behaviour. Print a picture of that object and paste it in a paper. At the back of the paper provide description as to why that object represents your internet behaviour. Furthermore, include interventions that you would most likely use to balance your internet behaviour.

## LESSON 4: SELECTIVE EXPOSURE AND POLITICAL POLARIZATION

**INTRODUCTION**

The internet has introduced us to different websites as well as social media platforms that show different topics, perspectives, and situations. Social media platforms which are most known to the world include Facebook, Instagram, and Twitter. Google, which is one of the most common search engines, may also provide an individual limitless information depending on how well an individual extracts this information. As these social media platforms are currently on the rise, people using the internet highly rely on these for information acquisition as well as information

dissemination. However, since these platforms are easy to use and publicly available, some individuals use it to create false information which can produce a bad impact to the public. An example of such impact would be political polarization. Selective exposure theory is one of the theories that is believed to explain the belief or inclination of a certain person to a certain information or in some cases, political polarization.

## LEARNING OUTCOMES

1. Define selective exposure and political polarization
2. Explain the relationship between selective exposure and political polarization

## LESSON PROPER

### Selective Exposure

- is a psychological theory, which is usually used in media and communication, that refers to one's tendency to favour information that reinforces the individual's pre-existing views while avoiding other information that is in contradiction of one's own. It is also called "confirmation bias."

### Political Polarization

- *Polarization* happens when people become divided into contrasting groups. It usually refers to how people think, especially when two views emerge that drive people apart, like two opposing magnets.
- *Political polarization* then refers to diverging political attitudes to ideological extremes. The most concrete example for this is the vast and growing gap between the liberals and conservatives or Republicans and Democrats (A defined American feature).

### Role of Social Media in Selective Exposure and Political Polarization

In order to understand the role of social media in selective exposure and political polarization, please read the excerpt in the following page.

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***The Success of Socializing the News***

Recognizing the extent to which people enjoy sharing news content, social media services developed technology designed to make it as easy as possible to endorse news content. Today these sharing services are deeply integrated into most major news websites— endorsing a story on aggregators

like Reddit, Tumblr, and Digg, or on social networking sites like Facebook, LinkedIn, and/or Twitter is now as simple as clicking a prominently displayed icon accompanying a news story (see NYTimes.com, WashingtonPost.com, FoxNews.com, Google News, and nearly every U.S. newspaper publisher website). Users of social media aggregation websites and mobile applications can see a list of items sorted by aggregated recommendations, while users of social networking sites see these stories as status updates from their contacts, all as part of the basic design of these platforms.

There is substantial evidence that this strategy of attracting users via social media is succeeding. A 2011 study analyzing Neilsen data found that Facebook was the fastest growing source of referrals to major news websites, while news aggregators account for an even larger share (Pew, 2011a). Furthermore, this trend seems likely to continue: Television and print media's role in conveying news is declining in favor of online/mobile media, and the internet now constitutes the main source of news for a majority of Americans who are under 50 (Pew, 2011b). With more than 800 million active users, of whom 200 million are American (Facebook, 2011), sharing over 25 billion web articles each month (Facebook, 2010), the relationship between social media and news consumption must now be considered to be a fundamental part of our media environment.

### *How Social Media Shape the Media Environment*

Social media shape the modern media landscape in two ways. First, because these websites and mobile applications display content from different news providers in a single location, users no longer need to select a news source; instead they select the story itself. This represents a fundamental break from past modes of news consumption wherein people habituated themselves to a trusted source—instead social media users can select news from a wide range of sources deemed by friends or fellow internet users to be interesting or important. This suggests that habitual de facto selective exposure (Sears & Freeman, 1967) will be substantially less common in the context of social media.

Second, these developments allow people to utilize endorsements to assist in their selection of content even when they visit a traditional news source website directly because social recommendations also appear on the story's

originating website. Nearly every news provider features a list of aggregated story popularity (the “Most Emailed” or “Most Read” lists) on its home page, and these lists are even more prominent in smartphone applications. Furthermore, these organizations now embed stories recommended by a user’s Facebook friends directly in homepage of the originating website. This enhances the ability of individuals to select socially relevant content when presented with an overwhelming number of news stories from which to choose (there are usually over 200 links on the NYTimes.com homepage).

(Source: Messing, S., & Westwood, S.J. (2014). Selective exposure in the age of social media: Endorsements trump partisan source of affiliation when selecting news online. *Communication research,* 41(8), 1042-1063.)

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The excerpt proves that there is a great impact of social media in political polarization. Unlike in the old days, most avenues for news and other articles can now be found in the social media (e.g. facebook, instagram, twitter, and other websites). However, in order to gather more views and subscribers, some media personnel are sensationalizing their articles which (most of the time) results in misleading statements and misleading understanding of the reader. The public, especially those that practice selective exposure, is then driven to become part of the political polarization. “Fanatics” and “non-fanatics” sometimes lose their rational thinking and are driven by their own bias which then creates conflict between the two opposing sides. This is the danger of selective exposure especially that the social media nowadays can be full of internet trolls that might feed wrong information to its readers. It is then advised to exercise utmost caution and rationality in reading online articles and be wary of “fake news” as the internet can be flooded with those. One must make sure to extract information from reliable social media avenues to prevent “confirmation bias.”

**SUGGESTED READINGS**

1. Knobloch-Westerwick, S., & Johnson, B. K.(2014). Selective exposure for better or for worse: Its mediating role for online news’ impact on political participation. *Journal of Computer-Mediated Communication, 19(2),* 184-196.

**ASSESSMENT**

**Where Do You Stand?:** Create a reaction paper in no less than 500 words explaining how selective exposure and political polarization was reflected during the Covid-19 crisis in the Philippines. Write this in a one whole sheet of paper.

# MODULE 4
# HUMAN HEALTH IN THE INTERNET AGE

## INTRODUCTION

Technology is adored by all. In almost every aspect of our everyday lives, we use technology. We're spending more and more time in front of our phones, desktops, tablets, and laptops. Many of us have come to appreciate and rely on technology for its convenience, but many of us are also concerned about the influence it may have on our health. Can too much screen time cause serious health problems?

If you're concerned about the impact of screen time on your health and well-being, now could be a good time to think about how your beloved gadgets might be doing more than just keeping you connected and engaged.

## LEARNING OUTCOMES

At the end of this topic, students should be able to:

1. Measure the amount of self-exposure to gadgets;
2. Identify the different health hazards of over-exposure to technology gadgets;
3. Weigh in the importance of technology and its impact to human health; and
4. Discuss how we could best protect our health from the danger or risk of technology.

**Activity:**

Let’s dig in. Please use a separate sheet to answer the questions below. Check the appropriate box as to how many times you access the social media. The number of times pertain at least 30 minutes of exposure per count.

| No. | Questions | Never (0) | Almost never (1) | 1-4 times a week (2) | 5-7 times a week (3) | 1-5 times a day (4) | 6-10 times a day (5) | More than 10 times a day (6) |
|---|---|---|---|---|---|---|---|---|
| 1 | How often do you access your social media account? | | | | | | | |
| 2 | Instead of phone text messaging, how often do use your messenger to communicate with your contacts? | | | | | | | |
| 3 | On average, how often do you share | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | information, photos, videos, shout outs or posts in the social media | | | | | | | |
| 4 | How often do you play online or offline games in your phones or in computers? | | | | | | | |
| 5 | How often do you access the internet, for other purposes other than social media? | | | | | | | |
| Your Total Score | | | | | | | | |

Count your total score by adding the equivalent value of your answer from 0 to 6 for questions 1 to 5. Interpret your score as follows:

| Score | | Interpretation |
|---|---|---|
| 0 to 10 | - | Not exposed to radiation |
| 11 to 15 | - | Slightly exposed to radiation |
| 16 to 20 | - | Considerably exposed to radiation |
| 21 to 30 | - | Highly exposed to radiation |

If you scored from 21 to 30, this means you were consuming at least 6 hours screen time a day, or 42 hours a week. According to CareWell Urgent Care site, people with this extended screen time tend to develop computer vision syndrome with symptoms: strained, dry eyes, blurred vision, and headaches.

**LESSON PROPER**

According to statistica.com, 44.3% of Filipinos are mobile phone internet users, which is expected to increase to 60% in 2021. Technology is considerably what's in today. It offers a great advantage to every individual of varied age groups. This digital age allows us to be more connected to our loved ones from far places. For the business side, markets even reach as far as they can go through online selling. Before, a small food store at home can only cater to buyers from the neighborhood. But because of technology, deliveries now reach nearby towns and provinces, thus increasing business profits.

**Technology and Health Care**

Technology is transforming global healthcare for almost all individuals in this world. For example, consider how the digitization of patient information has made life easier for clinicians, making it easier than ever to capture real-time patient data, search for personal health trends and patterns, and research patient history. As a result, doctors, nurses, and other health professionals could now offer faster and more accurate diagnoses, allowing them to spend more time with patients one-on-one.

From smartphone apps that send medicine reminders to wearables that can help monitor and prevent health concerns before they become life-threatening, the system offers patients more ways to manage their health on their terms.

**Technology and Cancer**

While the digital age provides more significant benefits, scientists say that it harms human health. Mobile phones have long been suspected of being linked to the development of brain tumors. Cellular phones release a type of radiation known as radio-frequency energy or radio waves is causing concern. Radiation from X-ray machines is known to increase cancer risk, prompting experts to wonder if cell phones are similarly dangerous. X-ray machines, on the other hand, emit high-frequency radiation, while cell phones emit low-frequency radiation. Given how we hold phones to our ears, the head is naturally the most sensitive to any potential radiation risk. More research is needed to determine whether cell phone use is linked to the development of brain cancer. At this moment, there is evidence for and against a link between cell phone use and brain cancer.

**Technology and Road Accidents**

In addition to the cancer risk, cell phones can cause distraction during activities, dangerous. For example, cell phone distraction is dangerous when driving, including talking on the phone and sending text messages. According to a study done abroad, 40% of persons asked admitted to chatting on their phone while driving at least a few times each week, and 13% admitted to sending messages while driving.

**Technology and Obesity**

Overweight, obesity and the associated health hazards have become a serious national health concern, with dramatic increases observed in the last 20 years. In

addition, our expanding use of technology, particularly in our free time, is thought to be one reason for our more sedentary lifestyle.

We are less likely to get up and move in our free time as we spend more time conversing with our cell phones, monitoring social websites, playing video games, and other such activities. Obesity is linked to this type of sedentary behavior or a lack of enough physical activity. Physical inactivity has been connected to obesity in studies, with some research examining the impact of TV viewing and other communication-based technology on inaction. Despite the difficulties in proving a direct link between media use and physical inactivity in research, technology remains a source of suspicion. The simple line is that spending more time in front of a screen implies spending less time moving.

**Technology and Vision Problems**

Computer Vision Syndrome, also known as Digital Eye Strain, is a collection of vision and eye problems caused by continuous usage of a computer, tablet, e-reader, or mobile phone. When seeing digital screens for long periods, many people can develop eye irritation and eyesight issues. The length of time spent in front of a digital screen appears to enhance the level of discomfort.According to aoa.org, the most common symptoms associated with Computer Vision Syndrome (CVS) or Digital Eye Strain are

- eyestrain
- headaches
- blurred vision
- dry eyes
- neck and shoulder pain

These symptoms may be caused by:

- poor lighting
- glare on a digital screen
- improper viewing distances
- poor seating posture
- uncorrected vision problems

The extent to which people have visual symptoms, according to eye experts, is often determined by their visual ability and the amount of time they spend looking at a digital screen. Uncorrected vision impairments such as farsightedness and astigmatism, insufficient eye focusing or coordination abilities, and age changes in the eyes, such as presbyopia, can all lead to the formation of visual symptoms using a computer or digital screen device. Below is the 20-20-20 rule recomme nded by eye experts to prevent digital eye strain.

Source: https://www.aoa.org/

**Beyond Physical Health**

Emotional and Psychological Consequences Beyond Physical Health Driving hazards and obesity may be more visible indicators of technology's impact on our health. Still, screen time may also bring personal risks that go beyond the physical, such as our increased reliance on technology altering our personal and familial connections.

The impact of our "ultra-connected" lifestyle on our personal and family connections is discussed by experts. They claimed that our interactions with technology could have an effect on our relationships with one another, stating that "as screen time increases, direct human-to-human engagement decreases proportionally." Most of us have witnessed what experts call the "Vanishing Family Trick"— a phenomenon in which family members leave a gathering one by one to check e-mail, send a text, or engage in social media and online activities. Families may connect on a deeper and more rewarding level if they switch off their home Internet connection for an entire weekend. Because everyone in the family is focused on each other rather than their gadgets, more work gets done, and enjoy bonding moments occur during programmed brownouts or power interruptions. Though we agree that the move to offline weekends was initially difficult, as families began to appreciate having more attention and time for one another, we could develop family relationships and focus on the needs of family members.

**Cyberstalking and cyberbullying**

Another social and emotional issue that our connected culture raises is the use of cell phones and the Internet to emotionally harm, harass, or humiliate someone by distributing hostile comments or embarrassing images. This tendency, known as "cyber-bullying," maybe highly harmful and has even been linked to suicides. Furthermore, the ease with which we can communicate and obtain knowledge about one another isn't always put to good use. Personal information can become up in the

wrong hands, and you could be contacted or "cyber-stalked" by someone you don't want to be associated with.

**Balance**

How we utilize technology, like so many other health-related decisions, is ultimately a personal choice. We all know the advantages and opportunities that being connected has provided us. However, with an understanding that technology may pose certain risks and limit specific innate abilities (such as bonding and sharing with others), we can choose to balance our use of technology with time away from the screen for improved safety and health, as well as perhaps deeper bonds with those we care about.

**ASSESSMENT**

Activity 1:

Answer the questions below. Please use separate sheet for your answers. Use A4 size for your document, and save it with this filename format: LASTNAME-COURSE-SECTION-GE113. Refer to the faculty in-charge on where to send your answers.

1. What gadget do you or your family owns? How much time is your total self-exposure to this gadget? What can you say or reflect on this?
2. What are the different health hazards caused by over exposure to gadgets? Which of these health problems have you experienced? What did you do to overcome?
3. Share a situation in your life where you think you have benefited from using gadget or technology. Give also one situation where you experience the hazard it caused. What can you recommend on the balance of using gadget?
4. How do you think you can best protect yourself from the hazard of using gadgets or technology? What possible program or project can you recommend to the government or the university to take action in order to help its students or citizens?

Activity 2:

Listed in the first row of the table below the link of technology to its possible effect on the human health. List down the first 5 terms that come into your mind for each Technology and Health Concerns listed in each column.

| No. | Tech and Cancer | Tech and Road Accidents | Tech and Vision Problem | Tech and Emotional and Psychological Effect | Tech and Obesity | Tech and Cyberbullying |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

Prepare to discuss or tell a story regarding those listed terms.

# MODULE 5
# POLICING THE INTERNET

## LEARNING OUTCOMES

At the end of the Module, the students should be able to:

1. Recognize one's and others' safety when sharing information using the internet.
2. Determine the dangers of the internet;
3. Integrates one's and others' reputation when using internet.
4. Promotes awareness in the use of social networking sites.

## INTRODUCTION

The internet, truly, is a powerful tool. Anybody can use internet to promote your business, gain new friends, and stay in touch with the old ones. It is also a source of entertainment through games, online communities, and everything in between. Like most things in this world there is always "other side of the coin." The internet is one of the most dangerous places, especially if you do not know what you do. But there is no need to worry; it is never that late. Hopefully, by the end of this lesson, you can consider how you go about using the internet.

### *Activity 1*

Most of us use the internet every day. Sometimes, we do not pay attention on how much information we share online. Below is a questionnaire about how much information you have shared so far. Please use another paper to work on the activity (DO NOT write anything on the questionnaire below).

How safe are you?

| Type of Information | Shared | Not shared |
|---|---|---|
| 1. First Name | | |
| 2. Last Name | | |
| 3. Middle Name | | |
| 4. Current and Previous school(s) | | |
| 5. Your cell phone number | | |
| 6. The name of your mother and father | | |
| 7. The name of your siblings | | |
| 8. Your address | | |
| 9. Your home phone | | |
| 10. Your birthday | | |

How many checks have you shared?

You probably answered shared in the in the first two items. Sharing those information will get you links of your profile page to a different search engines eg. google, yahoo, etc. Switching it to the image search chances are your profile pictures may appear, even if you have a unique name. Do not feel bad if it did not appear though; in fact, it is probably for your best interest not to have pictures of yourself in a search engine.

So how did this happen?
How can search engines locate me?
Is there any danger of being found by search engines?
How many hours do you spend on the internet per day?
Can you live without internet a week?
How many aspects of your life depends on the internet?
How many times have you have you complained about your internet connection speed?

As part of this new generation of learners, you are expose to many things powered by the internet. Whether it is socializing, playing games, reading sports news, shopping, etc., the internet has given you the most powerful tools that your parents, during their younger years, did not have. Because of this, do you not think that it is also important to wield this powerful tool properly?

Let us go back to the "how safe you are?" test. Visit each item and see how risky it is to share it is to share them.

| Type of Information | Risks |
|---|---|
| 1. First Name | There is a risk sharing your first name. Chances are, a hacker may already know plenty of stuff about you even if you only give out your first name. Likewise you cannot just walk in a room and start introducing yourself to everyone. You do not know whom you can across with. |
| 2. Last Name | If sharing your first name is a small risk, having both your first and last is more risky. You will be vulnerable to being searched for using search engines, which includes image search. Matching a name with a face is modus to several cybercrimes like identity theft. |
| 3. Middle Name | Sharing your middle name alone is probably not the most risky of these shared information, but sharing your full name would be |
| 4. Current and previous school(s) | Most people who steal identities study their subject. They can use this information for verification purposes. |
| 5. Cell phone number | Your cellphone number should never posted over the internet. The internet is a public place. It is the same as posting your number on a bill board. You would not want |

| | |
|---|---|
| | random strangers to text or call you, or worse, pretend that they are someone else. |
| 6. Name of mother and father | Risky, yet as risky as posting their full names, especially your mother's maiden name. In fact, you may have already encountered many websites that require your mother's maiden name as an answer to secret question whenever you lose your password. |
| 7. Name of siblings | Disclosing this is a huge risk. Strangers may pretend or use their identity to dupe you. |
| 8. Address | Hopefully, you answered "no" to this one. Giving the internet your number is one thing; giving them your address is a whole other level. It would be much easier for criminals to find you. |
| 9. Your home phone | This shared information is more risky than sharing your personal phone number. Scams usually use this information to deceive you, one of which is when a stranger pretends to know your parents or pretends to be you. |
| 10. Birthday | Letting people know your birthday is probably a must if you want to get as many gifts as possible. But having it in your profile makes you vulnerable to identity theft. |

The internet is defined as the information superhighway. This means that anyone can access this highway, place information, and grab that information. Any information, even things that you have set privately, can be accessed one way or another. This is why social networking sites like Facebook continue to improve their security features. Nevertheless, the threat of cybercrime is real. While you may not experience the threat now, whatever information we share today could affect our future.

***Activity 2***

Visit a social networking site and look for the site's privacy policy. The link is typically found at the bottom of the page and sometimes labelled only as "Privacy". Write a summary on how the website handles both your private and public information.

**DISCUSSION**

**Tips to stay safe online**

Because the Internet is a public space, it is your responsibility to keep yourself safe. Here are some suggestions to keep you secure while using the Internet.

1. Keep in mind what you share online and where you share it.

2. Read the terms and conditions before accepting them.
3. To learn how a website handles the information you share, look at the website's privacy policy page.
4. When accessing social networking site, be aware of its security features. Search engines will not be able to examine your profile if you keep it private.
5. Do not share your password with anyone.
6. Avoid logging into public networks/Wi-Fi.
7. Do not converse with strangers, whether online or in person.
8. Never post anything about upcoming activities.
9. Add a friend you really know.
10. Do not encourage visiting untrusted websites.
11. Have your computer installed with antivirus software and update it regularly. To avoid conflicts, use only one antivirus software.
12. Use a password in your Wi-Fi at home and make it a private network.
13. Avoid downloading anything from untrusted websites.
14. Buy the software; do not use the pirated version.
15. Do not open or reply to links from suspicious emails.

**Protecting Reputations Online**

It used to be that doing something embarrassing was not a big deal. It happened, and people laughed about it before moving on. Nowadays, anybody can film embarrassing events on almost any gadget. Worse, it is simple to transfer it to the Internet, where one can preserve it indefinitely. This activity could impact your reputation and the reality that individuals prefer to overlook this truth and suffer as a result later in life.

When you publish something on the Internet, search engines save it in their archives for future searches. The Internet ensures that everything you write will live indefinitely, even if you erase it from your page. So anybody could eventually use something you and your friends find amusing now to destroy someone's reputation.

**Think Before You Click**

Below are things to consider before sharing something on the Internet:

1. Before you put something on the Internet, consider if you'd want your parents or grandparents to view it.

2. Is that something you'd want your future boss to see? Once you post something on the web, you have no control over who sees your pots.
3. Protect your friends' reputation online. Share this responsibility with your friends.
4. If you want your posts to be not searchable by search engines, always make your post private.
5. Avoid using your real names. Your names are easy for search engines to scan.
6. If you feel that a post can affect you and other's reputation, ask the one who posted it to pull it down or report it as inappropriate.

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When you publish something on the Internet, search engines save it in their archives for future searches. The internet ensures that everything you write will live indefinitely, even if you erase it from your page. So anybody could eventually use something you and your friends find amusing now to destroy someone's reputation.

**Think Before You Click**

Here are things you might want to consider before posting something over the internet:

1. Before you post something on the web, ask these questions to yourself: would you want your parents or grandparents to see it? Would you want your future boss to see it? Once you post it something on the web, you have no control of who sees your pots.
2. Your friends depend on you to protect their reputation online. Talk about your friends about this serious responsibility.
3. Set your post to “private.” In this way, search engines will not be able to scan that post.
4. Avoid using names. Names are easy for search engines to scan.
5. If you fell that a post can affect you and other’s reputation, ask the one who posted it to pull it down or repost it as inappropriate.

***Activity 3***

Research for several news, articles and events related to cybercrime. Based on what you have learn write a step by step process on what action are you going to do if this situation happens.
(Someone posted something embarrassing about you.)

- What would you do?

**ASSESSMENT**

Create campaign materials promoting “think before you click.”(It could be a form of small posters) This campaign is an awareness program for your classmates, schoolmates, batch mates even for the younger and older batches of your school.

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