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SCHOOLS DIVISION OF NEGROS ORIENTAL  
REGION VII

Kagawasan Ave., Daro, Dumaguete City, Negros Oriental



# EMPOWERMENT TECHNOLOGIES

## Quarter 3 – Module 1

### Introduction to Information and Communications Technology



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**Trends, Networks, and Critical Thinking in the 21<sup>st</sup> Century**  
**Alternative Delivery Mode**  
**Quarter 3 – Module 1 : Introduction to Information and Communications Technology**  
**First Edition, 2020**

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# **EMPOWERMENT TECHNOLOGIES**

## **Quarter 3 – Module 1: Introduction to Information and Communications Technology**



# Introductory Message

For the facilitator:

Welcome to the Empowerment Technologies Alternative Delivery Mode (ADM) Module on Introduction to Information and Communications Technology!

This module was collaboratively designed, developed and reviewed by educators both from public and private institutions to assist you, the teacher or facilitator in helping the learners meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:



## ***Notes to the Teacher***

This contains helpful tips or strategies that will help you in guiding the learners.










As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.



For the learner:

Welcome to the Empowerment Technologies Alternative Delivery Mode (ADM)  
Module on Introduction to Information and Communications Technology!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning resource while being an active learner.

This module has the following parts and corresponding icons:

 <b><i>What I Need to Know</i></b>	This will give you an idea of the skills or competencies you are expected to learn in the module.
 <b><i>What I Know</i></b>	This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correct (100%), you may decide to skip this module.
 <b><i>What's In</i></b>	This is a brief drill or review to help you link the current lesson with the previous one.
 <b><i>What's New</i></b>	In this portion, the new lesson will be introduced to you in various ways; a story, a song, a poem, a problem opener, an activity or a situation.
 <b><i>What is It</i></b>	This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.
 <b><i>What's More</i></b>	This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module.
 <b><i>What I Have Learned</i></b>	This includes questions or blank sentence/paragraph to be filled in to process what you learned from the lesson.
 <b><i>What I Can Do</i></b>	This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns.
 <b><i>Assessment</i></b>	This is a task which aims to evaluate your level of mastery in achieving the learning competency.

 <b>Additional Activities</b>	In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson learned.
 <b>Answer Key</b>	This contains answers to all activities in the module.

At the end of this module you will also find:

### **References**

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it!



## ***What I Need to Know***

This module was designed and written with you in mind. It is here to help you master the context of Empowerment Technologies. It contains varied activities that can help you as a Senior High School student to succeed in environments that require the use of computer and the Internet.

The module contains lessons in Introduction to Information and Communications Technology which allows students to understand the world of ICT.

Happy learning!

### **MOST ESSENTIAL LEARNING COMPETENCIES:**

- apply online safety, security, ethics, and etiquette standards and practice in the use of ICTs as it would relate to their specific professional tracks  
(CS ICT11/12-ICTPT-Ia-b- 2)

After going through this module, you are expected to:

K: understand the world of ICT

S: determine the dangers of the internet

A: Be responsible in the use of the internet



## ***What I Know***

**Direction:** Choose the letter of the best answer. Write your answer on your notebook.

1. This media is designed to help people who have visual and hearing impairments.  
a. Assistive media      b. Long tail      c. Facebook      d. Blogger
2. It is dubbed as the ICT hub of Asia.  
a. Hongkong      b. Philippines      c. Singapore      d. Vietnam
3. An interconnected system of public webpages accessible through the internet.

- a. World Wide Web    b. Browser    c. Website    d. URL
4. This is a type of social media that allow users to post their own news items or links to other news sources.  
a. Social networks    b. Social news    c. Blogs    d. Forums
5. This is the operating system used in iPhones.  
a. Android    b. Symbian    c. Blackberry OS    d. iOS
6. Twitter is a social media site that can be classified as  
a. Media sharing    b. Microblogging    c. Blog    d. Social news
7. A feature of Web 2.0 in which a user can give a feedback to a certain product.  
a. User participation    b. Rich user experience  
c. Mass participation    d. Folksonomy
8. This type of social media allows user to download videos from a website.  
a. Blogs and forums    b. Bookmarking sites  
c. Social News    d. Media sharing
9. Facebook is a type of social media website that can be classified as  
a. Microblogging    b. Media sharing    c. Social networks    d. Social news
10. This is a read-only webpage.  
a. Web 1.0    b. Web 2.0    c. Web 3.0    d. Web 4.0



## ***What's New***

Evaluate yourself by answering the following questions:

1. Do you have a social media account? What is it?
2. How many times have you posted in Facebook today?
3. Did you use the internet yesterday? How many hours?
4. Do you follow a celebrity or read news in social media?

If you answered yes in most of these questions, then you are a *digital native*. You are born or brought up during the age of technology. You are exposed or surrounded by ICT.





## **What is It**

### **Information and Communications Technology**



<https://smkstictcd.files.wordpress.com/2010/11/la1-ict-topic-1-ict-and-society.pdf>

**Information** refers to the knowledge obtained from reading, investigation, study or research. The tools to transmit information are the telephone, television and radio. We need information to make decisions and to predict the future. For example, scientists can detect the formation of a tsunami using the latest technology and warn the public to avoid disasters in the affected areas.

**Communication** is an act of transmitting messages. It is a process whereby information is exchanged between individuals using symbols, signs or verbal interactions. Previously, people communicated through sign or symbols, performing drama and poetry. With the advent of technology, these 'older' forms of communication are less utilized as compared to the use of the Internet, e-mail or video conferencing.

**Technology** is the use of scientific knowledge, experience and resources to create processes and products that fulfill human needs.

Information and Communications Technology or ICT deals with the use of different communication technologies such as mobile phones, telephone, Internet, etc. to locate, save, send, and edit information. Example: When we make a video call, we use the internet.

### **ICT in the Philippines**

Philippines is dub as the ICT Hub of Asia because of the huge growth of ICT related jobs, one of which is Business Process Outsourcing, or call centers. ICT in the Philippines Business Process Outsourcing started in the Philippines with Accenture in 1992 thanks to Frank Holz, the Partner responsible for developing and marketing the first Global Resource Center in Manila.

According to 2013 edition of Measuring the Information Society by the International Telecommunication Union, there are 106.8 cell phones per 100 Filipinos in the year 2012.

In a data gathered by the Annual Survey of Philippines Business and Industries in 2010, the ICT industry shares 19.3% of the total employment population.

Time magazines declared Makati City, Philippines-Rank 1 as the “Selfiest Cities around the world, and Rank 9 is Cebu City.

With these statistics, Philippines is indeed the ICT hub of Asia.

## **World Wide Web**

The World Wide Web, commonly referred to as WWW, W3, or simply the web is an interconnected system of public web pages accessible through the internet. It was invented by Tim Berners-Lee in 1989.

### **Web 1.0**

Web 1.0 is the name given to the first generation of the Internet. It is the time when most websites were read-only or static. Webpages are usually just single files in Hypertext Markup Language (html or htm) format that are displayed in a web browser when the URL is entered.

### **Web 2.0**

Web 2.0 represents the second generation of the Internet. Unlike Web 1.0 where users are merely audiences or readers who absorb information from websites, Web 2.0 is dynamic and focuses on user participation. It emphasizes on a give-and-take relationship between a website and its users. This is accomplished by giving the users the power to share different types of information such as texts, images, sounds, and videos. This allows for the creation of interactive with more real-life uses like online banking, online shopping, and media-sharing.

### **Features of Web 2.0**

1. *Folksonomy*: a way to classify information, such as through tagging photos, websites, or links; tagging enables users to find information in an organized fashion. Some social networking sites use tags that start with a pound sign (#). This is also referred to as hashtag.
2. *Rich user experience*: dynamic, interactive content (for example, a user can click on an image of a plant to get more information about that plant — i.e. growth conditions, nutrient requirements, and more)
3. *User participation*: helps with the flow of information between the user and the owner of a certain website (For example, a user can like, comment, or send reviews to a certain post or site)
4. *Mass participation*: we have nearly universal web access that leads to differentiation of concerns, from a traditional internet user to a wider variety of users of various cultures.
5. *Long Tail*: services that are offered on demand rather than on a one-time purchase. (For example, either you are subscribed to a data plan that charges you for the amount of time you spent in the Internet, or a data plan that charges you for the amount of bandwidth you used.
6. *Software as a Service (Saas)*: allows the user to subscribe to a software rather than purchasing them. (For example, you can subscribe and use

Google Docs, a free web-based application, to create or edit word documents online.

### Web 3.0

Some people are already referring to the current generation of the Internet as Web 3.0.

Web 3.0's main characteristics include but are not limited to:

1. Real-time  
Events and information are made available to users as they happen.
2. Ubiquitous  
Users are always connected to the internet.
3. Machine learning  
Computers and mobile devices can create data and make decisions based on the user's previous actions.

### Trends in ICT

1. **Technological Convergence** is an evolution of technological developments that merge into new system bringing together different types of applications and media. For example, aside from calling and texting using the smartphone, you can also use it for browsing the internet or creating a word document.



<https://alfapeople.com/know-kind-impact-ict-business-environment/>

2. **Social Media** is a collection of internet-based communication tools and computer-assisted channels dedicated to allow users to interact, communicate, and share information in a virtual community and network.

#### There are six types of social media:

a. *Social Networks*. These are sites that allow you to connect with other people with the same interests or background. Examples: Facebook, Google+

b. *Bookmarking Sites*. These are sites that allow you to store and manage links to various websites and resources. Most of them allow you and others to easily search or share them. Examples: StumbleUpon, Pinterest

c. *Social News*. These are sites that allow users to post their own news items or links to other news sources. The users can also comment to the post or vote on the news articles of the website. Examples: Reddit, Digg

d. *Media Sharing*. These are sites that allow you to upload and share media content like images, music and video. Examples: Flickr, Youtube, Instagram



<https://thehimalayantimes.com/business/bring-social-networking-sites-under-tax-net>

e. *Microblogging*. These are sites that focus on short updates from the user. Those subscribed to the user will be able to receive these updates. Examples: Twitter, Plurk

f. *Blogs and Forums*. These websites allow users to post their content. Other users are able to comment to the said topic. There are several free blogging platforms like Blogger, Wordpress, and Tumblr.

**3. Mobile Technologies** refer to a combination of hardware, operating systems, networking, and software, including content, learning platforms, and applications. Mobile technology devices range from basic mobile phones to tablet PCs, PDAs, MP3 players, memory sticks, e-readers, and smartphones.

Mobile devices use different operating systems:

a. *iOS*. This is used in Apple devices like iPhone or iPad

b. *Android*. This is an open source operating system developed by Google.

Several mobile phone companies use this OS for free.

c. *Blackberry OS*. This is used in Blackberry devices

d. *Windows Phone OS*. This is a closed source and proprietary operating system developed by Microsoft.

e. *Symbian*. This is the original smartphone OS used by Nokia devices.

f. *WebOS*. This is originally used for smartphones but now used for smart TVs.

g. *Windows Mobile*. This is developed by Microsoft for smartphones and pocket PCs.

#### **4. Assistive Media**

Assistive technology is an umbrella term that includes assistive, adaptive, and rehabilitative devices for people with disabilities and also includes the process used in selecting, locating, and using them. Assistive technology promotes greater independence by enabling people to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing, by providing enhancements to, or changing methods of interacting with, the technology needed to accomplish such tasks.

Examples of Assistive Media:

➤ Mobility impairments

Wheelchairs, transfer devices, walkers, prosthesis

➤ Visual impairments

Screen readers, braille and braille embossers, desktop video magnifier, screen magnification software, large-print and tactile keyboards

➤ Hearing impairments

Hearing aids, assistive listening devices, amplified telephone equipment



### ***What's More***

Create a table and list down 5 static websites and 5 dynamic websites. Indicate the URL of each website. Write it in your notebook.



## What I Have Learned

Instruction: Make a journal to manifest your understanding about the topic. You can start by following the format below. Write it in your notebook.

I have learned that \_\_\_\_\_.

I have realized that \_\_\_\_\_.

I will apply \_\_\_\_\_.



## What I Can Do

Construct a process map of any device starting from old to new version. You may draw or paste cut-out pictures in a short bondpaper.

Sample Output:



## Assessment

I. Match Column A with Column B. Read each item carefully and use your notebook to write your answers.

Answers	A	B
_____ 1.	Invented the World Wide Web	a. Information
_____ 2.	An act of transmitting messages	b. Web 2.0
_____ 3.	The magazine that declared Makati City, Philippines as the selfiest city around the world.	c. Symbian
_____ 4.	This refers to the knowledge obtained from reading, investigation, study or research.	d. Tim-Berners-Lee
		e. Folksonomy
		f. Social Media

_____5.	This dynamic webpage focuses on user participation.	g. Time Magazine h. Web 1.0 i. Communication j. Windows Mobile
_____6.	Users are just merely readers of the content of the webpage.	
_____7.	This enables users to find information through tagging.	
_____8.	An operating system that is used by Nokia devices.	
_____9.	An operating system for pocket PCs.	
_____10.	This allows users to interact, communicate, and share information in a virtual community.	

II. Identify the type of social media that is being asked in the following:

- |                   |                   |
|-------------------|-------------------|
| _____1. Twitter   | _____6. Wordpress |
| _____2. Blogger   | _____7. Reddit    |
| _____3. Facebook  | _____8. Instagram |
| _____4. Pinterest | _____9. Tumblr    |
| _____5. Youtube   | _____10. Flickr   |



## ***Additional Activities***

Make an essay on how ICT helps you as a student. Write your answer in your notebook.



**Answer Key**

<p><b>Assessment</b></p> <p>I.</p> <p>1. D</p> <p>2. I</p> <p>3. G</p> <p>4. A</p> <p>5. B</p> <p>6. H</p> <p>7. E</p> <p>8. C</p> <p>9. J</p> <p>10. F</p> <p>II.</p> <p>1. Microblogging</p> <p>2. Blogs and Forums</p> <p>3. Social Networks</p> <p>4. Bookmarking Sites</p> <p>5. Media Sharing</p> <p>6. Blogs and Forums</p> <p>7. Social News</p> <p>8. Media Sharing</p> <p>9. Blogs and Forums</p> <p>10. Media Sharing</p>	<p><b>What I Know</b></p> <p>1. A</p> <p>2. B</p> <p>3. A</p> <p>4. B</p> <p>5. D</p> <p>6. B</p> <p>7. A</p> <p>8. D</p> <p>9. C</p> <p>10. A</p>
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# References

- Alcantara, Ramil. 2019. *slideshare.net*. June 3. Accessed February 13, 2021.  
<https://www.slideshare.net/RamilAlcantara/comparison-and-contrast-of-varied-online>.
- Community, Software Development. 2019. *https://medium.com*. February 26. Accessed February 13, 2021. <https://medium.com/@SoftwareDevelopmentCommunity/web-2-0-an-introduction-8230eb8fa6ce>.
- Fredlie. 2019. *https://www.slideshare.net*. June 4. Accessed February 14, 2021.  
<https://www.slideshare.net/Fredlie/empowerment-technology-148845732>.
2018. *https://icttechtips.wordpress.com*. February 23. Accessed February 14, 2021.  
<https://icttechtips.wordpress.com/2018/02/23/what-is-ict-empowerment-technologies-k-to-12/>.
2020. *https://www.techopedia.com*. May 30. Accessed February 12, 2021.  
<https://www.techopedia.com/definition/28094/digital-native>.
- Raolangeban. 2020. *https://www.docsity.com*. September 27. Accessed February 14, 2021.  
<https://www.docsity.com/en/empowerment-technologies-module-1-3/5858917/>.
- Rex Book Store.(2016).Empowerment Technologies.1.5-10  
<https://smkstictcd.files.wordpress.com/2010/11/la1-ict-topic-1-ict-and-society.pdf>



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