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Empowerment Technologies

12

QUARTER 1

MODULE
1

Information and Communications
Technology (Part 1)



Empowerment Technologies – Grade 12
Quarter 1 – Module 1: Information and Communications Technology (Part 1)
First Edition, 2020

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Published by the Department of Education - Schools Division of Pasig City

Development Team of the Self-Learning Module

Writer: Chirelyn P. Delavega

Editor: Name

Reviewers: Janeth M. Pineda (Content) and Cerina V. Galoy (Technical)

Illustrator: Rizza Joy Magno

Layout Artist: Name

Management Team:

Ma. Evalou Concepcion A. Agustin OIC-Schools Division Superintendent
Aurelio G. Alfonso EdD OIC-Assistant Schools Division Superintendent
Victor M. Javeña EdD Chief, School Governance and Operations Division and OIC-Chief, Curriculum Implementation Division

Education Program Supervisors

Librada L. Agon EdD (EPP/TLE/TVL/TVE)
Liza A. Alvarez (Science/STEM/SSP)
Bernard R. Balitao (AP/HUMSS)
Joselito E. Calios (English/SPFL/GAS)
Norlyn D. Conde EdD (MAPEH/SPA/SPS/HOPE/A&D/Sports)
Wilma Q. Del Rosario (LRMS/ADM)
Ma. Teresita E. Herrera EdD (Filipino/GAS/Piling Larang)
Perlita M. Ignacio PhD (EsP)
Dulce O. Santos PhD (Kindergarten/MTB-MLE)
Teresita P. Tagulao EdD (Mathematics/ABM)

Printed in the Philippines by Department of Education – Schools Division of Pasig City

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MODULE

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**Information and Communications
Technology (Part 1)**

Introductory Message

For the Facilitator:

Welcome to the Empowerment Technologies Self-Learning Module on Information and Communications Technology (Part 1)!

This Self-Learning Module was collaboratively designed, developed and reviewed by educators from the Schools Division Office of Pasig City headed by its Officer-in-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin, in partnership with the City Government of Pasig through its mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) in developing this instructional resource.

This learning material hopes to engage the learners in guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs, namely: Communication, Collaboration, Creativity, Critical Thinking, and Character 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. Moreover, 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 Self-Learning Module on Information and Communications Technology (Part 1)!

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 material while being an active learner.

This module has the following parts and corresponding icons:



Expectations - This points to the set of knowledge and skills that you will learn after completing the module.



Pretest - This measures your prior knowledge about the lesson at hand.



Recap - This part of the module provides a review of concepts and skills that you already know about a previous lesson.



Lesson - This section discusses the topic in the module.



Activities - This is a set of activities that you need to perform.



Wrap-Up - This section summarizes the concepts and application of the lesson.



Valuing - This part integrates a desirable moral value in the lesson.



Posttest - This measure how much you have learned from the entire module.



EXPECTATIONS

At the end of the learning period, the students shall have:

- improved their understanding regarding the current state of ICT;
- constructed a comprehensive description (both similarities and differences) of their chosen topic from the lesson through Venn diagram; and
- justified what they realized/valued regarding the current state and improvements in ICT.



PRETEST

Directions: Encircle the letter that corresponds to the correct answer.

1. ICT deals with the use of different communication technologies that locates, saves, send, and edit information. This acronym stands for?

- A. Information and Communications Technology
- B. Inform and Communicate Technology
- C. Information and Computing Technologies
- D. Informing and Computing Technologies

2. At the age of 49, Lola Maria created her Facebook account, and learned to use Messenger as a medium for communication. Her grandchild taught her how to use these two social networking sites. As a digital person, her grandchild is considered as _____.

- A. Digital Immigrant
- B. Digital Native
- C. Both A and B
- D. None among the options

3. Through Tim Berners-Lee proposal, this system was developed which enables the user to access hypertext documents and other files over the Internet.

- A. World Wide Web
- B. Web 1.0
- C. Web 2.0
- D. Web 3.0

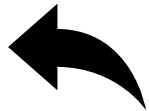
4. There are three versions of web: Web 1.0, Web 2.0 and Web 3.0. Which one is not a key feature of Web 2.0?

- A. Mass Participation
- B. Software as a Service
- C. Vagueness
- D. Long Tail

5. One of the key features of Web 2.0 refers to diverse of information sharing through universal web access.

- A. Mass Participation
- B. Software as a Service

- C. Vagueness
- D. Long Tail



RECAP

There is no recap/review in this Quarter 1/Module 1



LESSON



(or ICT) is an umbrella term which covers any communication devices, applications, and systems that people use to interact and connect with others. Old form of media like radio and television are considered as ICT. Various services and applications, software or hardware, as well as digital forms of communication such as tools available on the Internet like blogs and e-mail, and computer software such as Microsoft PowerPoint and Word considered as ICT.

For example:

1. Cardinal Sin used the **radio broadcast** of Radyo Veritas to encourage Filipinos to fight against former President Ferdinand Marcos in the year 1986.
2. In 1989, Tim Berners-Lee invented the **World Wide Web** and founded World Wide Web Consortium in 1994.
3. Today, the latest mobile devices use **5G Networking**, which is currently the fastest mobile network.

The Current State of ICT Technologies



Tim Berners-Lee
Image credit: theverge.com

When the World Wide Web (Internet) was invented by Tim Berners-Lee, most of the web pages were **static web** (also known as flat page or stationary page) or the content is “as is”. In this state, the user cannot manipulate or edit the content of the page, as well as, the content is same for all the users. In addition, static web can be referred to as **Web 1.0**.

Web 1.0 were added by **dynamic web** pages, and eventually evolved into **Web 2.0**. This term was popularized by Tim O'Reilly and Dale Dougherty at the O'Reilly Media Web 2.0 Conference in the year 2004. However, Darcy DiNucci coined this term on January 1999. In this state, most of the websites contain dynamic content or has interactive characteristics. Currently, digital natives, such as the Millennials and Gen Z, enjoy these websites and applications because they can create, collaborate, modify and exchange content with the other users.



Darcy DiNucci
Image credit: WordPress.com

But, how can we know if the website or application is an example of Web 2.0?

These are the six features:



Image credit: Google Images

1. **Folksonomy** – It is a term from the blended words “folks” and “taxonomy”. This feature allows user to categorize and classify/arrange information (ex.: hashtag like #NewNormal).

2. **Rich User Experience** – This feature deals with how a site uses user information for a personalized content (ex.: blog/vlog, social media accounts, et cetera).

3. User Participation – This means that those who view the website can also put their own information (ex.: the comment section and/or the reaction button of Facebook).

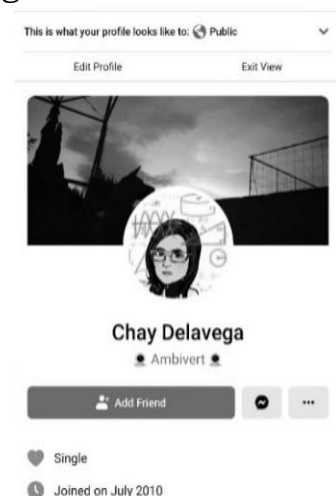
4. Long Tail Services – These services offer services on demand as opposed to a one-time purchase (ex.: the Netflix user must pay the monthly subscription fee to enjoy binge-watching).

5. Software as a Service – It contains how users would subscribe to a software as opposed to purchasing them (Ex.: thesis group members can collaborate online through Google Docs, and can create online survey with Google Forms wherein members can edit and monitor their progress simultaneously).

6. Mass Participation - This feature deals with diverse information sharing through universal web access (ex.: regardless your nationality, gender, et cetera, you can share information online, but make sure, it is not fake).

One of the examples of Web 2.0 is the social networking site **Facebook**.

Through their personal account, user can share their personal information, and thoughts. They can connect with their friends from distant locations and keep in touch with them. In addition, business-minded user can start their online-selling business. Though Facebook has a lot of privilege, it also comes with a great responsibility. As a Facebook user, you should protect yourself from identity theft or other cybercrimes through changing your privacy setting. Set your profile from “Public” to “Only Me” option.



Though netizens experiencing the advancement of Web 2.0, there are still people who like to improve what we have. Tim Berners-Lee of World Wide Web Consortium (W3C) encourages web developers to include **Semantic Web** in their web pages, which is one of the components of **Web 3.0**.

Web 3.0 was coined by John Markoff of the New York Times in 2006. It is supposed to be the third generation of Internet-based services, which aims to produce machine that can understand the user's preferences. This machine can serve better by “learning” from the previous choices of the user.



However, it is not been fully realized due to several problems.

1. **Compatibility** – Our currently used web browsers, and HTML files cannot support the idea of Web 3.0. If this compatibility won't be achieved, other things like security will be compromised also.
2. **Security** – To serve better the user, saving user's preference is the main idea of Web 3.0. However, is it achievable with the current state of the ICT?
3. **Vastness** – Information comes from billions of web pages is the main feature of the Internet, and it must be organized to specifically deliver what the user's need.
4. **Vagueness** – Web 3.0 machine must cater all languages as this third generation of web aims to serve diverse users.
5. **Logic** – Since it uses logic, it might not understand sarcasm nor other messages that might involving interference or prediction.

Based on the lesson, the ICT is still under some development, however it greatly impacts our daily life, and became an important part of the Philippine economy that our country was dubbed as the "ICT Hub of Asia."

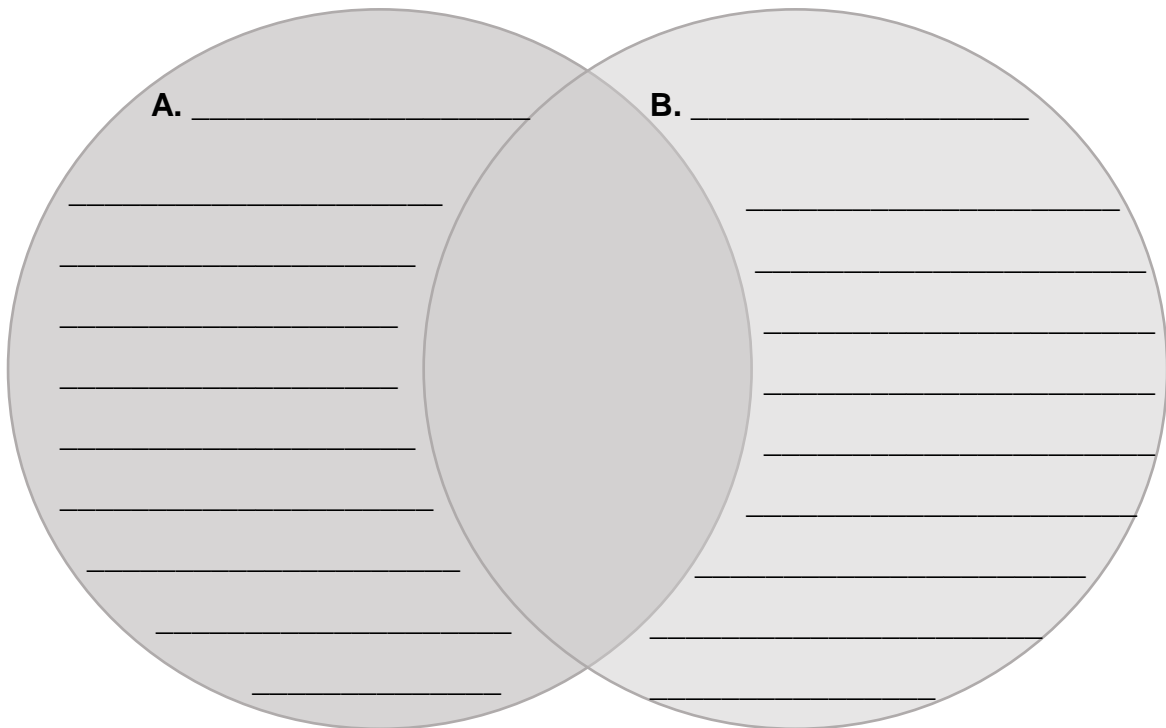


ACTIVITIES

I. WORD SEARCH: Can you find the ICTs listed below? Kindly, encircle it.

- | | |
|----------------|---|
| 1. Fax Machine | R B V S R F F L N E H N T R A M S T E C |
| 2. Messenger | I A F N S E F H N O M X Y P P I M X N K |
| 3. Telephone | C N X I C P T O T X I V G X A R D E I Q |
| 4. Television | Z G J O P J H L F F F S R G G D X T H A |
| 5. Text | H R L C B P N N L Z H A I Q E O G W C O |
| 6. Vlog | M E S S E N G E R A D D Y V R K L I A V |
| 7. Pager | D P Z L P U X G K I P Z Y U E F K V M Y |
| 8. SMART | D O E R U V T J O I W T A P Q L F N X W |
| 9. Radio | V T T N Z B N G J Q W J O P K K E J A B |
| 10. Laptop | S P T D B D Q I M E N T B P C M D T F I |

II. VENN DIAGRAM: From the lesson above, show the similarities and difference of the two things you learn. Write the differences inside the circle, while the similarities on the lines below the





WRAP-UP

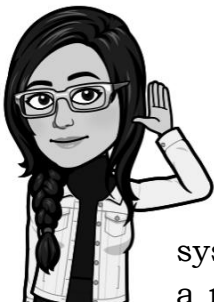
Directions: Fill-in the blanks with the correct missing terms.

1. _____ or ICT is an umbrella term that covers any devices or applications, as well as, digital forms that can locate, save, send, and edit information. Through Tim Berners-Lee innovation, people started with Web 2. ____, and eventually, evolved into Web 3. ____, however, industry keeps on growing and thinking about Web 3.0 to serve people better. It is a great advancement; however, it comes with a few problems like security, 4. _____, vastness, logic, and compatibility.

Currently, digital native and immigrant enjoy the features of Web 2.0 namely, folksonomy, rich user experience, user participation, 5. _____ services, software as a service, and mass participation. These features can be seen with the social media applications and sites. ICT contributes a great part in our daily life. In the Philippines, it is an integral part of economy, and dubbed the country as the “ICT Hub of Asia.”



VALUING



Do you know the term “digital native” and “digital immigrant”? Digital Immigrant is a person who born or brought up before the widespread use of digital technology; however digital native is a person grows-up in the digital age, rather than acquiring familiarity with the digital systems. As a digital native, what can you say about ICT? Is this a responsibility, a privilege, or both? Please, write your answer and explain below:



POSTTEST

Directions: Encircle the letter that corresponds to the correct answer.

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KEY TO CORRECTION

To check your progress, here are the answers for the following activities:

The answers may varied.	1. Information and Communications Technology 2. 1.0 3. 2.0 4. vagueness 5. long-tail
VENN DIAGRAM AND VALUING	WRAP-UP
	1. A. 2. B. 3. A. 4. C. 5. A.
WORD SEARCH	PRETEST AND POSTTEST

References

- Yuvienco, Joel. *Empowerment Technologies (Student Reader)*. 1st ed. Pasig City: Department of Education, 2016.
- Innovative Training Works, Inc. *Empowerment Technologies*. 1st ed. Manila: Rex Bookstore (2016).