MODULE

13

1.3.2 Ensure the positive use of ICT to facilitate the teaching and learning process

PHILIPPINE PROFESSIONAL STANDARDS FOR TEACHERS

PPST
Resource Package

NON-PRESCRIPTIVE SUGGESTIVE
TEACHER PRACTICES

Republic of the Philippines
Department of Education
TEACHER EDUCATION COUNCIL
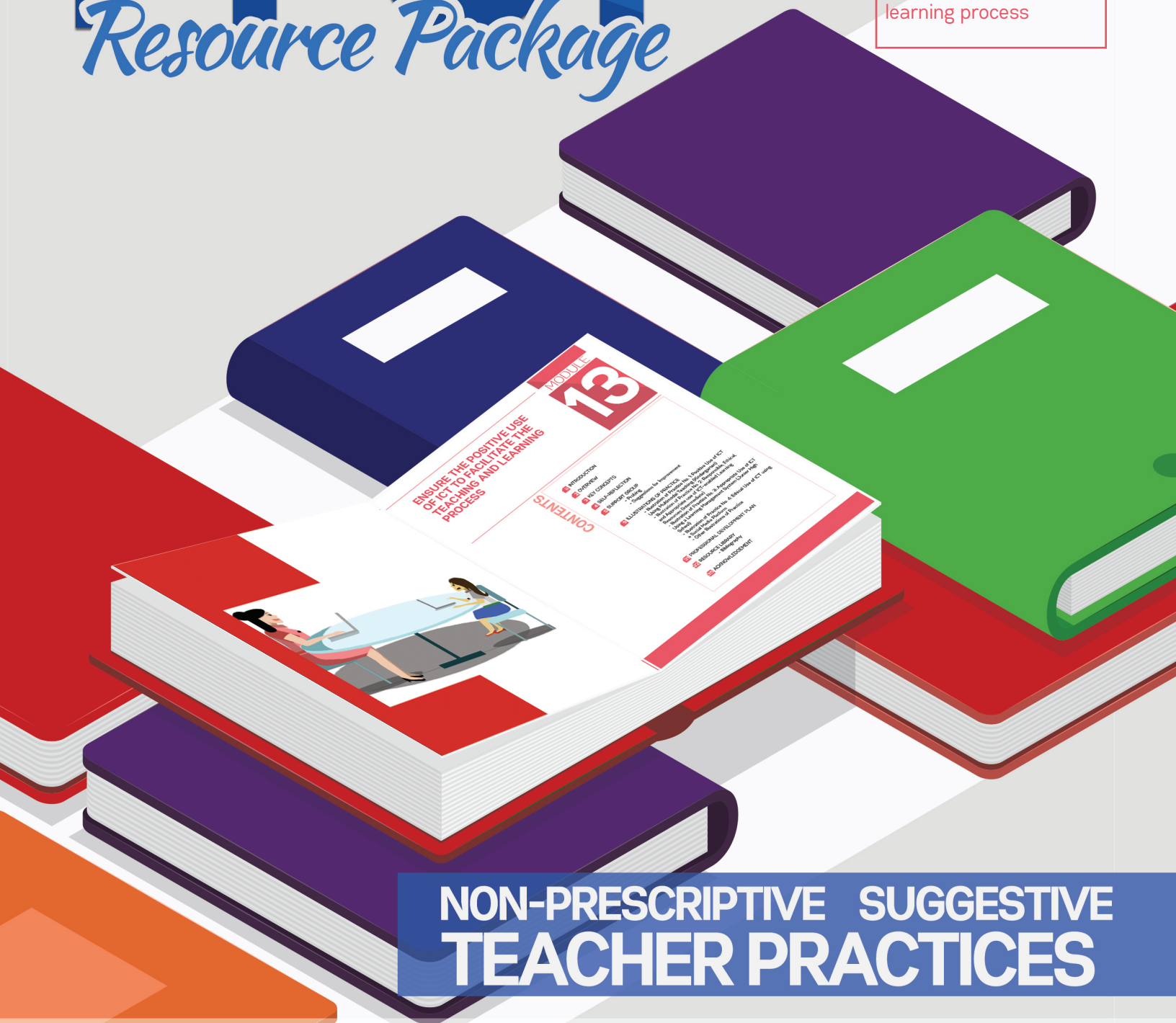
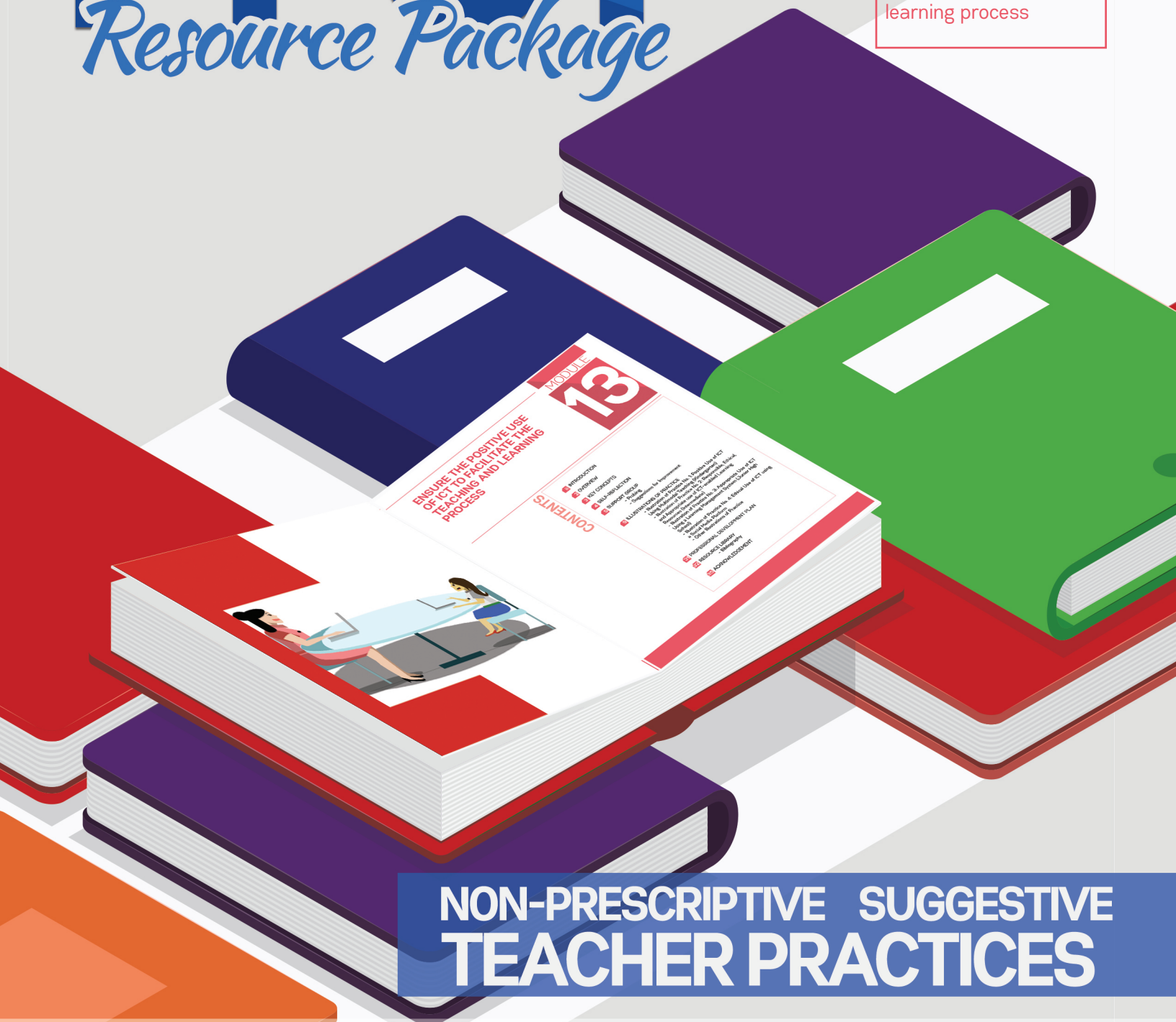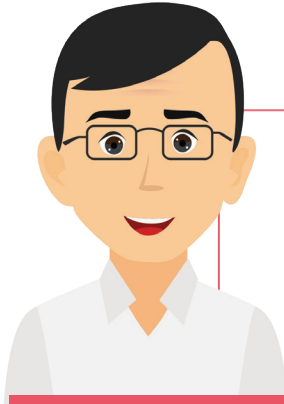PHILIPPINE PROFESSIONAL STANDARDS FOR TEACHERS

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NON-PRESCRIPTIVE   SUGGESTIVE
TEACHER PRACTICES

INTRODUCTION TO TEACHERS' RESOURCE PACKAGE

Hello, dear Teacher!
Welcome to this Resource Package.

I am Teacher Rey!

And I am Teacher Dulce!

We are members of your support group in the Department of Education (DepED). Together with your Principal, Master Teachers, and colleagues, we are pleased to be your mentors and companions as you use this resource package.

Are you ready?

We begin by letting you know the journey started of putting together this resource package.

In August of 2017, the Department of Education Secretary Leonor Briones signed the Philippine Professional Standards for Teachers (PPST) into policy through DepEd Order No. 42, S. 2017. The policy states, among other things, that the PPST "shall be used as a basis for all learning and development programs for teachers."

The Department of Education is committed to supporting your continuing professional development. This resource package hopes to contribute to this commitment.

As a teacher, understanding the PPST is crucial in order for you to grow and flourish in your profession. The PPST identifies what you are expected to know, be able to do, and value in your profession.

How can this resource package help you?

This resource package can help you as it:

- serves as your guidebook towards becoming better acquainted with the PPST;
- provides you with another 12 modules for Proficient Teachers based on 12 indicators aligned with the Results-based Performance Management System (RPMS); and
- contains illustrative and instructive information that you will find realistic, sensible and workable, and can help you achieve the target indicators across the curriculum teaching areas and key stages of learners' education.

We are happy to say that this resource package has been developed and compiled by teachers in support of other teachers.

Why do you need this resource package?

You will find the materials here useful if you:

- reflect on your own classroom practices and ensure that your teaching practices are aligned with the next 12 indicators for Proficient Teachers;
- are part of a group of teachers who need materials for your school-based Learning Action Cell (LAC) sessions in order to (i) learn more about the PPST, and (ii) innovate with practices using the samples in the resource package material as guide; and
- want to develop or expand the current work by (i) providing more examples of practices, or (ii) working on other career stages or indicators other than the 12 presented in this resource package.

If learning is your passion, this resource package is for you.
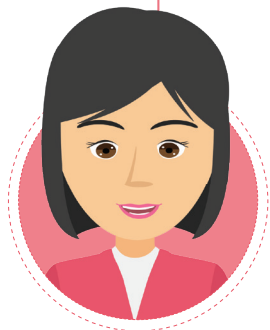
You will discover that each module discusses a specific indicator on becoming a Proficient Teacher. There are key concepts that will be unpacked as you read the next few parts of these modules. Most importantly, they will show you relevant illustrations of practices that may help you understand and attain the indicators.

The modules explore the following indicators.

MODULE 13

1.3.2 Ensure the positive use of ICT to facilitate the teaching and learning process

MODULE 14

1.6.2. Display proficient use of Mother tongue, Filipino and English to facilitate teaching and learning

MODULE 15

2.1.2 Establish safe and secure learning environment to enhance learning through the consistent implementation of policies, guidelines and procedures

MODULE 16

2.4.2. Maintain supportive learning environments that nurture and inspire learners to participate, cooperate and collaborate in continued learning

MODULE 17

3.2.2. Establish a learner-centered culture by using teaching strategies that respond to learners' linguistic, cultural, socio-economic and religious backgrounds

MODULE 18

4.2.2. Set achievable and appropriate learning outcomes that aligned with learning competencies

MODULE 19

4.3.2 Adapt and Implement learning programs that ensure relevance and responsiveness to the needs of all learners

MODULE 20

5.3.2 Use strategies for providing timely, accurate and constructive feedback to improve learner performance

MODULE 21

5.5.2 Utilize assessment data to inform the modification of teaching and learning practices and programs
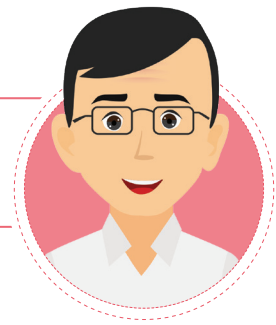
MODULE 22

6.2.2. Build relationships with parents/ guardians and the wider school community to facilitate involvement in the educative process

MODULE 23

7.3.2 Participate in professional networks to share knowledge and enhance practice

MODULE 24

7.4.2 Develop personal professional improvement plan based on reflection of one's practice and ongoing professional learning

Each module contains the following parts:

OVERVIEW introduces you to the indicator for the Proficient career stage and why you need to achieve it;

SELF-REFLECTION allows you to reflect on your knowledge, skills and attitude related to the indicator;

KEY CONCEPTS defines operationally the concepts used pertinent to the indicator;

SUPPORT GROUP allows you to consult and collaborate with your teacher-friends who will provide suggestions on how to improve your current practice;

ILLUSTRATIONS OF PRACTICE walks you through sample illustrations of specific teaching practices that show how the standards are put into action;

PROFESSIONAL DEVELOPMENT PLAN helps you identify your strengths, development needs and plans for specific action for professional development;
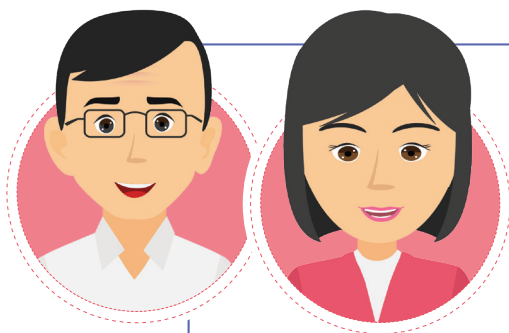
RESOURCE LIBRARY provides resources with annotations that can help you further understand the indicator.

Each module takes you through a journey of exploration and discovery, while you learn more about the indicator and apply it to your teaching context.
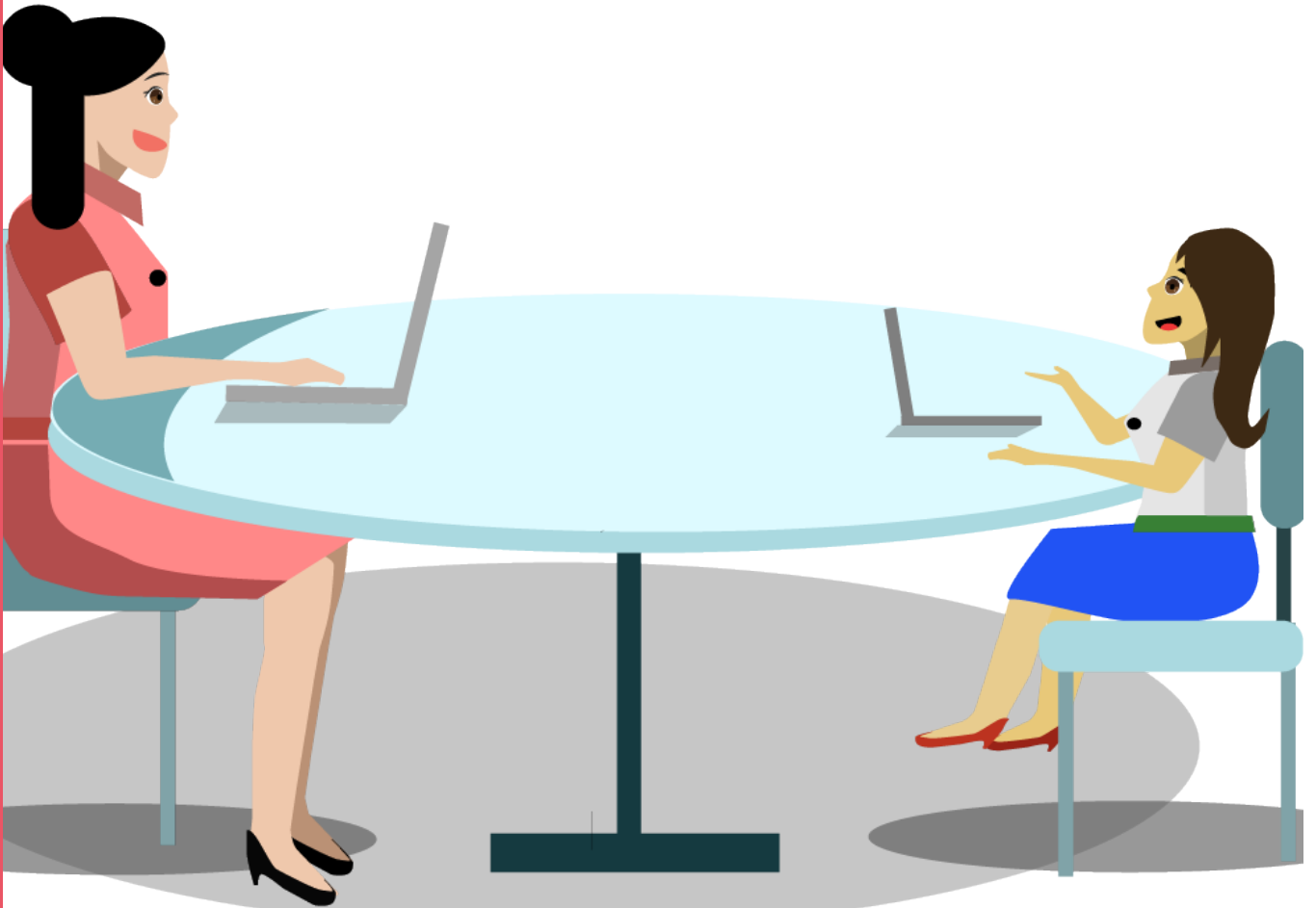
We encourage you to actively engage with the texts as you read through the module.

We hope that you find the information, materials and resources in this package helpful as you use the Philippine Professional Standards for Teachers as your guide towards professional development.

We will be with you every step of the way.

Have a happy journey!

ENSURE THE POSITIVE USE OF ICT TO FACILITATE THE TEACHING AND LEARNING PROCESS

MODULE 13

CONTENTS

OVERVIEW

Hi, there! This is Teacher Rey and with me is Teacher Dulce. Together, we will be looking into the content of this Module with the aim in mind of ensuring positive use of ICT to facilitate the teaching and learning process.

For us Proficient Teachers, thinking about how to effectively deliver instruction and speed up the learning process will always be a challenge. However, the introduction of Information and Communication Technology (ICT) in education has given a wide array of pedagogical possibilities in the 21st century classroom and beyond. As such, ICT contributed a lot of innovations and breakthroughs to education that teachers should take advantage of.

Effective integration of Information and Communication Technology (ICT) in education rests on its positive and productive use. The advent of 21st century teaching landscapes has revolutionized the use of ICT to complement, enrich, and transform education for the better (UNESCO, 2018). According to the Department of Information and Communications Technology Act of 2015, otherwise known as Republic Act No. 10844, ICT shall mean the totality of electronic means to access, create, collect, store, process, receive, transmit, present and disseminate information. These mechanisms are practiced at present by many teachers in the field.

However, we teachers are expected to use ICT positively and productively. This entails making sure that in our quest for strengthened teaching and learning, we should be able to utilize ICT to positively affect learning and transform ways of delivering education in general. The teacher's goal is to ensure that ICT is used responsibly, ethically, and appropriately in order to achieve and reinforce learning as stipulated in the Philippine Professional Standards for Teachers (PPST).

This Module, therefore, provides helpful ideas represented by teaching practices highlighting positive use of ICT to facilitate the teaching and learning process.

In this module, we will focus on:

STRAND: Positive use of ICT to facilitate the teaching and learning process

INDICATOR: 1.3.2 Ensure the positive use of ICT to facilitate the teaching and learning process.

KEY CONCEPTS

"Knowing and understanding the following significant concepts facilitate deeper appreciation of the indicator and help you ensure positive use of ICT to facilitate the teaching and learning process. Let us get to know better the following key concepts.
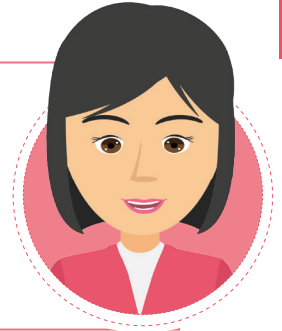
INFORMATION AND COMMUNICATION TECHNOLOGY (ICT). It consists of electronic devices and interactive resources utilized by the teacher to communicate, create, disseminate, store, and manage information to facilitate the teaching and learning process (Tinio, 2003).

POSITIVE USE OF ICT. It is the responsible, ethical, and appropriate use of ICT to ensure and achieve learning (PPST, 2017).

SELF-REFLECTION

This time, let us reflect on our current practice in terms of ensuring positive use of ICT to facilitate the teaching and learning process. In keeping with the key concepts previously given, my reflections are the following:

KNOWLEDGE	SKILLS	ATTITUDES
As a Proficient Teacher, I know...	**As a Proficient Teacher, I do...**	**As a Proficient Teacher, I feel...**
the responsible, ethical, and appropriate use of ICT in the teaching and learning process in order to ensure and achieve learning.	...practice positive use of ICT to harness responsible, ethical, and appropriate integration of educational technologies toward effective teaching and learning.	...accountable to consistently foster positive use of ICT and make sure that the same sense of responsibility is transferred to my learners.

Interesting reflections, Teacher Rey! Now, it is your time to reflect on your knowledge, skills, and attitudes in relation to the featured indicator. You may write your reflections inside the boxes below.
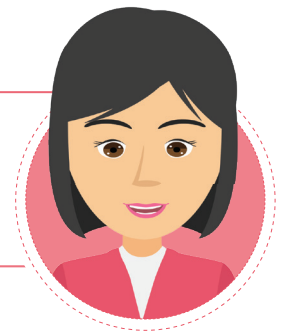
KNOWLEDGE	SKILLS	ATTITUDES
As a Proficient Teacher, I know...	**As a Proficient Teacher, I do...**	**As a Proficient Teacher, I feel...**
_____ _____ _____ _____ _____ _____ _____.	_____ _____ _____ _____ _____ _____ _____.	_____ _____ _____ _____ _____ _____ _____.

SUPPORT GROUP

" Hi, teacher! This is Teacher Rey once again. How is everything going? Are you done thinking of reflections on how to ensure positive use of ICT to facilitate the teaching and learning process? That is good! I welcome you now to our Support Group, where we can examine and address teaching-related concerns. For our first case, we will get to know Teacher Donna. Let us try to think about the ways by which she integrates ICT in planning for instruction.
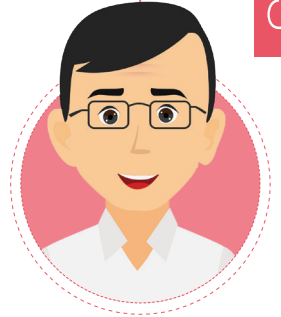
Teacher Donna is a Grade 10 English teacher from Real South High School. In one of her lessons, as reflected in the "Procedures" part of her Daily Lesson Log (DLL), she asked her learners to watch a modern version of the text "Inferno" by Dante Alighieri. She downloaded a full-length, game movie from Youtube to strengthen the teaching of the story. Let us find out how she did it by looking at the excerpted part from her DLL.

IV. Procedures	
D. Discussing new concepts and practicing new skills #1	The learners will be watching a game-movie version of Dante Alighieri's "Inferno" which will last for 1 hour and 29 minutes. The video was downloaded from *Youtube*. Dante's Inferno [Game Movie]
E. Discussing new concepts and practicing new skills #2	The learners will be watching the full-length video for two meetings. They are to write a reaction paper on what they have learned after watching the game movie.

Probing
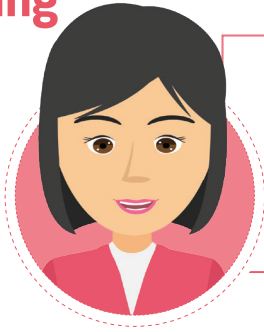
Were you able to grasp what Teacher Donna did as regards incorporating a full-length video from Youtube as one of her activities in discussing Dante Alighieri's Inferno? Now, it is time for us to take a closer look at how she made use of the featured ICT resource by answering the following questions.

1 Is the downloaded game-movie version of "Inferno" an appropriate ICT resource for the lesson of Teacher Donna? How?

_____
_____
_____
_____
_____
_____.

2 In terms of downloading videos from social media platforms such as Youtube, do you think Teacher Donna observed ethical standards in incorporating such ICT-related resource? How?

_____
_____
_____
_____
_____
_____.

3 How will learners benefit from watching a game-movie version of the story, "Inferno?" Is the ICT-related resource appropriate to the learners such as their age and the context of the lesson, for instance?

_____
_____
_____
_____
_____
_____.
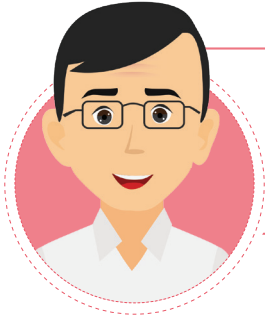
After answering the probing questions, we shall now begin rationalizing the use of the ICT-related resource to ensure that learners achieve the target learning competency.

At a glance, we can see that using ICT-related materials such as readily-downloadable videos and clips from Youtube could help us teachers in ensuring that optimum learning is achieved. However, such use entails a lot of responsibility, ethical considerations, and appropriate actions. To positively use ICT, we have to keep in mind that it is not only a resource for teaching but also a powerful means to strengthen the teaching and learning process.

In order for us to gain more knowledge on how to ensure positive use of ICT to facilitate the teaching and learning process, let us read the following suggestions for improvement.
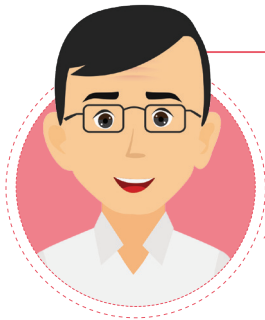
Suggestions for Improvement
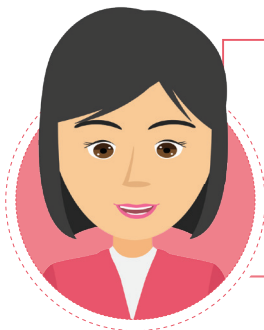
At this point, we shall be going through some aspects of Teacher Donna's practice that needs more improvement. Let us create recommendations on how she could better ensure positive use of ICT to facilitate the teaching and learning process.

1. USE ICT-RELATED RESOURCES FOR A PRODUCTIVE PURPOSE. The integration of ICT to facilitate the teaching and learning process expands the idea of providing effective and meaningful learning. Teachers should not focus on its use just to ease the teaching tasks alone. It has to go beyond the idea of individual benefits for the teachers. On the part of Teacher Donna, although she has the idea in mind that having learners watch a game-movie version of the story, "Inferno," would better capture the interest of the learners to facilitate understanding of the narrative; still, spending too much time to watch a full-length video for two meetings in the classroom does not sound facilitative and productive. In order to use the ICT resource productively, she should have chosen a video clip rather than a full-length video. Although she integrates ICT for that matter, having learners watch the video for more than an hour makes the delivery of the lesson unimodal, which would make it appear monotonous and less interactive. Moreover, she needs to incorporate activities that could capture other learning preferences like group dynamics and not only asking them to watch and write a reaction paper about the video.

2. OBSERVE ETHICAL CONSIDERATIONS IN UTILIZING ICT-RELATED RESOURCES. Being responsible towards the use of ICT to facilitate the teaching and learning process also relates to its ethical utilization. Ethical use of ICT therefore entails observing morally sound academic practices like sources attribution and respecting intellectual property rights. For instance, Teacher Donna was not able to include the Internet source or the Uniform Resource Locator (URL) to give due credit to the person, group of individuals, and the specific online platform from where she downloaded the video. She also has to personally contact the person who created and uploaded the video on Youtube to follow ethical standards on the use of readily available materials online.

3. ENSURE THE USE OF LEARNER-APPROPRIATE ICT-RELATED RESOURCES. It is also of great importance for us teachers to ensure that we are using ICT-related resources that are relevant to the age, cultural background, religion, learning context, learning style, and other characteristics of learners under our care. Teacher Donna was able to think of a more age-appropriate video to back-up her teaching of the story because she thought of having them watch a game-movie version of "Inferno." However, Teacher Donna should have also asked herself the following questions - (1) Is the game featured in the video familiar to my learners? (2) Could my learners understand the specialized language used in the video? (3) Is the video not too violent to be watched by my learners? (4) Will the movie-game version capture the themes that learners should understand about the story?
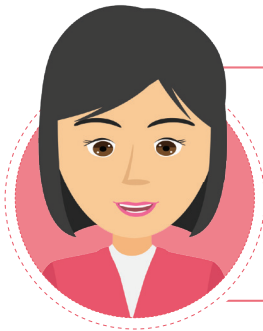
Excellent job! I hope the given suggestions for improvement would help you ensure positive use of ICT to facilitate the teaching and learning process.
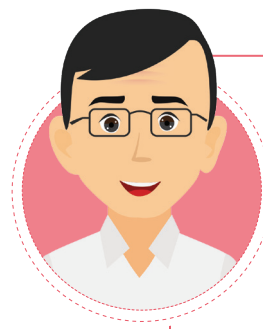
ILLUSTRATIONS OF PRACTICE

This time, we shall proceed to the different practices of ensuring positive use of ICT so as to achieve and reinforce learning. Get ready to learn more as we discuss in detail model practices of Proficient Teachers in relation to featured indicator of this Module.

The changing winds and shifting sands of pedagogical practice have created possibilities to foster a more learner-centered environment in the 21st century education landscape. The excitement brought about by new educational technologies also enables teachers to play a greater role in developing learner autonomy (Jones, 2001). It is with these possibilities that learners will be able to manage their own learning, while teachers fulfill their role as facilitators (Haynes, 2011). A more challenging but promising endeavor at present is to provide and use powerful ICT tools to support the shift from teacher-centered to learner-centered paradigm (Resta, 2002). It also gives more rooms for 21st century learners to find, synthesize, and share knowledge with others (Majumdar, 1997). Such pedagogical revolution through ICT lies in the responsible, ethical, and appropriate practices of teachers in the field.

The illustrations of practice presented in this Module therefore delineates the ways by which Proficient Teachers could positively use ICT to facilitate the teaching and learning process. The foci also highlight how different ICT resources could be utilized in the most appropriate and productive way possible. Each illustration comes with "How to Do It" instructions to further help teachers in concretizing the model practices.

ILLUSTRATION OF PRACTICE NO. 1:

Positive Use of ICT Using Multimodal Teaching (Kindergarten)

For our first illustration of practice, let us meet Teacher Karen. She is a Teacher I from Racal Elementary School who teaches in the kindergarten level. Teacher Marge ensures that she incorporates fun and enjoyment in helping her learners develop all the needed developmental domains in the kindergarten curriculum. She does it by providing multimodal activities to her learners as facilitated by ICT. We shall now see how she positively uses ICT in her carefully crafted lesson log.

PROCEDURES (BLOCKS OF TIME)	OBJECTIVES	CONTENT TUESDAY
ARRIVAL TIME	**Developmental Domain(s):** Understanding the Physical and Natural Environment (PNE) **Sub-Domain:** Life Science and Body Senses (BS)	**Daily Routine:** National Anthem Opening Prayer Exercise Greetings Attendance Informing others about significant things that happened to them
	Content Standard: The child demonstrates an understanding of body parts and their uses.	
	Performance Standard: The child shall be able to take care of oneself and the environment and able to solve problems encountered within the context of everyday living.	
	Learning Competency and Code: Identify one's basic body parts. **PNEKBS-Id-1**	
MEETING TIME 1	**Developmental Domain(s):** Understanding the Physical and Natural Environment (PNE) **Sub-Domain:** Life Science and Body Senses (BS)	**Message:** Kids, I have a friend named Nonong. Do you want to meet him? Look at the picture on the screen. **Question:** 1. What can you say about my friend, Nonong? 2. Is there something missing with Nonong's body?
	Content Standard: The child demonstrates an understanding of body parts and their uses.	
	Performance Standard: The child shall be able to take care of oneself and the environment and able to solve problems encountered within the context of everyday living.	
	Learning Competency and Code: Identify one's basic body parts. **PNEKBS-Id-1**	
WORK PERIOD 1	**Developmental Domain(s):** Understanding the Physical and Natural Environment (PNE) **Sub-Domain:** Life Science and Body Senses (BS)	**Teacher Supervised:** 1. The Teacher will ask the learners about the missing body parts of Nonong. 2. The teacher will flash on the screen a PowerPoint version of Nonong's picture and his missing body parts. 3. The teacher will help the learners identify and name the missing body parts of Nonong.
	Content Standard: The child demonstrates an understanding of body parts and their uses.	

The developmental domain in kindergarten that will be strengthened using ICT is centered on understanding the physical and natural environment, with a sub-domain that focuses on life science and body sense. These are all reflected from the kindergarten curriculum guide (CG).

The learning competency to be developed is on identifying one's basic body parts. The lesson itself is followed by both individual and group activities that are aided by ICT-driven programs and resources.

Teacher Karen's first task for the learners is preluded by showing a picture of Nonong's body with missing parts. The teacher makes use of the Microsoft PowerPoint presentation program to do this. A laptop and an LCD projector will facilitate the use of slide presentations for the discussion. This will better engage learners as they learn about the body parts, since they do prefer visualizing concepts.

	Performance Standard: The child shall be able to take care of oneself and the environment and able to solve problems encountered within the context of everyday living.	
	Learning Competency and Code: Identify one's basic body parts. **PNEKBS-Id-1**	
WORK PERIOD 2	**Developmental Domain(s):** Understanding the Physical and Natural Environment (PNE) **Sub-Domain:** Life Science and Body Senses (BS) **Content Standard:** The child demonstrates an understanding of body parts and their uses. **Performance Standard:** The child shall be able to take care of oneself and the environment and able to solve problems	**Individual Activities:** 1. The learners will repeat naming the missing body parts of Nonong. 2. The learners will be watching a teacher-made video (through the use of PowerPoint) rationalizing the need to find Nonong's missing body parts as it also helps learners identify and name human body parts. 3. The teacher will teach the learners the song embedded in the video and will sing it altogether. The title of the song is, "Where are you, where are you?"
	encountered within the context of everyday living. **Learning Competency and Code:** Identify one's basic body parts. **PNEKBS-Id-1**	4. The learners will be viewing again the photo of Nonong and will be completing and naming the missing body parts.
WORK PERIOD 3	**Developmental Domain(s):** Understanding the Physical and Natural Environment (PNE) **Sub-Domain:** Life Science and Body Senses (BS) **Content Standard:** The child demonstrates an understanding of body parts and their uses.	**Group Activities:** 1. **Pair Up:** The learners will be paired for this activity. The teacher will play a video clip using PowerPoint presentation. Learners will face their partners as they sing together the children's song, "My Toes, My Knees." The teacher downloaded the video clip from *YouTube* using the following URL (Uniform Resource Locator): *https://www.youtube.com/watch?v=po jRHnIxCXM*

Teacher Karen takes advantage of the facility of PowerPoint or slide presentation to create a video clip to easily teach the human body parts. She turned the presentation into a video by adding necessary elements such as narration, animation, pointer movements, timings, photos, and recorded audio. She did this in order to provide a more contextualized learning of the competency. This prevents mismatch in terms of learners' characteristics, which is usually the problem when a teacher downloads materials from the Internet such as in Youtube that does not fit the present teaching and learning context. For instance, it is hard to teach Filipino learners materials that are made for American learners.

Provisions for supplementary materials to deepen the learning of human body parts was also carefully considered by Teacher Karen. Using group activities, she downloaded from Youtube a video clip and a sound clip, respectively, that are relevant to the learning competency. A lot of instructional videos are available online for teachers to download and make use of, especially for kindergarten learners. Teachers just need to be extra careful in choosing the right materials for the types of learners they are handling. In the case of Teacher Karen and her learners, having sing-and-dance activities to learn human body parts engages them more into the lesson and provides fun and enjoyable learning experiences.

|	
Performance Standard: The child shall be able to take care of oneself and the environment and able to solve problems encountered within the context of everyday living. **Learning Competency and Code:** Identify one's basic body parts. PNEKBS-Id-1	**2. Sing-a-Round:** The learners will be forming a big circle as the teacher stands in the middle. The teacher will play a sound clip through PowerPoint presentation about learning the names of the human body parts. The teacher sings as the sound clip is being played. In the sound clip, the learners will have to identify if the body parts pointed by the teacher from her body is correct or not. The prompt is, "Is this my _____?" Learners will respond by saying "yes" or "no." The converted video clip can be downloaded on *YouTube* at **https://www.youtube.com/watch?v=be fK_rqladQ.** **Teacher:** Is this my nose? (pointing at her nose) **Learners:** Yes, it is your nose! **Teacher:** Is this my head? (pointing at her hand) **Learners:** No, it is not your head. It is your hand!

HOW TO DO IT?

The rise of various educational technologies ushered in novel ways to use ICT to better deliver instruction. This is better realized through multimodal teaching. Multimodal teaching allows for the teacher to present materials in a variety of modes that may encourage learners to develop a more flexible approach to learning (Hazari, 2004). In this sense, ICT could help improve learners' viewing, speaking, and listening skills by providing a variety of activities relevant to different sensory modalities. To tap multimodal learning among learners, especially in the pre-elementary level, the following may be considered:

1. For multimodal teaching and learning through ICT to be possible, we need to find a suitable, readily-available, and user-friendly computer programs like the Microsoft Office PowerPoint to make slide presentations. Such program allows us to insert images (even animated ones), audio clippings, and videos that could directly cater learners' visual, verbal, and auditory learning preferences, not to mention their creative and critical thinking skills.
2. Create activities using images (still or animated ones) as a means to develop the target learning competency. Showing learners images that represent the concept discussed makes them concretize what is considered as abstract from the discussion. For kindergarten learners, bigger, colorful, and animated photos are more interesting and catchy.
3. For a more interactive engagement in speaking activities for verbal learning, use audio clips that would allow learners to respond real-time as part of the task. For kindergarten learners, having them sing a long with nursery rhymes and recite short phrases make them better engaged with different tasks. Such tasks also tap their auditory learning preferences.
4. In using different sensory modalities facilitated by ICT, teachers should also not forget the importance of collaborative learning. Dividing the class into pairs or groups allows them to interact with their classmates and socialize to learn more. However, a good combination of individualized and group tasks make learning more meaningful and productive for learners.
5. Downloading materials from the Internet and other online platforms requires teachers to do proper citations and attributions. Although a lot of materials online could be classified as open educational resources and may belong to public domains, we still have to do necessary ethical actions so that intellectual property rights of creators are not violated.

ILLUSTRATION OF PRACTICE NO. 2:

Responsible, Ethical, and Appropriate use of ICT-enabled Learning Resources (Intermediate)
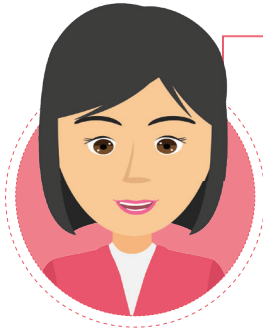
For our second illustration of practice, we will take a look at an excerpted Daily Lesson Log (DLL) from Teacher Olga, a Teacher II from Mabunga Elementary School. She always shares all the ICT tools she got for her Grade 6 Science class in her DLL.

Under the "Learning Resources" part of her DLL, she specified how she has incorporated ICT-relevant resources to help her develop the intended learning competency in Science 6 - Determine the distinguishing characteristics of vertebrates and invertebrates. S6MT-IIe-f-3. Teacher Olga provided specific learning resources that would back-up the achievement of the foregoing learning competency. Let us see how it was done!

III. LEARNING RESOURCES

Learning Competency	Determine the distinguishing charcateristics of vertebrates and invertebrates. S6MT-IIe-f-3				
A. References					
1. Teacher's Guide Pages	N/A	N/A	N/A	N/A	N/A
2. Learner's Materials Pages	pp. 125-126	p. 127	pp. 128-130	pp. 131-132	pp. 133-135
3. Textbook Pages	pp. 45-48	p. 50	pp. 50-53	pp. 54-55	pp. 60-64
4. Additional Materials from Learning Resource (LR) portal	N/A	N/A	N/A	N/A	N/A
B. Other Learning Resources	Downloaded photos of different animals from Forestry Images (https://www.forestryimages.org/wildlife.cfm) Electronic Devices Needed: **laptop computer and LCD projector**	An online article from National Geographic Channel (https://www.nationalgeographic.com/animals/invertebrates/) Electronic Devices Needed: **mobile phones/tablet computers**	An online game from Tiny Tap about vertebrates and invertbrates (http://www.tinytap.it/activities/g1fca/play/vertebrates-and-invertebrates) Electronic Devices Needed: **laptop computer and LCD projector**	Digitized video and audio materials on distinguishing vertebrates and invertebrates Electronic Resource: **DOST STARBOOKS**	Sample brochures or pamphlets containing information and photos on how to distinguish characteristics of vertebrates and invertebrates for learners' outputs Electronic Devices Needed: **digital camera/laptop computer** Social Media Platform: **Facebook or Instragram**

This screen-captured excerpt from Teacher Olga's DLL shows the learning resources used to enrich the featured learning competency. It includes all the links to relevant online resources and the electronic devices and platforms, respectively, needed for the fulfillment of ICT use and integration in the teaching-learning process.

13

Now, it is time to rationalize if this practice of Teacher Olga shows responsible, ethical, and appropriate use of ICT.

ICT DEVICES/RESOURCES/ SOCIAL MEDIA PLATFORM	UTILIZATION AND INTEGRATION	RATIONALIZATION - IS IT RESPONSIBLE, ETHICAL, AND APPROPRIATE?
The use of a laptop computer and LCD projector to view different images of animals downloaded from an online site.	Using downloaded images of animals and presented through a laptop computer and an LCD projector strengthen learners' background knowledge about animals, specifically, their classification into vertebrates and invertebrates, respectively. It serves their visual learning preference.	• It shows RESPONSIBLE use of ICT because Teacher Karen utilized a learning resource that enriches and directly relates to the learning competency to be mastered by the learners. • It shows ETHICAL use of ICT because Teacher Karen reflected the URL or the link from which the online resource could be downloaded. She also downloaded the item from a reliable educational website. • The use and integration of ICT is also APPROPRIATE to the common learning modality of the learners. It satisfies the utilization of ICT in relation to the need to show learners actual images of animals to help them better grasp the content of the discussion.
The use of mobile phones and tablet computers for learners to view and study an online article about vertebrates and invertebrates	The online article from National Geographic Channel was incorporated in the teaching of the target competency in order to acquaint learners on the distinct characteristics of vertebrates and invertebrates. Using mobile phones and tablet computers (if readily available), individualizes learning and opens opportunities for learners to see how their phones for example could give them the aid to learn scientific data.	• It shows RESPONSIBLE use of ICT because Teacher Karen thought of using learners' available mobile phones and tablet computers not for mere entertainment purpose, but for them to learn more about the characteristics of vertebrates and invertebrates. • It shows ETHICAL use of ICT because Teacher Karen acknowledged that she got the article from National Geographic Channel and that she was not the one who wrote it. She also made sure that the article came from a very reliable source.

ICT DEVICES/RESOURCES/ SOCIAL MEDIA PLATFORM	UTILIZATION AND INTEGRATION	RATIONALIZATION - IS IT RESPONSIBLE, ETHICAL, AND APPROPRIATE?
		• The ICT resource used is APPROPRIATE because Teacher Karen aligns it to the target learning competency and that integration of the online article, with mobile phones and tablet computers as electronic devices, was made to ease learning.
The use of a laptop computer and an LCD projector to play an online game that will test how well learners' have grasped the target learning competency	The online game would be best appreciated by the learners if it is projected well visually and auditorily. The laptop computer and the LCD projector may serve this purpose. Integration of ICT into this part of the lesson makes assessment easy and entertaining for learners.	• It shows RESPONSIBLE use of ICT in such a way that Teacher Karen searched for an ICT-based activity as a form of formative assessment. She thought of breaking away from regular paper-and-pencil tests to make learning more dynamic. • There is ETHICAL use of ICT because attributions were made to acknowledge the site where she downloaded the online game. It does not show that she made the resource herself. • It is APPROPRIATE because it caters the age of learners who are accustomed to online games. The online game could also gain learners' interest because it is visual, auditory, and tactile in nature.
The use of DOST STARBOOKS for scientific researches	STARBOOKS could provide a rich source of scientific data readily available in text or audio file for learners' relevant researches. This would help learners do independent researches about the characteristics of vertebrates and invertebrates.	• There is RESPONSIBLE use of ICT because Teacher Karen made sure that STARBOOKS, a learning resource from DOST, is maximized to facilitate the teaching and learning process. • There is ETHICAL use of ICT because Teacher Karen

| ICT DEVICES/RESOURCES/ SOCIAL MEDIA PLATFORM	UTILIZATION AND INTEGRATION	RATIONALIZATION - IS IT RESPONSIBLE, ETHICAL, AND APPROPRIATE?
		directs learners to actively use a learning resource available in the school like STARBOOKS instead of having them search online where authentic and contextual information about vertebrates and invertebrates may not be easily accessed. • It is APPROPRIATE because for an enrichment activity that will help learners gather more relevant information on the characteristics of vertebrates and invertebrates, the use of STARBOOKS is more practical and facilitative for learners who may find it hard and expensive to search data over the Internet.
The use of sample online pamphlets and brochures backed-up by the utilization of a digital camera, Facebook, and Instagram to produce online materials	Having digital pamphlets and brochures as sample materials would give learners ample ideas on how to make one for their final output. Using a digital camera would help learners capture real photos of vertebrates and invertebrates that could be seen in their immediate places. The integration of Facebook and Instagram aids them in spreading knowledge and awareness about these animals.	• There is RESPONSIBLE use of ICT because the digital camera and Facebook were utilized to help learners come up with an output that is authentic and would allow learners to apply what they learned about the characteristics of vertebrates and invertebrates. • There is ETHICAL use of ICT because Teacher Karen only used the sample pamphlets and brochures available online as samples or guides for learners. The learners were not asked to copy as is or replicate the materials. • There is APPROPRIATE use of ICT because the digital camera and the aforesaid social media platforms will be utilized to concretize what learners have learned

ICT DEVICES/RESOURCES/ SOCIAL MEDIA PLATFORM	UTILIZATION AND INTEGRATION	RATIONALIZATION - IS IT RESPONSIBLE, ETHICAL, AND APPROPRIATE?
		about the topic and, at the same time, use these devices and platforms to spread positive awareness on how to take good care of these animals more than just knowing their characteristics.

ILLUSTRATION OF PRACTICE NO. 3:

Appropriate Use of ICT Using a Learning Management System (Junior High School)
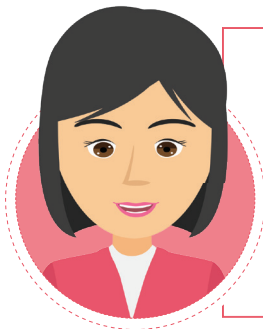
Hi, teacher! Hoping that Teacher Olga was able to give you enough information on how to use electronic resources responsibly, ethically, and appropriately. Now that we have already identified two illustrations of practices on the positive use of ICT to facilitate the teaching and learning process, it is now time for us to proceed to another modeled practice courtesy of our next Proficient Teacher, Teacher George.

Teacher George is a Teacher III from Cagalingan Science High School as a Science 10 teacher among learners enrolled in the school's Special Science Curriculum (SSC). He is currently implementing his action research about improving the performance of Grade 10 learners of the SSC curriculum using ICT. One of his interventions is the use of an online platform designed to deepen learning even outside the regular classroom – The Quipper School.

Now, he wants to employ the use of Quipper School in teaching the concept of Plate Tectonics. To carefully incorporate Quipper School in the teaching and learning process, he drafted an intervention plan featuring the aforesaid topic as part of the least mastered learning competency of his participants (the learners) for the quarter. We shall now look at how ICT is positively utilized by Sir George using the intervention plan below.

INTERVENTION PLAN IN SCIENCE 10 USING QUIPPER SCHOOL

Quipper

Learning Competency	Objectives	Strategies/Activities	Persons Involved	Time Frame	Expected Result
The learner explains the presence of active volcanoes, earthquake epicenters and mountain ranges along plate boundaries. S10ES–Ia-j-36.1	• Deepen learners' content knowledge about the presence of active volcanoes, earthquake epicenters, and mountain ranges along plate boundaries.	• Introduce Quipper School to the learners. • Guide them in creating their student accounts and in navigating the online platform.	• Learners and Science 10 teacher	• July 9, 2018	• Learners were able to create their Quipper School accounts and had been acquainted with the features of the online platform.
		• Provide additional learning materials through Quipper School such as PDF copies of PowerPoint presentations. • Upload video content to highlight the occurrences of volcanic eruptions and earthquakes and the presence of mountain ranges along plate boundaries.	• Learners and Science 10 teacher	• July 10-12, 20-18	• Learners had better developed content knowledge about the presence of active volcanoes, earthquake epicenters, and mountain ranges along plate boundaries.

Teacher George takes advantage of the availability and facility of Quipper School to deepen concepts learned in Science 10. Quipper School could be used by the learners either in school or at home as long as Internet connection is available.

Both the teacher and the learners should be acquainted first with the features of Quipper School and how to navigate it. This eases the tasks to be accomplished by the learners.

The teacher may opt to use Quipper School during class discussions or outside class hours with learners independently accomplishing their tasks. Teacher George, in this intervention plan, will use Quipper School outside school hours as a supplement for the concepts taught in class. Text-based materials and video content about the featured lesson will be uploaded in Quipper School. When used at home or outside class hours, learners have more time accomplishing the intended tasks.

• Provide assignments to the class – objective and constructed responses for the learning competency to be mastered. • Make use of the feed backing system of Quipper School to inform learners about their performance.	• Learners and Science 10 teacher	• July 10-12, 2018	• Learners had accomplished the needed assessment activities as homework/assignments to deepen previously learned concepts.
• Create gamified versions of assessments on the presence of active volcanoes, earthquake epicenters, and mountain ranges along plate boundaries.	• Learners and Science 10 teacher	• July 10-12, 2018	• Learners had effectively mastered the learning competency through engagement with gamified versions of assessment activities.
• Consolidate all the outputs of the learners and give them their overall performance using Quipper School analytics. • Solicit reflections from learners on the use of Quipper School in their Science 10 class.	• Learners and Science 10 teacher	• July 13, 2018	• The teacher had reported the overall performance of the learners and had prompted them to reflect on their experiences of using Quipper School to learn about the lesson content through their learning diaries.
• Coordinate with the school ICT coordinator to schedule the use of the computer laboratory for Quipper School-initiated learning.	• School Head, Head Teachers, School ICT coordinator, Science 10 teacher	• July 9, 2018	• The teacher had successfully created a schedule on the use of the computer laboratory to allow learners to use Quipper School at least once a week.

Teacher George will also be uploading assignments (objective and constructed-type) in order to extend learning of the featured lesson. This could be easily checked and recorded using Quipper School. The feedbacking mechanism of the platform will also help Teacher George communicate with the learners about their performance.

There should also be a class period where the teacher will report about learners' performance and will negotiate learning using Quipper School with the learners. For instance, Teacher George will have it done on the last day of the week to solicit responses from the learners by asking them to reflect on their Quipper School experience.

It is also advised that teachers coordinate with the ICT leader/coordinator on the use of the school's computer laboratory to carry out Quipper School tasks. This is ideal for set-ups where only few learners have access to mobile devices and the Internet.

There should also be a class period where the teacher will report about learners' performance and will negotiate learning using Quipper School with the learners. For instance, Teacher George will have it done on the last day of the week to solicit responses from the learners by asking them to reflect on their Quipper School experience.

HOW TO DO IT

The use of Quipper School to facilitate the teaching and learning process has been acknowledged by teachers across the Philippines. Quipper School provides over 1,000 high quality topics for Grades 4-11 in different curriculum teaching areas like English, Mathematics, Science, Araling Panlipunan, Filipino, and ICT. The contents were created with the help of experienced Filipino educators. Quipper School is also promoted by the Department of Education (DepEd) for educational consumption (Quipper Philippines, 2018). Quipper School subscription is completely free for both teachers and learners, so that its use will be maximized to help schools increase learners' knowledge and improve learning outcomes. For teachers to successfully integrate Quipper School in their respective classrooms, specific considerations have to be remembered.

1. Visit the Quipper School Philippines' website to get to know better the features of the online platform. Once you are already acquainted with its mechanisms, create your own account. Also, study how learners should create their accounts so that you can guide them as soon as its introduction or orientation has started in the class.

2. As per Quipper School Philippines (2018), the following contents would help teachers in creating enjoyable and result-oriented experiences for learners.
> • Wide-Ranging, Tailored Educational Content. Teachers could choose from thousands of preloaded topics or create personal educational content.
> • Bespoke Learning, Better Insights. Teachers can create assignments for classes, groups or individuals and get instant feedback on student performance.
> • Learning: Mastery and Fun. Students can master specific topics, layering their knowledge whilst enjoying Quipper School's engaging social and gamified features.

3. Although Quipper School provides readily available materials for the learners, teachers could still create additional resources to strengthen learning. Uploading of video clips that relate to the featured lesson is also possible with Quipper School.

4. Teachers could also use the performance analytics provided in Quipper School to analyze learners' achievements. It aids teachers on some important instructional decisions such as who among the learners should be remediated based on the results of the assessment activities.

5. Teachers should still provide time to report face-to-face the assessment results to the learners and to make them reflect on the learning experience using Quipper School. This rationalizes all the activities designed for online learning and gives the teacher opportunities to clarify unclear processes as learners accomplish their tasks plus present generated results of assessment activities directly to the learners. This is highly needed because Quipper School lets learners manage their own learning, without much of the intervention of the teacher as compared to an actual class encounter.

6. Just like any other ICT-driven resource, Quipper School also has some limitations. The teacher should always be careful in using this online platform because not all learners have access to mobile gadgets/devices and the Internet. Quipper School is better used for classes where learners have readily available cellular phones or computers at home with Internet connection. One option is to set schedules to use the computer laboratory instead. Some schools have computers and Internet connection that could cater to the needs of the learners when using Quipper School.

Ethical Use of ICT using a Social Media Platform

This is an extension of the discussion on the ethical use of ICT. This time, we will focus on the utility of social media platforms such as Facebook to communicate online with learners, otherwise known as computer-mediated communication (CMC). To give us helpful ways on how to ethically use social media platforms to nurture responsible netizens among our learners, let us meet Teacher Angel.

Teacher Angel is a Practical Research 2 teacher from Barreto East High School. She integrates the use of ICT in her research class by extending learning even at home through the facility of Facebook. Specifically, she and her learners communicate on virtual space through the Facebook pages and group chats she created. However, before utilizing it, she made sure that learners are well aware of their rights and limitations when using Facebook. She also informed the parents about it. We shall now see what Teacher Angel went through to ensure that ICT is utilized ethically.

THINGS TO REMEMBER DURING CMC ON FACEBOOK

1. Our Facebook group and group chat are closed groups. Only learners in the same class are allowed to use these facilities for online communication.
2. Use both our Facebook group and group chat for research purposes alone such as for updates, important announcements, clarifications, and other related concerns.
3. We encourage sharing and mentoring in our Facebook group. You are free to upload resources, that you think may help your other classmates as they finish their research studies.
4. If you want to have specific comments about your studies, send word files privately to your Practical Research 1 teacher or to your other classmates whom you think could help you. If you want to upload your studies and make commenting public, you may do so for as long as you are comfortable with it.
5. Always use polite language as we communicate online.
6. Our class says NO to CYBERBULLYING which is a completely unacceptable behavior online.

Teacher Angel negotiated with her learners as she clears things about the use of their Facebook group and group chat in their Practical Research 2 class. She emphasized the need to make the facilities exclusive to the class. She also included the importance of knowing the privileges of the learners in using such as well as their limitations and justifiable options. What is more noteworthy are his reminders to the learners to practice Internet etiquette just like using polite language and more importantly, veering away from any form of cyberbullying such as the following (Kaspersky Lab, 2015):

- EXCLUSION - the deliberate act of leaving someone out online
- HARASSMENT - a sustained, constant and intentional form of bullying by giving a person or a group of people abusive or threatening messages

- OUTING - a deliberate act to embarrass or publicly humiliate a person or a group through online posting of sensitive, private or embarrassing information without their consent
- CYBERSTALKING - a form of cyberbullying where the perpetrator threats the person or a group's physical well-being and safety
- FRAPING - happens when somebody logs into a person or a group's social networking account and impersonates him/it by posting inappropriate content in their name
- FAKE PROFILES - are created to hide one's identity with the purpose of cyberbullying a person or a group of people
- DISSING - the act of sending or posting cruel information about a person or a group online to damage their reputation or friendships with others
- TRICKERY - the act of gaining a person or a group's trust so that they reveal secrets or embarrassing information that the cyberbully shares publicly online
- TROLLING - is the deliberate act of provoking a response through the use of insults or bad language on online forums and social networking sites
- CATFISHING - is when another person steals others' online identities (usually photos), and recreates social networking profiles for deceptive purposes

Republic of the Philippines
Department of Education
BARRETO EAST HIGH SCHOOL

September 7, 2018

Dear Parents/Guardians,

Greetings!

This is to inform you that in our Practical Research 2 class, we will be using Facebook as a means to communicate with one another. This is to help your child and his or her classmates as well in writing their research studies. By using Facebook, we could also extend learning even when learners are at home.

As their Practical Research 2 teacher, I am assuring you that Facebook will only be used, strictly, for educational purpose and that the identity and other relevant information about your child will not be shared or used inappropriately.

I am also attaching a copy of the guidelines they need to remember during our communication through Facebook so that they will be able to use the said ICT facility more appropriately and responsibly.

By writing your name below and affixing your signature, you are agreeing that your child will participate in our online communication and that you are approving the guidelines attached to this letter.

Thank you very much, and God bless you!

Very truly yours,

ANGEL ANSALA
PR 2 Teacher

Please tick (/) the box that corresponds to your decision, and provide reasons if ever you do not want your child to participate.

- ✧ Yes, I am allowing my son/daughter to participate in online communication for their Practical Research 2 class.
- ✧ No, I am not allowing my son/daughter to participate in online communication for their Practical Research 2 class because

Printed Name of Son/Daughter

Signature over Printed Name of Parent/Guardian

Teacher Angel also sent a letter to all the parents and guardians of her learners to inform them about her plans of using Facebook for their Practical Research 2 class. The letter is a way to establish linkage with the parents/guardians and at the same time, another avenue to assure parents that their children's online safety is not at-risk and that Facebook, as a social media platform, is ethically utilized.
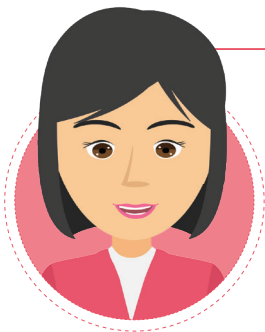
How are you doing, teacher? Were you able to grasp the illustration of practice from Teacher Angel? That is good! Now, we will be looking into the ways by which she positively utilized ICT, this time, to facilitate the teaching and learning process in her Practical Research 2 class. To support such purpose, she created a Facebook group and a group chat for each of the five (5) classes she is handling.

Facebook is not only used for entertainment purposes but for teaching and learning as well. For instance, Teacher Angel created a Facebook Group for her 12-Voltaire class enrolled in Practical Research 2. This allows her and the class to exchange information about the researches they are conducting. Learners could post questions about their studies and notify Teacher Angel. Teacher Angel, in return, will be answering learners' queries online. The use of Facebook for this matter is therefore an online platform that suggests virtual communication so that the teacher could still be on call and on aid for the learners even outside class hours.

In using Facebook group, the teacher can also include announcements and important messages in relation to the subject. Uploading of files in different formats could also be initiated using this social media platform. Videos and other learning resources could be posted and downloaded for learners' consumption. For this Facebook group, Teacher Angel is the administrator so that she can control or screen all possible posts to be made by the members (the learners). This is advantageous because some learners have the tendency to post unnecessary items in the group. The teacher should also make sure that all learners are members of the group so that they are always updated.
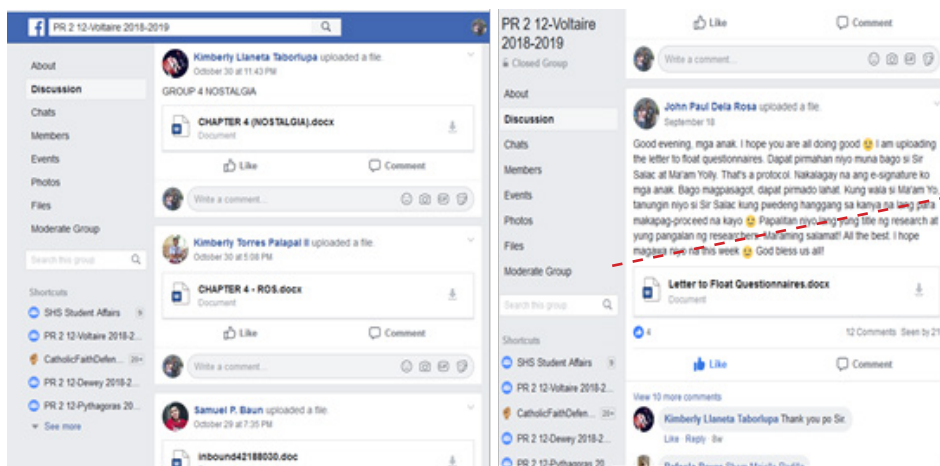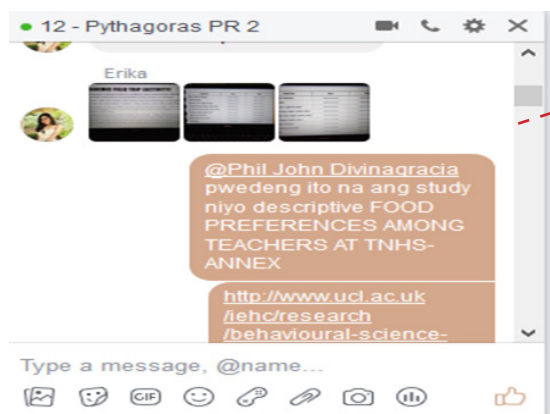
Another way to do it is to make communication real-time by creating a Facebook chat. Facebook chat encourages online conversations between two or more individuals, this time, between the teacher and the learners. Just like Facebook group, this chat box also permits uploading of different files, though video files are discouraged because Facebook limits files to not more than 25 MB (megabytes). For Teacher Angel and her learners, the use of group chat makes them easily send queries and answers. The Facebook chat also allows for negotiation of meaning to occur on virtual space especially for a research subject where lots of clarifications and inputs must be given by the teacher. It is also more accessible and common to learners. Video calls are also possible in group chats.

HOW TO DO IT

Facebook is a form of computer-mediated communication (CMC). According to Simpson (2002), CMC is an umbrella term which refers to human communication using computers. This may be synchronous or asynchronous. Synchronous CMC allows for real-time interaction to take place, while asynchronous CMC may be initiated even if participants are not online simultaneously. The user-friendly features of Facebook such as the use of Facebook groups and group chat for teaching and learning purposes make it a social media platform to go to for most teachers and learners. Hence, in using the facility of Facebook as an online platform, the following are paramount.

1. Make sure that clear expectations and guidelines are given to the learners. This is to prevent possible occurrences of cybercrimes like identity theft, plagiarism, and worse, cyberbullying. It is also of great importance for parents to have knowledge about the scheme the teacher will be using in introducing online communication to the learners through Facebook.

2. Learn how to create a Facebook group and a Facebook chat. To use these two features of Facebook to facilitate the teaching and learning process, one has to be cognizant of the steps on how to get started with it. To create a Facebook group for the class, be guided by the following steps (da Cunha, 2018).
- Sign in to your Facebook account.
- Navigate to the "Groups" button under "Explore" on your Newsfeed page.
- Hit "Create Group" in the upper right corner.
- Name your group, invite people, and select your privacy settings.
- Upload your Facebook group photo.
- Edit your group settings by adding a group description, selecting a group type, adding tags, and specifying location. All of these should be in connection to the learning area handled.
- After following the steps, you can now create your first post for the class. You may "mention" specific learners on the group who need to be notified right away. Facebook automatically mentions the member as soon as you started encoding his or her name. The teacher may now upload different types of documents (portable document files, word files, PowerPoint files, video content, etc.) on the Facebook group to help learners in their studies.

3. To create a Facebook chat and start meaningful conversations with the learners, follow these steps (Webster, 2018).

> • Sign in to Facebook and click on the "Create Group" link in the left column of the screen.
> • Enter a name for the group. Click inside the Members field and start typing the names of learners (who are your Facebook friends) whom you want to add to the group. Learners who are not your Facebook friends can always request to join the group later.
> • Click the "Chat with Group" link on the right side of the group page. If you want to make some announcements for the subject or notify learners about the things they need to accomplish, you just need to "start a conversation." You may also "mention" specific learners who need to be notified right away. To do this, just key in their names. The @ sign signifies that they are mentioned in the group chat.

4. Both the teacher and learners may negotiate about the language of communication to be used. For as long as it is the language all parties are comfortable to use, it may be completely accepted.

5. Facebook group and Facebook chat will also help teachers monitor learners' efficiency in submitting their outputs online as Facebook itself provides data on the exact time files were uploaded or sent. Teachers could actually teach learners academic autonomy through this online platform.

6. The use of Facebook group and Facebook chat should not be monopolized by the teacher. Tell learners that they can also upload or make posts relevant to the learning area studied. Remind them on the importance of making these online platforms completely educational or academic in nature.

7. When used responsibly and productively, Facebook and other social media platforms could serve their purpose of making distance learning possible for learners and promote socialization for a more meaningful learning to occur. This opportunity may not be given in a face-to-face classroom set-up. However, extreme guidance from the teachers and parents as well as utmost responsibility from the learners should be sought.

## OTHER ILLUSTRATIONS OF PRACTICE

Having been acquainted with a number of illustrations of practice that ensure positive use of ICT to facilitate the teaching and learning process, you are now ready to do the same or better yet, think of other ways for you to apply the featured indicator in your respective classes. Remember that the use of ICT should not hinder us from exerting more effort to improve instruction, and later on, help learners produce desirable learning outcomes. Although it helps us facilitate the teaching and learning process, ICT must always be used with caution and intelligence so that it will serve its purpose in education.

Now, to give you another way to learn about the featured indicator, you may consider other illustrations of practice focused on how ICT could be positively integrated in your respective classes.

ICT-RELATED RESOURCE/MATERIAL	HOW TO POSITIVELY USE IT
Microsoft Excel Program	To better teach concepts in Mathematics, say for instance, in plotting of points on a graph, the teacher could create a computer-based Cartesian coordinate plane using Microsoft Excel Program. The program could also be used to teach different formulae and functions in Statistics, since MS Excel provides all of these on hand to its users.
ext-Tula	To level up literary writing among learners of Filipino, the teacher may ask them to create short poems such as a text-tula or flash fiction stories through their mobile phones. To share their "masterpieces," they may be encouraged to send their outputs to their friends or classmates via short message service (SMS).
Movie-Maker Applications	For real-life depictions of virtues and values, the teacher may teach learners how to use movie-maker applications or programs such as VivaVideo for mobile phones and movie-maker programs that can be downloaded and installed in laptop computers. The teacher may ask learners to upload their outputs on social media platforms like Facebook and Youtube for knowledge sharing.
Facebook	The teacher may use real means to teach learners the basics of entrepreneurship using Facebook. This is through analyzing the vitality of online businesses in social media. The marketing strategies and buying behavior of consumers online could be better examined through this social media platform.

ICT-RELATED RESOURCE/MATERIAL	HOW TO POSITIVELY USE IT
	In Araling Panlipunan, a culminating activity may include having Grade 7 learners create a Facebook page that promotes products produced in the Philippines. They may also use Facebook as an avenue to sell products that are locally made and are representative of Filipinos' rich culture and heritage.
Android Applications, Youtube, and Government Websites	For elementary learners, using Android applications such as Jungle Music may help them appreciate music through games. For Arts, the use of Paint program installed in many laptop computers may train learners how to create virtual pictures or paintings. To stimulate learners' kinesthetic learning in Physical Education (PE), readily downloadable Zumba videos from Youtube may be used. Lastly, for Health-related lessons, learners may explore authentic data from different government sites such as the Department of Health (DOH) and Bureau of Food and Drugs (BFAD) to document cases of dengue in Central Luzon, for example, and to take note of food products that are banned from public consumption.
Microsoft Word (Track Changes, Insert Comments)	Copyediting and proofreading may be better taught to the learners through Microsoft Word. MS Word has its "Track Changes" and "Insert Comments" features found in its "Review" button that allow learners to do editing virtually quick. Teachers may also use such facilities in editing papers online.
Instagram	The use of Instagram could cut across four specific learning areas both in Junior High School and Senior High School. Since Instagram is also common among learners today, it can be used to teach them photo journalism (English), story writing using pictures (Creative Writing), advertisement campaigns (Media and Information Literacy), or simply the art of photography (Contemporary Philippine Arts from the Regions). Hence, they may imbibe both artistic and language skills using this social media platform.
Online Research Repositories, Text Analysis Tools	Research teachers may use online resources to help learners frame different parts of the research paper. For example, to teach learners how to write their research introductions, they may be asked to download and examine available research journal articles in different educational sites such as Academia.edu, Research Gate, Google Scholar, and ERIC (Educational Research Information Center). Learners may also use other online programs or softwares to help them tighten language use as they write their researches. These include Coh-Metrix and Style Writer, and Grammarly.com. To avoid plagiarism, Turnitin may be introduced to the learners.

OTHER EMERGING EDUCATIONAL TECHNOLOGIES
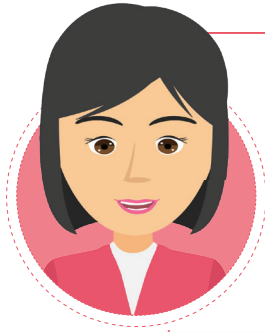
We are not yet done, dear teacher! Here are other emerging technologies that teachers could use to ensure and achieve learning in their classes. Here are other applications that are downloadable for free for teachers (Nekilan, 2018). The presentation also includes some suggested learning management systems (LMS) suggested for K to 12 classrooms (EducationDive, 2014). Lastly, offline resources for teachers are also provided (Gupta, 2017).

ONLINE APPLICATIONS	FEATURES
Educreations	It is a visual-learning application that allows teachers to create and show short instructional videos and share the videos with students quickly and painlessly.
Virtual Nerd Mobile Math	It contains interactive tutorials to show Mathematics concepts and show learners lessons in middle school and even high school.
Seesaw: The Learning Journal	It allows learners at any age to create, collaborate, reflect, and share. Families could also be invited through this app to help them monitor their children's learning.
Kahoot! - Play Learning Games	It includes fun learning games and quizzes for teachers.
ZipGrade	It turns phones or tablets into an optical grading machine similar to a Scantron. It has the ability to read free-to-download answer sheets in multiple sizes.

LEARNING MANAGEMENT SYSTEM (LMS)	FEATURES
Google Classroom	It allows teachers to create and collect assignments, monitor what students have finished, and give real-time feedback online.
Schoology	It is not only a note-taking platform. It also contains resource folders, tracking systems, and communication programs for teachers, learners, and parents, respectively.
Moodle	It is a free, open-source learning platform. Documentation, trackers and resources are all provided by Moodle.
Edmodo	The Edmodo network helps teachers to share content, distribute quizzes, and assignments to learners, other teachers, and parents.
Blackboard	It provides open and flexible teaching and learning either online or offline.

OFFLINE RESOURCES/MATERIALS	FEATURES
Canary Learning	The offline resource can be used when grading and checking assignments.
Pocket	It is not only a note-taking platform. It also contains resource folders, tracking systems, and communication programs for teachers, learners, and parents, respectively.
Evernote	It helps teachers create lists, to-do items, record voice notes, save images and documents. It can also be used to make annotations, group sharing, and chats.
Edmodo	The Edmodo network helps teachers to share content, distribute quizzes, and assignments to learners, other teachers, and parents.
iBooks	This offline resource is good for downloading PDFs for offline reading.
KA-Lite	It is an offline version of Khan Academy offering high-quality education by allowing easy rich to online learning.

Good job, Teacher Dulce! There are still other ICT-driven materials/resources available online that teachers could utilize. As we ensure positive use of ICT to facilitate the teaching and learning process, it would also contribute a lot if we will share to our colleagues other materials or resources to help them achieve optimum learning in their classes.

PROFESSIONAL DEVELOPMENT PLAN

After you have explored the different key concepts on ensuring positive use of ICT to facilitate the teaching and learning process, you now have a better grasp of the featured indicator.

Your next task is to fill in the personal action plan below.
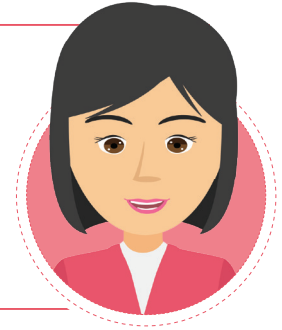
STRENGTHS *What are the skills you are good at?*	DEVELOPMENT NEEDS *What are the skills you need to improve?*	ACTION PLAN *What can you recommend for your development intervention?*	TIMELINE *When will you implement your plan?*	RESOURCE NEEDED *What assistance/ resources do you need to implement the plan?*

RESOURCE LIBRARY

Welcome to the Resource Library! We also provide you with references that can help you further understand the indicator.

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Department of Information and Communications Technology (2015). An act creating the Department of Information and Communications Technology, defining its powers and functions, appropriating funds therefore, and for other purposes. Retrieved from http://www.dict.gov.ph/wp-content/uploads/2016/05/RA10844_DICT.pdf.
The act provides for the creation of the Department of Information and Communications Technology (DICT) in the Philippines. It is also known as Republic Act No. 10844. The article includes definitions of relevant terms connected to ICT which teachers could use to clarify meanings to learners.

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The article features the top 8 learning management system (LMS) options for teachers. These are emerging educational technologies that teachers could use to keep up with the demands of ICT and life-long learning for K-12 learners.

Gupta, P. (2017). 5 tools for educators for when there's no access to the Internet. Retrieved from http://edtechreview.in/trends-insights/insights/2856-offline-tools-for-educators.
Offline resources for teachers that are surely helpful are enumerated and described in this online article. Their features and use are also given in order to guide teachers in creating lessons that are geared towards ICT, even without access to the Internet.

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The article establishes the importance of developing academic autonomy to empower learners. Definite pedagogical practices to nurture independence in learning will surely guide teachers in developing such skill among the learners.

Hazari, S. (2004). Applying instructional design theories to improve efficacy of technology-assisted presentations. Journal of Instruction Delivery Systems, 18(2), 24-33.
This journal article provides a rationalization on the use of sensory modalities in teaching. Specific integration of multimodal teaching through technology-assisted presentations is also highlighted. Moreover, teachers who would want to learn more about the ways by which they

could maximize the use of ICT or educational technologies in a multimodal approach must read the article. Back-up theories may also give teachers the rationale they need if ever integration of ICT and multimodal teaching at the same time, is possible in their respective classes.

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The article could inform teachers, learners, and parents about the different forms of cyberbullying. The specifics about how these instances of cyberbullying are perpetuated by "cyberbullies" are emphasized in the discussion to put light into online actions that others think as common or normal but could then be considered as a form of cyberbullying.

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The paper discusses the process of modeling ICT development in education. Teachers could benefit from the article by focusing on the proposed model of the author that centers on infrastructure and applications of ICT in teaching and learning.

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Resta, P. (2002). Information and Communication Technologies in teacher education: A planning guide. UNESCO, Paris.

The article underscores the role of Information and Communication Technologies in teacher education. This will help administrators and curriculum planners to look at ICT in education on a wider perspective.

Simpson, J. (2002). Computer-mediated communication. Retrieved from https://watermark. silverchair.com/560414.pdf.
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Tinio, V. L. (2003). ICT in education: UN development programme. Retrieved from http://wikieducator. org/images/f/ff/Eprimer-edu_ICT_in_Education.pdf.
This e-primer discusses important concepts on ICT in education. Articles on the uses of ICT in education could help educators in various fields to positively use and integrate educational technologies to speed up learning and nurture globally-competitive learners.

UNESCO (2018). Information and communication technologies (ICT). Retrieved from http://uis.unesco. org/en/glossary-term/information-and-communication-technologies-ict.
UNESCO provides several definitions about Information and Communication Technologies (ICT). The organization also presents specific projects and programs that would support the use of ICT in education and other disciplines.

Webster, L. (2018). How to create group chats on Facebook. Retrieved from https://smallbusiness. chron.com/create-group-chats-facebook-30176.html.
The article comprehensively discusses the steps on how to create group chats using Facebook. Other features of Facebook that could be used to support online communication between teachers and learners are also explained in the article.

Ensure the positive use of ICT to facilitate the teaching and learning process