



Republic of the Philippines  
Department of Education  
TEACHER EDUCATION COUNCIL

MODULE

3

PHILIPPINE PROFESSIONAL STANDARDS FOR TEACHERS

# PPST

## Resource Package

15.2 APPLY A RANGE OF TEACHING STRATEGIES TO DEVELOP CRITICAL AND CREATIVE THINKING, AS WELL AS OTHER HIGHER-ORDER THINKING SKILLS



**MODULE 3**

**APPLY A RANGE OF TEACHING STRATEGIES TO DEVELOP CRITICAL AND CREATIVE THINKING AS WELL AS HIGHER-ORDER THINKING SKILLS**

**CONTENTS**

- 1. Introduction
- 2. Objectives
- 3. Key Concepts
- 4. Competencies
- 5. Illustrative Examples
- 6. Assessment
- 7. References
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- 9. Glossary
- 10. Acknowledgments







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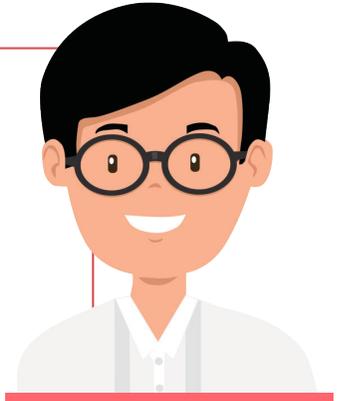
# INTRODUCTION TO TEACHER RESOURCE PACKAGE

*Hello, dear Teacher!  
Welcome to this Resource Package.*



**I am Teacher Jen!**

**And I am Teacher Mike!**



We are members of your support group. Together with your principal, master teacher, and co-teachers, we are pleased to be your guides and companions as you walk through the modules.

Are you ready?

We begin by letting you know how the journey started for us in putting together this resource package.

In August 2017, 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 others, 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.

These modules are standalone sections that you can select based on your needs and interests. This means that you can choose and read any module that is most relevant to you. You can take your time in familiarizing yourself with any one module with no pressure to finish reading all 12.

This resource package:

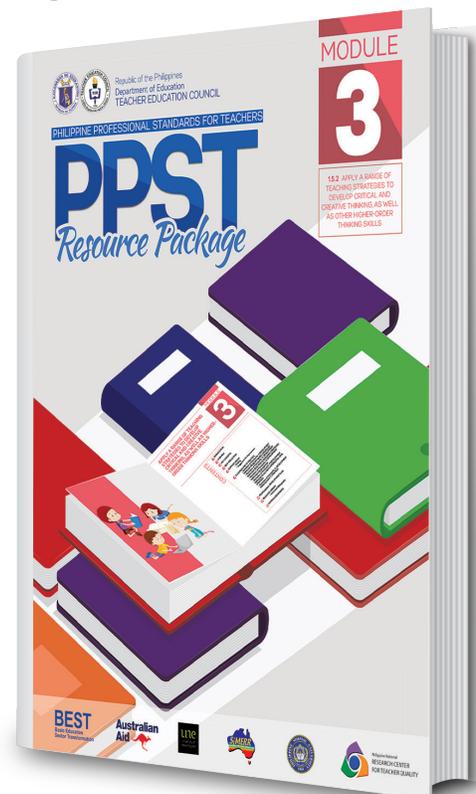
- serves as your guidebook towards becoming better acquainted with the PPST;
- comprises 12 modules corresponding to the 12 indicators that are aligned with the Results-based Performance Management System (RPMS); and
- contains illustrative and instructive information that you will find realistic, sensible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

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

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 indicators;
- want to mentor beginning teachers so they become better in their practice;
- are a 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 on practices using the samples in the resource 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 package.

***If learning is your passion,  
this resource package is for you.***





### *What can you expect to find in each module?*

You will discover that each module discusses a specific indicator, defines its key concepts and provides relevant illustrations of practice that may help you understand and attain the indicator.

The modules explore the following indicators:

#### **MODULE 1**

1.1.2 Apply knowledge of content within and across curriculum teaching areas.

#### **MODULE 2**

1.4.2 Use a range of teaching strategies that enhance learner achievement in literacy and numeracy skills.

#### **MODULE 3**

1.5.2 Apply a range of teaching strategies to develop critical and creative thinking, as well as other higher-order thinking skills.

#### **MODULE 4**

2.3.2 Manage classroom structure to engage learners, individually or in groups, in meaningful exploration, discovery and hands-on activities within a range of physical learning environments.

#### **MODULE 5**

2.6.2 Manage learner behavior constructively by applying positive and non-violent discipline to ensure learning-focused environments.

#### **MODULE 6**

3.1.2 Use differentiated, developmentally appropriate learning experiences to address learners' gender, needs, strengths, interests and experiences.

#### **MODULE 7**

4.1.2 Plan, manage and implement developmentally sequenced teaching and learning processes to meet curriculum requirements through various teaching contexts.

#### **MODULE 8**

4.4.2 Participate in collegial discussions that use teacher and learner feedback to enrich teaching practice.

#### **MODULE 9**

4.5.2 Select, develop, organize and use appropriate teaching and learning resources, including ICT, to address learning goals.

#### **MODULE 10**

5.1.2 Design, select, organize and use diagnostic, formative and summative assessment strategies consistent with curriculum requirements.

#### **MODULE 11**

5.2.2 Monitor and evaluate learner progress and achievement using learner attainment data.

#### **MODULE 12**

5.4.2 Communicate promptly and clearly the learners' needs, progress and achievement to key stakeholders, including parents/guardians.

## PART OF THE MODULES



The module contains the following parts:



**OVERVIEW** introduces you to the indicator and why you need to achieve the indicator;



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



**KEY CONCEPTS** defines key concepts pertinent to the indicator;



**SUPPORT GROUP** allows you to consult and collaborate with our 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 and development needs and plans for specific action for professional development; and

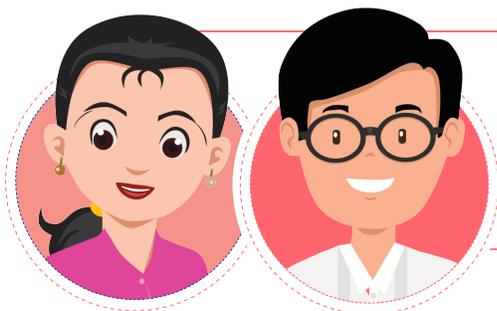


**RESOURCE LIBRARY** provides you with resources (which may include bibliography, forms, templates, appendices and links) that can help you further understand the indicator.

Each module takes you through a journey of exploration and discovery, while you learn more about the indicator and you apply it in your teaching context.

We encourage you to actively engage with the text as you read through the module.

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



We, Teacher Jen and Teacher Mike, will be with you every step of the way.

*Have a happy journey.*





# APPLY A RANGE OF TEACHING STRATEGIES TO DEVELOP CRITICAL AND CREATIVE THINKING, AS WELL AS HIGHER-ORDER THINKING SKILLS

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Hello! I am Teacher Jen. Welcome to Module 3. I invite you to look at the illustration below.



How's the teacher in the illustration? Is he really facilitating critical thinking among his students?

As Proficient teachers, we come to class every day with a hope that we will make learning for every learner meaningful. Equipped with sufficient knowledge and skills, we embrace the world of diverse learners. One of the challenges we face is how to engage them into classroom activities that foster critical, creative and higher-order thinking skills.

More than making our learners remember what we teach, we also want them to use the knowledge they learn to analyze problems, evaluate options and create solutions. This can only be possible when learners are provided with classroom environments that develop and nurture their thinking skills.

#### In this module, we will focus on:



**STRAND:** Strategies for developing critical and creative thinking, as well as other higher order thinking skills



**INDICATOR:** 1.5.2 Apply a range of teaching strategies to develop critical and creative thinking, as well as other higher-order thinking skills



## KEY CONCEPTS



Understanding the following significant concepts facilitates deeper appreciation of the indicator and helps you deliver lessons that are responsive to creative, critical, as well as higher-order thinking skills. So, let us now acquaint ourselves with the following key concepts.



**TEACHING STRATEGIES.** These refer to the structure, system, methods, techniques, procedures and processes that a teacher uses during instruction. These are strategies the teacher employs to assist student learning.

**CREATIVE THINKING SKILLS.** These are thinking skills that involve exploring ideas, generating possibilities and looking for many right answers rather than just one.

**CRITICAL THINKING SKILLS.** These are high level thinking skills such as analysis, evaluation, interpretation, or synthesis of information and application of creative thought to form an argument, solve a problem, or reach a conclusion.

**HIGHER-ORDER THINKING SKILLS.** These are complex thinking processes which include analysis, evaluation, synthesis, reflection and creativity.



## SELF-REFLECTION



Let us first reflect on current practice regarding our application of teaching strategies for developing critical, creative, and other higher-order thinking skills.



Considering the key concepts, I have written down my reflections on this.

KNOWLEDGE	SKILLS	ATTITUDES
<p><b>As a Proficient Teacher, I know...</b></p> <p><i>... the diversity of personal experiences of my students, given their individual familial, social and cultural backgrounds.</i></p>	<p><b>As a Proficient Teacher, I do...</b></p> <p><i>...various classroom activities that give my pupils opportunities to analyze, explore, and create new concepts.</i></p>	<p><b>As a Proficient Teacher, I feel...</b></p> <p><i>...that learners become productive when the activities I give encourage them to think beyond and without restrictions.</i></p>



Now, it's your turn to reflect on your knowledge, skills and teaching strategies to develop the learners' critical, creative, and other higher-order thinking skills



KNOWLEDGE	SKILLS	ATTITUDES
<p><b>As a Proficient Teacher, I know...</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><b>As a Proficient Teacher, I do...</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><b>As a Proficient Teacher, I feel...</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>



## SUPPORT GROUP



Welcome to our support group! We are here to help you enrich your teaching practice.

Below are current practices of teachers in the classroom. Take time to read and compare the strategies they used.



**Two Grade 5 Science teachers teach the same competency in Science: S5MTlc-d-2 Investigate changes that happen in materials under the following conditions: 2.2 application of heat.**

Teacher A delivers a lecture on the changes that happen to certain materials under the application of heat. In her discussion, she asks her learners questions, such as “What happens to paper when it is burned?” To evaluate their learning, she provides them with a worksheet that contains questions about the topic.

Teacher B at the beginning of the lesson asks “What will our lives be without heat?” Then, she poses the question “What will happen to the different materials when they are subjected to heat?” She then elicits answers from the class and writes them on the board. After, she guides the learners to conduct experiments on the effect of heat on various materials. She then allows them to present and explain their findings. As an enrichment activity, she asks them to think of a new device that produces heat and to identify its function.



What can you say about their instructional practice? Please answer and reflect on the probing questions on the following page.



## Probing



Below are some of the key questions that you may answer to help Teacher A and Teacher B improve their practice.



**1** In what way(s) do the teachers' practice differ?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

**2** Which teacher practice is more engaging for the learners? Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

**3** Which teacher practice will create more meaningful learning experience for the learners? Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

**4** Which teacher practice demonstrates a strategy to develop critical thinking?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

## Suggestions for Improvement



You are doing a wonderful job! Here are our suggestions for you to further enrich your current practice.



The teacher's application of instructional strategy is crucial in the development of critical, creative and higher-order thinking skills.

In the presented sample teacher practice, both teachers work on similar content but deliver it differently.

Teacher A's traditional lecture method centers on the role of teachers as transmitters and sources of knowledge. Consequently, learners are viewed as passive receivers of information.

On the other hand, Teacher B demonstrates guided inquiry in instruction. She engages the learners through problem-based activities. She encourages them to experiment, to test their hypotheses, and to communicate their findings. As post-teaching activity, she asks them to create as an extension and application of what the learners learn in the class. These strategies stimulate them to infer, make decisions, formulate ideas and solve complex problems.

We need to remember that our instruction should apply a range of strategies to develop creative, critical and higher-order thinking skills. Our learners are thinking and creative individuals. Our role then is to unleash the creativity in each of our learners.



Wow! We hope we are able to help you! You can incorporate your suggestions in your lesson next time.





## ILLUSTRATIONS OF PRACTICE



Teacher Mike and I will walk you through the different illustrations of practice that apply a range of teaching strategies to develop critical and creative thinking, as well as other higher-order thinking skills.

We hope you'll have fun! Let's go!

### ILLUSTRATION OF PRACTICE NO. 1:

## Development through Problem-Based Strategies



Read the following practices of teachers using problem-based learning.



- 1 Mila, an elementary Science teacher, facilitates the teaching process that will enable her learners to describe the effects of a typhoon on the community (S5FEIVe-5).

To allow her learners to demonstrate profound understanding of this competency, she engages her class to work on a problem-based task as presented below:

#### **Application :**

Your community is prone to destructive typhoons. In groups of 5, think of a possible structure of a typhoon-proof house. Explain the reasons behind its structure.

- 2** Maritess, an elementary Araling Panlupunan teacher, enables her learners to patronize locally made products (AP6TDK-IVgh-7: Naiuugnay ang kahalagahan ng pagtangkilik sa sariling produkto sa pag-unlad at pagsulong ng bansa).

To facilitate understanding of the topic, she employs a group activity:

### **Pangkatang Gawain**

Bilang mga empleyado ng isang advertising company, naatasan kayong ipromote ang local na produkto ng inyong bayan. Gumawa ng isang ad campaign para rito.



It can be noted that problem-based learning (PBL) can be employed in all learning areas and all levels. As you noted with the cited illustrative practices, PBL as a teaching method uses complex real-world problems to promote student learning of concepts and principles. Aside from the understanding of content, it promotes critical thinking skills, problem-solving and communication skills. Likewise, it can provide opportunities for working in groups, finding and evaluating materials and life-long learning (Duch, Groh, and Allen, 2001).



### **HOW TO DO IT?**

Problem-based learning can be implemented by considering these steps (Duch, Groh, and Allen, 2001).

1. Choose a learning goal for the learners to attain at the end of instruction.
2. Think of a real-world context for the understanding of the content. Build realistic applications of the concept being taught.
3. Identify the teaching contexts where the problem may be introduced. In doing such, be guided by these questions:
  - a. What open-ended questions can be asked?
  - b. What learning issues will be identified?
  - c. How will the problem be structured?
  - d. What resources will the students need?
  - e. What end product will the students produce at the completion of the problem?
4. Evaluate the learners' performance using appropriate tool/s and provide feedback. Make and deliver activities/exercises aligned with the lesson objectives.

## ILLUSTRATION OF PRACTICE NO. 2:

## Development through Effective Questioning Strategies



Teacher Joe reads a story to his Grade 4 learners. After reading the story, he asks among his learners questions about it. .

Let's take note of his effective questioning strategies by focusing on the set of questions he prepared for the class:

- a. Who were the characters in the story?
- b. Why was the mouse so eager to go to the seashore?
- c. Why were his parents alarmed by his decision?
- d. What challenges did he encounter on his way to the seashore?
- e. What do you think did the parents mean when they say "the world is full of terror" Do you agree with what they said? Why or why not?
- f. What could be another way for the mouse to pursue his dream?
- g. If you were to pursue your own dream, how would you do it?

As you note, these questions require the learners to recall information from the text read. These call for low-order thinking skills like remembering. These questions, answered by single responses, are called convergent questions.

On the other hand, these questions require learners to answer by analyzing, synthesizing, and evaluating. These are divergent, open-ended questions and may have multiple answers.

**Apply a range of teaching strategies to develop critical and creative thinking skills, as well as higher-order thinking skills**

From the practice, effective questioning can be used as an important classroom tool to develop critical, creative and higher-order thinking skills. It is also important that teachers like you have deep understanding of the learning objectives as constructed.

According to McComas and Rossier (2005), if you want your students to recall and remember certain knowledge, ask them low-level convergent questions; however, if you want to see if students understand and are able to transfer knowledge, ask them divergent questions. Similarly, they indicated that low-level divergent questions should be asked to see if students can make inferences, find the causes and effects of an issue, and make generalizations; on the other hand, to make them speculate, make evaluations, and think creatively, they should be asked high-level divergent questions.

As teachers, we should have a profound understanding of how learning goals are structured so we can formulate questions appropriate to the levels of thinking we want to develop among our learners.

To develop critical thinking among your learners, your questioning should encourage them to analyze, evaluate and create with sample tasks as presented in the table:

lower order thinking skills			higher order thinking skills		
remember	understand	apply	analyze	evaluate	create
recognizing • identifying recalling • retrieving	interpreting • clarifying • paraphrasing • representing • translating exemplifying • illustrating • instantiating classifying • categorizing • subsuming summarizing • abstracting • generalizing inferring • concluding • extrapolating • interpolating • predicting comparing • contrasting • mapping • matching explaining • constructing models	executing • carrying out implementing • using	differentiating • discriminating • distinguishing • focusing • selecting organizing • finding coherence • integrating • outlining • parsing • structuring attributing • deconstructing	checking • coordinating • detecting • monitoring • testing critiquing • judging	generating • hypothesizing planning • designing producing • constructing

Source: Table adapted from Anderson and Krathwohl (2001) pp. 67-68, as cited in <http://www.celt.iastate.edu/wp-content/uploads/2015/09/RevisedBloomsHandout-1.pdf>



**HOW TO DO IT?**

For your quick guide, please take note of the following considerations (Illinois Center for Innovation in Teaching and Learning):

HOW TO ASK?	WHAT TO DO WITH STUDENTS' RESPONSES?	WHAT TO DO WHEN LEARNERS DON'T RESPOND?
Decide on your goal for asking the questions.	Reinforcement: You should reinforce student responses and questions in a positive way in order to encourage future participation.	Redirect: When your student responds to a question, you can ask another student to comment on his statement. One purpose of using this is to enable more learners to participate.
Ask questions that require an extended response or, at least, a "content" answer. Avoid Yes-No questions. Refrain also from asking implied response questions, e.g., Don't we all need to follow traffic rules?	Probing. As a questioning strategy, this encourage learners to explore initial comments. Probes are useful in getting students more involved in critical analysis of their own and other students' ideas.	Rephrasing: When your student provides an incorrect response or no response, you may: <ul style="list-style-type: none"> <li>a. reword the question to make it clearer.</li> <li>b. provide additional information for the learner.</li> <li>c. break the question into manageable parts.</li> </ul>
Phrase your questions so that the task is clear to students.	Adjust/Refocus: When a student provides a response that appears out of context, you can refocus to encourage the learner to tie his or her response to the content being discussed.	Using "wait time": Employ "wait time" between asking a question and doing something else (calling on a student or rewording the question). Give the learners one to three seconds for them to comprehend the questions.

## ILLUSTRATION OF PRACTICE NO. 3:

## Development through Visualization



Mhawi teaches Grade 7 English. In order to develop the creative and critical thinking skills of his learners, he uses visualization strategy in his lesson on *The Centipede* by Rony V. Diaz.

Let us take a look at the procedures employed in his class.

**Teacher Mhawi:** I will read an excerpt from the story *The Centipede* by Rony V. Diaz. As I read to you, I will visualize the text in my mind.

“Beyond the ipil grove, in a grass field we spotted a covey of brown pigeons. In the open, they kept springing to the air and gliding away every time we were within range. But finally, they dropped to the ground inside a wedge of guava trees. My father pressed my shoulder and I stopped. Then slowly, in a half-crouch, we advanced. The breeze rose lightly; the grass scuffed against my bare legs. My father stopped again. He knelt down and held my hand.”

(Teacher Mhawi takes 5 minutes to sketch what’s on his mind. After that, he shows to the class his sketch.)

Now, I will read a passage for you to visualize. Close your eyes and create an image based on the text read. Accomplish the Sketch-to-Stretch template based on your interpretation of the excerpt. Do not worry about your sketches.

**Sketch-to-Stretch**

Directions: Sketch your response to the excerpt in the box below. Remember not to worry about artistic quality; just sketch your reaction.



Teacher Mhawi incorporates visualization strategy in his English class. It is a creative thinking strategy which promotes insight, enhances creativity, expands imagination, and strengthens problem-solving skills. This strategy opens up thinking by using sensory information to stimulate imagination with both spoken and written words (Calagua & Tenally, 2014).





### HOW TO DO IT?

So how do you teach students to use visualization? Here are some points to consider when using visualization strategy (Miller, 2004):

1. Teachers should directly model the thought processes involved in visualizing. They should read familiar text and describe the images they see in their mind.
2. Read a passage for students to visualize. Choose something that is descriptive so they can easily create vivid images in their mind. Explain to students that when they visualize, it is important to use their background knowledge and words in the text to help them imagine a picture in their mind. It is important students understand that there is not one correct answer. For younger students, start with an object and describe it by color, size, shape and smell. Ask students to close their eyes and create an image.
3. Students should share their images with a partner. They can use the "Think, Pair, Share." technique. After forming an image, they should pair up with a partner, and share what they have visualized. Allow students to choose their own subjects to describe to each other.
4. Teachers should use a different selection from the same text and ask students to illustrate while they listen to the teacher read a passage. Students should share and discuss their images.
5. Students should practice the strategy frequently. They should use visualization during read-alouds and silent reading. Teachers should incorporate both drawings and mental imagery to meet the needs of all students.

**ILLUSTRATION OF PRACTICE NO. 4:**

**Development through Plus, Minus, Interesting (PMI) Strategy**



Teacher Mandy prepares her learners to facilitate discussion in their carpentry class. Their class is working on the following competency: formulate safety nets to control hazards and risks in the work place (TLE\_IACP7/8ID-Oi2).

Take note of the activity using the PMI Tool in Teacher Mandy's class.

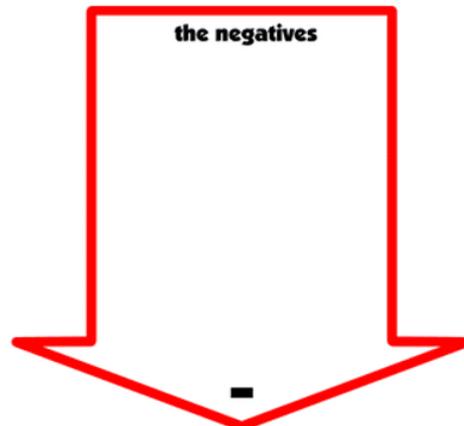
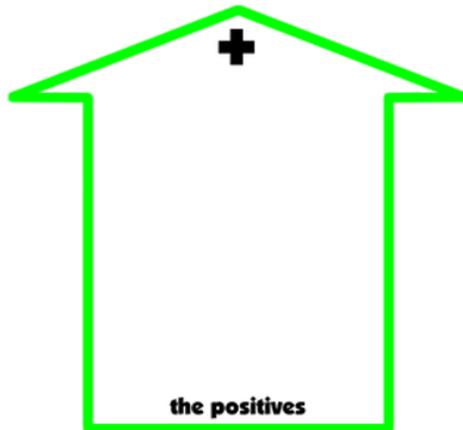


Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Activity No. 1**  
*PMI Your Thoughts*

**?**  
**question** You are working on a project of restoring an ancestral house in the locality. You noticed that there are hazards and risks in your workplace. What are the positive, negative and interesting points you can derive from the situation?



**!**  
**interesting**

PMI by Edward deBono



Teacher Mandy exposes the learners to PMI (plus, minus, interesting) strategy. It is a brainstorming, decision making and critical thinking tool. It is used to encourage the examination of ideas, concepts and experiences from more than one perspective. PMI was developed by Dr. Edward de Bono, a proponent of lateral and critical thinking.

This is simply represented by this three-column chart:

P	M	I



#### HOW TO DO IT?

The following might help you in using PMIs:

##### Step 1. Consider the Plus Points

In this step, simply enumerate all of the positive things you can think of. Don't critique yourself along the way; simply spill out all the positive points that you can think of.

##### Step 2. Consider the Minus Points

In this step, enumerate all of the negative things you can think of. Again, don't critique yourself. Simply spill out all the negative points you can think of.

##### Step 3. Consider the Interesting Points of the Situation

In this step, enumerate all the interesting points that you can think of. Rather than positive or negative, they are simply points of interest that you should direct your attention to.

##### Step 4. Make your conclusion

In this step, you make your judgement because you've scanned and organized three important aspects: the positives, the negatives, and the interesting.

ILLUSTRATION OF PRACTICE NO. 5:

## Development through Role, Audience, Format and Topic (RAFT) Strategy



The learners in Teacher Maricris' class learn about the relationship between the visible constellations in the sky and the Earth's position along its orbit in their Grade 9 Science class.

After the discussion of all the topics, Teacher Maricris prepares a culminating activity for her learners through Role, Audience, Format and Topic (RAFT).

Take time to ponder on the RAFT activity.

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Grade and Section: \_\_\_\_\_

Directions: Choose one row.

Role	Audience	Format	Topic
Super giant star	Younger stars	Dialog	A look back on my life
Moon	Astronauts	Advice column	What to expect when you visit
Constellation	Earth	Letter of concern	We are growing apart
A planet	Protoplanets	Motivational speaker	You, too, can be a strong independent planet



It can be noted that Teacher Maricris does not only focus on the content subject area but also develops the critical and creative thinking skills of the learners through the use of RAFT strategy. According to Buehl (2009), RAFT is a writing strategy that helps learners understand their role as a writer and they can communicate their ideas effectively. It also helps the learners focus on their writing task and discover ideas from writing. By using this strategy, the teacher can encourage the learners to write creatively and effectively.





Having seen how Indicator 3.1.2 can be achieved, you are now better equipped to develop your learners' critical and creative thinking skills, as well as other higher-order thinking skills.

Further, below are illustrations of practice that you may consider in aligning your teaching practices with this indicator.

Happy working!

#### OTHER ILLUSTRATIONS OF PRACTICE

#### The teacher challenges learners cognitively to advance high-level thinking and discourse.

##### CRITICAL THINKING

- The teacher asks directive and purposeful questions to exercise learners' problem-solving and decision-making skills.
- The teacher encourages learners to ask questions not just to provide answers but to nurture their problem-solving skills.
- The teacher allows time for learners to ponder on questions, issues or problems.
- The teacher gives learners a variety of experiences that prompt learners to formulate, infer, make decisions, consider possibilities, make judgements and solve complex problems, e.g.,
  - writing reflective journals to state their stand, to reason out, and to present both sides of an issue or argument,
  - participating in peer group activities where members analyze arguments, judge the credibility of every statement, interpret the statements, and generalize ideas,
  - reflecting on what they know, what they will learn and what they have learned.
  - categorizing things in many possible ways.

##### CREATIVE THINKING

- The teacher employs divergent thinking strategies which encourages learners to think "out of the box" by asking them to define a problem, provide solutions and explain implications of the solution. Learners think of many different and unusual ideas and points of view, then adds details to improve those ideas.
- The teacher uses instruction that is designed to aid learners in finding meaning in an academic material and keep it by connecting it to their daily lives, e.g.,
  - providing opportunities for open-ended questions and questions with multiple responses,
  - finding relationships between two seemingly unrelated ideas.
- The teacher uses visualization strategies where learners are tasked to create mental images of something that cannot be seen or that does not exist.
- The teacher employs Creative Dramatics where learners explore ideas through physical activities (e.g., pantomime, mirrors, debriefing).
- The teacher uses analogy where learners compare similar objects or abstract processes (direct) or write about something in another's perspective (personal).

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**OTHER HIGHER-ORDER THINKING**

- The teacher gives learners opportunities to assess their own work based on the learning goals and make necessary adjustments.
- The teacher teaches learners how to think aloud through modelling (e.g., Thinking Hats).
- The teacher engages learners to think aloud about engaging themselves on a problem. Pupils are paired where one is the problem solver and the other is the listener. The pair shares experience with the group (i.e. thinking aloud through collaborative inquiry).

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**Learners extend the discussion by inviting comments from their classmates and challenging one another's thinking.**

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**CRITICAL THINKING**

- The teacher creates an environment where teacher and learners can freely communicate with each other, express ideas and exchange views that others may not necessarily agree with.

**CREATIVE THINKING**

- The teacher asks learners to offer multiple varied solutions to complex problems through brainstorming.

**OTHER HIGHER-ORDER THINKING**

- The teacher adopts activities that allow learners to monitor their learning (i.e. learning logs, wrap-up, reflective narratives).

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**Learners themselves ensure that all voices are heard in the discussion.**

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**CRITICAL THINKING**

- The teacher ensures that questions are within the learners' level of ability or within the context of their experiences.

**CREATIVE THINKING**

- The teacher generates creative ideas from learners by providing a "big picture" of what they are learning for them to have something to think flexibly about.

**OTHER HIGHER-ORDER THINKING**

- The teacher uses cooperative group work where learners are tasked to discuss understanding, evaluate their own work and other's work, and reflect on learning.
-



## PROFESSIONAL DEVELOPMENT PLAN



After you have explored the different key concepts on applying a range of teaching strategies to develop critical and creative thinking, as well as other higher-order thinking skills, you now have a better appreciation of the indicator. Based on your learning in this module, think of what you can do to enhance your professional development.



Fill in the personal action plan below.

<b>STRENGTHS</b> <i>What are the skills you are good at?</i>	<b>DEVELOPMENT NEEDS</b> <i>What are the skills you need to improve?</i>	<b>ACTION PLAN</b> <i>What can you recommend for your development intervention?</i>	<b>TIMELINE</b> <i>When will you implement your plan?</i>	<b>RESOURCE NEEDED</b> <i>What assistance/resources do you need to implement the plan?</i>



## RESOURCE LIBRARY



We also provide you with resources that can help you further understand the indicator.



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*This web page presents visualization as a proven strategy used to improve reading comprehension and provides step-by-step plan on how to teach visualization*

**TEACHER EDUCATION COUNCIL**

**Leonor Magtolis Briones**  
Secretary  
Department of Education

**Allan B. De Guzman, Ph.D.**  
Luzon Zonal Representative

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Mathematics Subject Representative

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Social Studies Subject Representative

**SECRETARIAT**  
**Runvi V. Manguerra, Ph.D.**  
Executive Director II

**Jayson A. Peñafiel**  
Education Program Supervisor

**ACKNOWLEDGEMENTS**

**PROJECT TEAM**

**Gina O. Gonong, Ph.D.**  
Joint Project Team Leader and Director  
PNU-RCTQ

**John Pegg, Ph.D.**  
Joint Project Team Leader and Director  
UNE-SiMERR

**Christine Reading, Ph.D.**  
Senior Research Fellow  
UNE-SiMERR

**Michael Wilson I. Rosero**  
Senior Research Officer  
PNU-RCTQ

**Mikkey Mari M. Tuazon**  
Research Officer  
PNU-RCTQ

**PNU-RCTQ and UNE-SiMERR National Research Centre**

**Jennie V. Jocson, Ph.D.**  
Deputy Director, PNU-RCTQ

**Allan S. Reyes, Ph.D.**  
Senior Program Manager, PNU-RCTQ

**Joy Hardy, Ph.D.**  
Deputy Director, UNE-SiMERR

**Ken Vine, Ph.D.**  
Principal Research Adviser  
UNE-SiMERR

Support Staff  
Silvia Danieli  
June Billings  
Ambrose McDermott

Glinore Morales  
Beverly Estocapio  
Ruby Gantalao  
Luis Angelo Abergas  
Lyndon Morales  
Guillen Nabong  
Ezra de Jesus

**WRITER-COORDINATORS**

**Jennifer E. Lopez**  
Education Program Supervisor  
Region IV-A

**Maria Concepcion Beltran - Montenegro**  
Faculty, Ateneo de Manila University

**WRITERS**

Adelyn R. Bartolome  
Domingo R. Cueto  
Alfred James A. Ellar  
Mark Anthony P. Idang  
Gerlie C. Lopez  
Francis Victor A. Medrano  
May Grace D. Salazar  
Shiela Niña Rea-Santes  
Ryan G. dela Torre  
John Paul dela Rosa  
Grace Urbien-Salvatus  
Karina Angela C. Celestial  
Arlene M. Hernandez  
Christian Mespher A. Hernandez

**REVIEWERS**

**Shirley N. Cerbo**  
**Jerome A. Chavez, Ed.D.**  
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**Vivian I. Buhain, Ed.D.**  
**Philip Jay N. Alcoberes, Ph.D.**  
**Allen U. Bautista, Ed.D.**  
Maricel D. Ambid  
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Florpinia B. Galay

Sandra A. Garcia  
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Natividad V. Nacino  
Aufric Alma N. Navarro  
Carlo Donato E. Olivan  
Jose Ariel S. Padsuyan  
Jennifer M. Rojo  
Gemma A. Realo  
Neil Vincent C. Sandoval

**EDITOR**

Myrna L. Macalinao, Ph.D.

**GRAPHICS & LAYOUT ARTIST**

Raymond S. Bermudez

**AUSTRALIAN EMBASSY**

**Francesca Lawe-Davies**  
First Secretary-Education

**BASIC EDUCATION SECTOR TRANSFORMATION (BEST) PROGRAM**

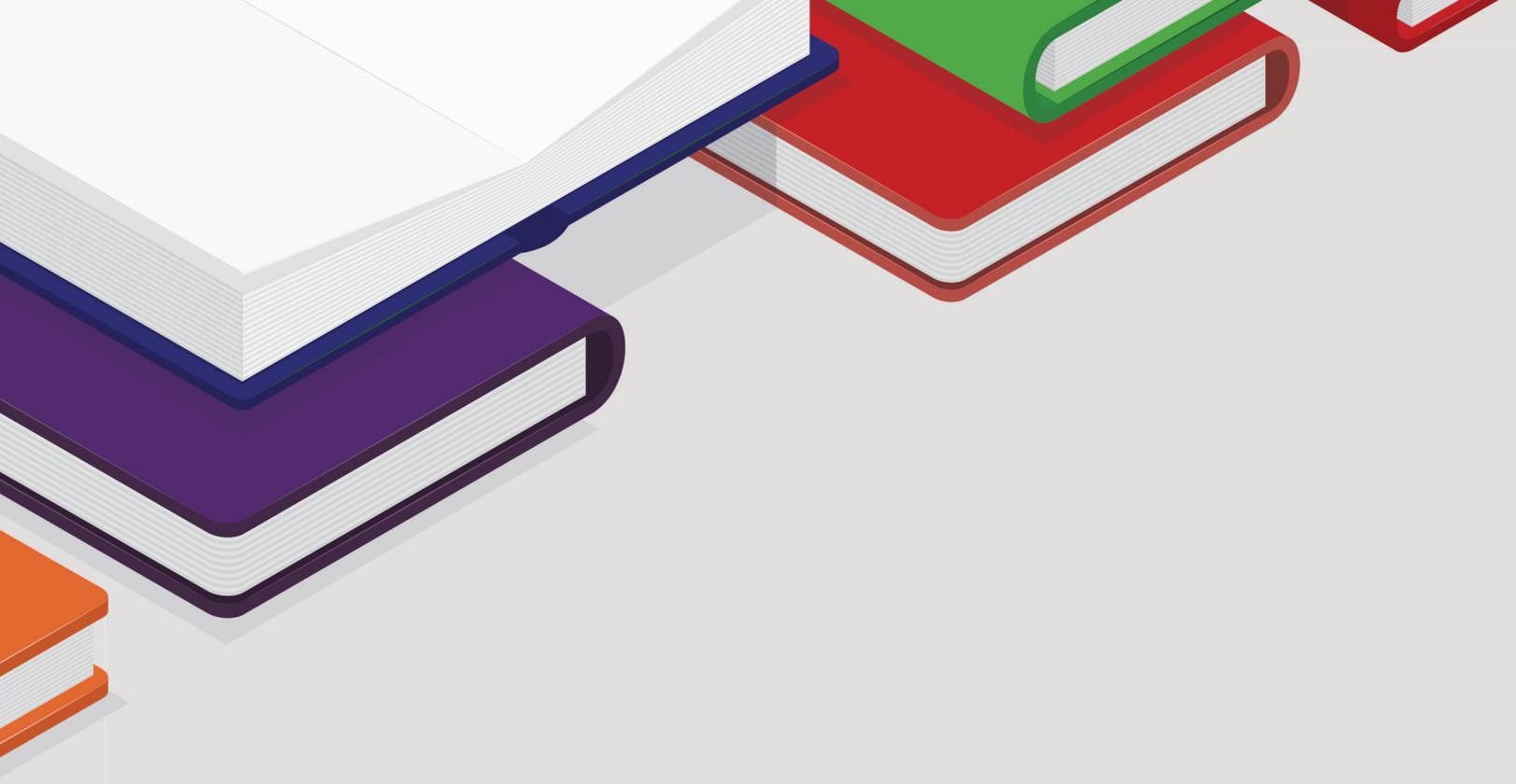
**Kaye Cox**  
Team Leader

**Alison Atwell, Ph.D.**  
Component Lead  
Teaching and Learning

**Soledad L. Lecaroz**  
Teacher Development Adviser

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