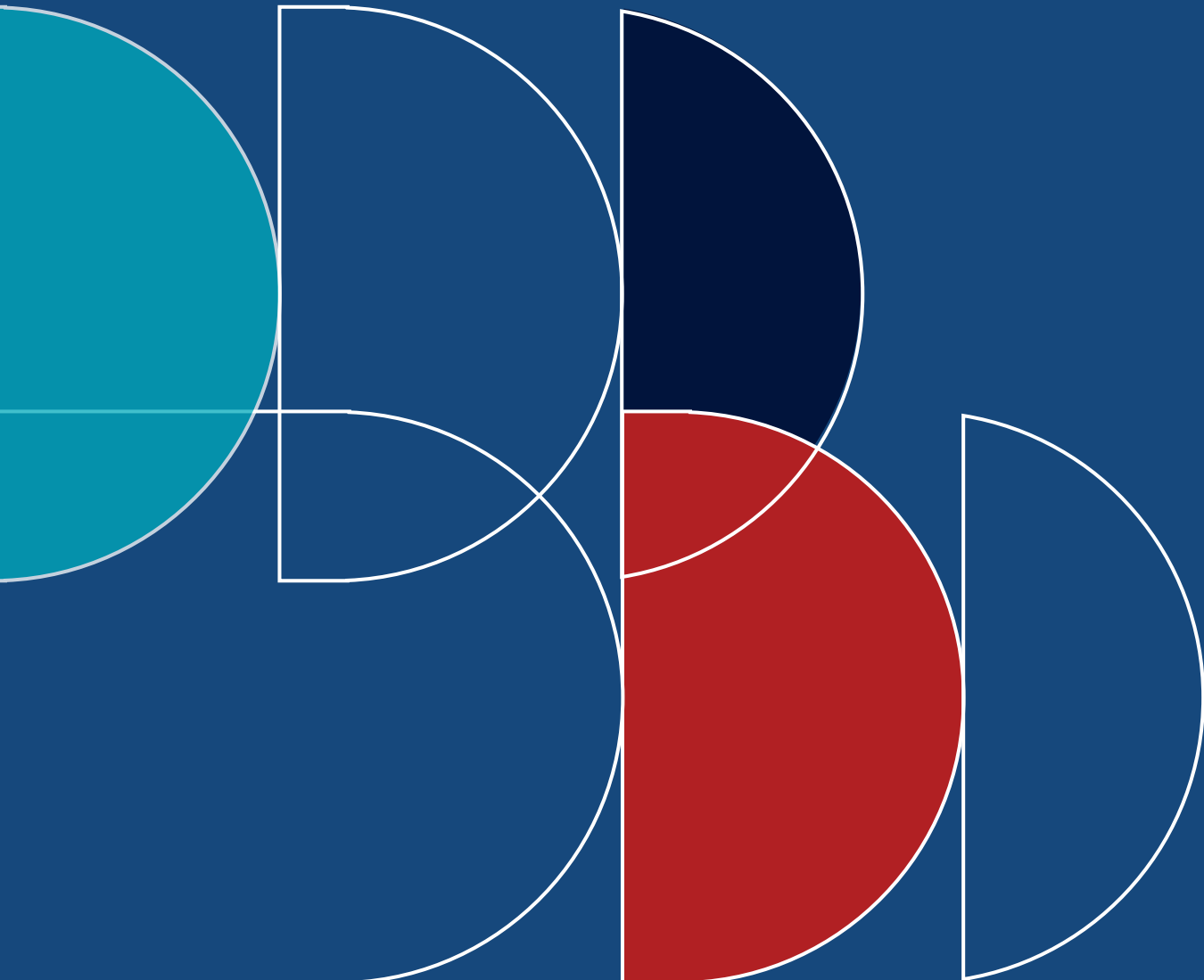


ACTRC

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Designing Professional Development Methods:

An Evidence-Based
Guide



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Introduction

Recently, major efforts have been made to restructure and enhance professional development (PD) of teachers and school leaders in the Department of Education (DepEd).

The significance of high-quality teaching and leadership in improving learning outcomes is widely acknowledged. As indicated in Republic Act No. 10533 (Enhanced Basic Education Act of 2013) and professional standards for teachers and school principals, providing professional development opportunities to teachers and school leaders to improve their skills and knowledge is a key priority. Although these policies laid the groundwork for improving PDs, a systematic review of Philippine PD programs from 2013 to 2023 revealed significant challenges in implementing training programs (Prudente et al., 2024). Systemic factors such as limited funding, insufficient resources, and gaps in program design have impacted the outcomes of PD programs.

The National Educators Academy of the Philippines (NEAP), the training arm of DepEd, has recently undertaken efforts to streamline its PD programs to guarantee they meet the principles of quality assurance, accessibility, and inclusivity for a diverse range of educators. Existing policies made in partnership with NEAP such as DepEd Memorandum No. 44, s.2023, govern the planning, implementation, and evaluation of training programs at various structural levels (regional, division, and school-based training). However, the current memo may need specific guidance on designing PD programs, particularly on the “methodology” for each training session. Providing specific guidance on designing PD can significantly improve their effectiveness, helping teachers to confidently apply their knowledge and skills in the school setting. When a program incorporates strategies that research has shown to be effective, it can positively influence educators and enhance student learning.

This handbook can be used as a complementary resource to DM No. 44 s.2023, offering evidence-based mechanisms for designing effective PD programs. You will be introduced to an effective model for professional development for the Philippines. The model is based on a systematic review and meta-analysis of 104 peer-reviewed studies, commissioned by the Education Endowment Foundation (EEF) (Sims, et al., 2021) and is designed to promote, deliver and design high quality learning opportunities. The EEF model provides support for teachers to develop their teaching by focusing on four key groups of expertise and providing a number of mechanisms within each group.#

Mechanisms are evidence-based methodological strategies that can be used within the design of a professional development program. They serve as the foundational components or “building blocks” that make a PD program effective, and programs with more of these components are more likely to achieve desired results. Therefore, prioritizing mechanisms is essential when designing or selecting PD programs because they are likely the key factors influencing teacher practice and student achievement. Schools are encouraged to invest in evidence-based, high-quality programs with proven success in improving student learning. When such programs are not available, creating or choosing PD that incorporates a variety of mechanisms offers the best chance for success.



A useful way to think about mechanisms is to think about toothpaste. You're able to purchase a range of different toothpastes. There are different types, such as toothpaste targeted at whitening, or toothpaste targeted at reducing sensitivity; and there are different brands with very specific ingredients from specific companies. However, the key mechanism that you will want in any toothpaste you use is fluoride, the specific, replicable, observable ingredient that prevents cavities. A toothpaste is more likely to be effective in reducing cavities if it includes fluoride.

When designing and selecting PD, we're looking to identify and incorporate the 'fluoride', the mechanisms that are likely to alter teacher practice and improve pupil outcomes.

(Education Endowment Foundation 2023).

#Here we have used the Presenting Information From a Credible Source mechanism (page 14) to help motivate you.



BUILD KNOWLEDGE

- Managing Cognitive Load
- Revisiting Prior Learning



MOTIVATE TEACHERS

- Setting and Agreeing on Goals
- Presenting Information from a Credible Source
- Providing Affirmation and Reinforcement after Progress



DEVELOP TEACHER TECHNIQUES

- Instructing Teachers on How to Perform a Technique
- Arranging Practical Social Support
- Modeling the Technique
- Providing Feedback
- Rehearsing the Technique



EMBEDDING PRACTICE

- Embed Practice
- Prompting Action Planning
- Encouraging Monitoring
- Prompting Context-specific Repetition

Effective PD programs include at least one mechanism from each of the four groups in their design. This Guide will introduce you to the 14 Mechanisms that comprise the four groups and will provide guidance about adult learning principles that have been proven effective for teachers (Educational Endowment Foundation, 2023), activities to consider, reflective questions and applications for best practice.



Learning Goals/Objectives

By working through this Guide, you will develop your ability to:#

- 1. Identify the mechanisms for effective professional development design**
- 2. Use the mechanisms when designing professional development programs**

#Here we have used the Setting and Agreeing on Goals mechanism (page 14) to help motivate you.

How to Use this Guide

This guide is arranged using the four key groups of mechanisms as the structure – you will be introduced to each group in turn. Within each group, the mechanisms are introduced one-by-one. You will learn the characteristics of each mechanism and have an opportunity to test your learning using the Analysis Tasks.

After the mechanisms within a group have been introduced, examples are provided using familiar contexts. This illustrates how mechanisms can be integrated within professional development methodologies. Within these examples, you can practice finding the mechanisms and noting which of their characteristics are present. You may also find opportunities in the examples where an additional mechanism could have been used. Answers are provided at the end of the guide.

The rubric below can be used to self-assess your grasp of the mechanisms and their characteristics. To achieve the Beginner/Competent level, you must perform well in the Analysis Tasks, by meeting the specified criteria. To achieve the Proficient level, you need to complete the Annotated Example Tasks by correctly identifying the mechanisms and their characteristics.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Identifies the mechanisms for effective professional development design	Identifies examples of the mechanisms and their characteristics present within training materials	Matches characteristics to the mechanism	Connects the mechanism to the group

Once you are familiar with the groups and mechanisms, the next step is to practice using them as you design professional learning. At the end of each Group section is an Apply to Practice Task. To complete these tasks, you will need to choose a PD program that you would like to design or revise. The PD program you choose should already have at least the learning goals/objectives and an overview of the sessions. In the Apply to Practice Tasks, you will insert mechanisms from the group into a professional development methodology, illustrating your ability to use the chosen mechanism/s. As you work through the groups of mechanisms, you will build an entire professional development methodology that is effective at changing the practice of participants.

The following rubric can be used to assess your Apply to Practice Tasks. You can use it for reflection, or others can use it as the basis of feedback.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Use mechanisms when designing professional development programs	Balances the use of mechanisms across professional development program to maintain participant interest	Locates mechanisms to meet the learning needs of the participants	Includes mechanisms in the professional development methodology design

We have used some of the mechanisms in our design of the Guide. The first time we use a mechanism, we have added a footnote so you can see it as an additional example.



Build
Knowledge

Build Knowledge: Mechanisms that Build Knowledge

Mechanisms that build knowledge are used to support teachers to take on new information. There are two mechanisms in this section:

- Managing Cognitive Load
- Revisiting Prior Learning

Try to incorporate at least one of these mechanisms into the methodology you use for any professional development you design or present.

Mechanism: Managing Cognitive Load

When presenting new information as part of professional development, careful thought should be applied to managing the cognitive load of participants. This could involve the following characteristics:

- Removing less relevant content
- Focusing only on the most relevant content
- Varying their presentation via the use of multiple examples
- Employing strategies such as dual coding, which is the combination of verbal and visual instruction

For example: making the appropriate number of slides for the length of the professional development, minimising the amount of information on a slide, and giving 'brain breaks' between sections of information.

Analysis Task: Managing Cognitive Load

Which of the following are examples of managing cognitive load?

- a) Creating a list of the most relevant and immediate bullet points (in red), less relevant, (in yellow) and points for interest (in green)
- b) Removing any content from the main part of your presentation and providing in an Appendix or as 'between' session considerations
- c) Asking participants to complete all required reading prior to starting the PD program
- d) Asking participants to summarize the main points of one of your sessions using a picture or drawing.

Check your responses using the answers at the end of the Guide.

Mechanism: Revisiting Prior Learning

PD is more likely to be effective where designers:

- Revisit previous topics or techniques later in the program
- Quiz participants on information provided in past sessions
- Use tasks that require teachers to draw on past learning

For example: using recall activities such as a gamified quiz, picture analysis, word cloud, polls, group tasks or open-ended question at the start of the session.

Analysis Task: Revisiting Prior Learning

Which of the retrieval practices listed below would you consider are effective approaches for revisiting prior learning before introducing new information?

- a) A short 'Recall/Revisit' quiz at the start of your session
- b) Entry and exit cards determining prior learning
- c) Informal questioning of participants about what they learned previously
- d) Requesting participants draw or sketch what they have learned

Check your responses using the answers at the end of the Guide.



Examples in Context: Build Knowledge

Here is an illustrative example of a scenario from a professional development program that uses mechanisms from the Build Knowledge group. Please annotate it by noting where the Build Knowledge mechanisms are, recognizing that a single activity within a PD program may contain more than one mechanism. Write additional notes where you can see an opportunity to add more features of Build Knowledge mechanisms to improve the PD.[#]

Context: For the In-Service Training (INSET), the designer prepared PD sessions to support teachers in assessing learning competencies. One of the aims of the training is to enhance teachers' knowledge and skills in preparing assessment tasks that target the new set of competencies.

Challenges: Initially, there were several problems identified during the planning phase. First, the slide deck featured an extensive overview of the history of paper and pencil tests and theoretical perspectives of assessments. The session included six hands-on activities, which may overwhelm the participants due to the cognitive load of engaging with multiple new strategies in a limited timeframe. Furthermore, feedback from previous INSETs revealed a common barrier. Many teachers struggled to recall key assessment principles, causing them to disengage from the training and carry out unrelated tasks.

Strategies: The designer revised the slide deck to include essential information about the topic and several examples of assessment tasks. The designer created an initial activity where the facilitator asked the participants what they can recall about formative assessment and summative assessment. The participants entered their answers via a live poll. The facilitator asked one of the participants to create a working definition of formative assessment and summative assessment based on the answers in the poll. Using the responses and working definitions, the teachers were asked to sort what activities can be categorized as formative and summative. For incorrect responses, immediate explanations were given to clarify misconceptions and reinforce understanding.

Before proceeding to the next part of the session, the facilitator provided a 3-minute brain break where the teachers could stretch and breathe. These pauses allowed teachers to reflect on the information, consolidate their understanding, and renew their focus. After being reminded by the program management team, the facilitator was direct, clear, and succinct with their talk, especially when demonstrating the selected online assessment tools designed for teachers and students. In applying what was learned, the teachers submitted an exit ticket which asked them to list 3 tools they can use in their lessons.

Outcomes: The content in the slide deck was condensed, containing only the essential context of assessment in the new curriculum. Because the facilitator used a preliminary activity (live poll), the teachers recognized that they have prior knowledge of the topic already. This connection created a bridge between what participants already knew and the new knowledge being introduced. Examples illustrated how these tools could be used to assess the new competencies concepts effectively. Furthermore, the use of verbal explanations with step-by-step visual demonstration of using the online tools assisted the participants in managing the information better and comprehending practical strategies more deeply. As a result, participants felt more confident about implementing these tools in their classrooms.

[#]By using this example, we have used the Modeling the Technique mechanism (page 19) to help you develop your skills in using these mechanisms.

Annotated Example: Build Knowledge

Annotate the example to note where a mechanism is present and which characteristics are incorporated.

- Which mechanisms that build knowledge are contained within the example?
- Which characteristics of each mechanism are present?

Add any opportunities to add a mechanism to your annotations.

Check your responses using the answers at the end of the Guide.

Self-assess against the rubric based on your corrected responses to tasks you have completed so far within this group. If you have reached the proficient level, you are ready to continue. If not, please review the earlier materials.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Identifies the mechanisms for effective professional development design	Identifies examples of the mechanisms and their characteristics present within training materials	Matches characteristics to the mechanism	Connects the mechanism to the group

Apply to Practice: Build Knowledge

Using mechanisms within your practice requires many considerations. Here are some questions to reflect on when incorporating Build Knowledge mechanisms in your practice.

1. If you do not cover all 'bullet point' requirements of your PD session, but are able to develop some in detail, do you consider that your participants will be disadvantaged?
2. If responding to participants' needs and interests means you may not cover all required points, how do you handle this tension?
3. Look at the design of your PD program. At what stage of your program are participants likely to experience the highest cognitive load? Where will you include this mechanism in your design?
4. If some of your participants have not understood material from a previous session, what will you do to support them?

Apply to Practice Task: Build Knowledge

1. Within the PD program you want to design or revise, identify locations in the PD program where knowledge is being built.
2. Are there already Build Knowledge mechanisms in those locations? Are there opportunities to add mechanisms to better support participants to build their knowledge?
3. Select which of the Build Knowledge mechanisms are most appropriate to use at each location.
4. Consider the use of Build Knowledge mechanisms across the program as a whole. Adjust the use of the mechanisms to provide variety and ensure the load on participants is manageable.
5. Use the rubric to self-assess your use of the Build Knowledge mechanisms within the PD program you have designed/ revised. If you have reached Competent or Proficient, you are ready to progress to the next group.[#]

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Use mechanisms when designing professional development programs	Balances the use of mechanisms across professional development program to maintain participant interest	Locates mechanisms to meet the learning needs of the participants	Includes mechanisms in the professional development methodology design

Summary: Build Knowledge

When presenting new information, the Managing Cognitive Load mechanism asks you to consider removing less important content, focusing on only the most relevant content, varying your presentation, using multiple examples, and employing strategies such as dual coding to manage the cognitive load of your participants.

It is important that you understand the knowledge and skills your participants have recalled from previous sessions. Using the Revisiting Prior Learning mechanism at the commencement of each session will help your participants recall what they already know and provide you as the facilitator consider if there are aspects that need to be revisited.

[#]By providing a rubric here we have used the Encouraging Self-Monitoring mechanism (page 26) to help you embed these mechanisms in your practice.



Motivate Teachers

Motivate Teachers: Mechanisms that Motivate Teachers

Mechanisms that motivate teachers are used to support teachers to integrate new information into their work. There are three mechanisms in this section:

- Setting and Agreeing on Goals
- Presenting Information from a Credible Source
- Providing Affirmation and Reinforcement After Progress

Try to incorporate at least one of these mechanisms into the methodology you use for any professional development you design or present.

Mechanism: Setting and Agreeing on Goals

When conscious, specific, and sufficient goals are set during professional development, it is more likely that practice will change, and performance will improve. Goals often work best when the behavior change is explicitly described. For example, if the aim is to improve metacognitive knowledge, a suitably specific goal might be to improve learners' metacognitive knowledge by including explicit modeling of your thinking, through demonstrating and describing your thought processes using a visualiser.

For example: communicating the objectives of the session, citing competencies in the Philippine Professional Teacher Standards, aligning the goals to the school's vision and mission, asking the group about their expectations in the training, or asking the participants to make their own goals prior at the onset of the training.

Analysis Task: Setting and Agreeing on Goals

There are multiple ways that goals for a PD program can be set. Some ways are more trainer-centered and others are more participant-centred. Order the following ways from most trainer-centered (1) to least trainer-centered (3).

- Allowing PD participants to select goals from a set range of possible goals
- Negotiating the PD goals with participants to arrive at agreed goals
- Providing the learning goals to PD participants

Check your responses using the answers at the end of the Guide.

Mechanism: Presenting Information from a Credible Source

The more credible the source of information, the more likely teachers are to change their practice in response. Useful methods that make teachers more likely to follow suit may include:

- supporting a suggestion with published and robust research;
- featuring a prominent education academic to advocate for a change;
- using an expert teacher to promote a particular practice.

For example: selecting resource speakers with relevant knowledge and experience, citing peer-reviewed articles to support the topics, or showing the best practices from a school or expert teachers.

Analysis Task: Presenting Information from a Credible Source

Which of the following are ways to show the information comes from a credible source?

- Explain that you found the information on the internet
- Give reasons why the information is useful for teachers
- Have an acknowledged expert present the information
- Link to a relevant DepEd memo
- Provide links to refereed journal articles

Check your responses using the answers at the end of the Guide.



Mechanism: Providing Affirmation and Reinforcement After Progress

Providing affirmation and reinforcement after a teacher has made an effort to alter their practice, or shown progress in performing a new skill can improve teachers' motivation to act upon professional development. This should come after the change has been attempted (rather than before).

For example: providing a tangible token such as certificates, using a visual chart (e.g. road map) to track the group's progress in the training, or giving positive reinforcement through verbal praises, feedback, or written notes.

Analysis Task: Providing Affirmation and Reinforcement After Progress

Which of the following is an example of Providing Affirmation and Reinforcement After Progress?

- a) Acknowledging the effort someone has made when the technique was used successfully
- b) Acknowledging the effort someone has made when the technique was not used successfully
- c) Drawing attention to improvement in performance of the technique
- d) Encouraging someone to try to use the new technique
- e) Reminding someone of the steps required to use the technique before they practice
- f) Reminding someone of the steps required to use the technique after they practice

Check your responses using the answers at the end of the Guide.

Examples in Context: Motivate Teachers

Here is an illustrative example of a scenario from a professional development program that uses Motivate Teachers mechanisms. Please annotate it by identifying where the Motivate Teachers mechanisms are, noting that a single activity within a PD program may contain more than one mechanism. Write additional notes where you can see an opportunity to add more features of Motivate Teachers mechanisms to improve.

Context: In a professional development (PD) program on classroom management, the program management team aimed to equip novice teachers with the skills necessary to establish and sustain a positive learning environment.

Challenge: In the previous evaluation of training, the teachers expressed disinterest with the topic and uncertainty about the effectiveness of the strategies. The PD designers thought that the disengagement from some participants was caused by the absence of clear individual and collective learning goals.

Strategies: The team restructured the program to include a goal-setting process and a collaborative task. At the onset of the program, the facilitator outlined overarching goals for the training. Displayed on the screen, the goals were explicitly connected to the target competencies outlined in the Philippine Professional Standards for Teachers (PPST). Participants were encouraged to set personal goals that are connected to their teaching contexts. These goals were shared with the group, with the facilitator providing feedback to every response and reminding participants to keep their personal goals because they would refer to them later in the PD.

The facilitator incorporated research evidence to validate the recommended strategies. In the Analysis phase of the PD session, a recent meta-analysis from a reputable education journal was included, citing the effectiveness of behavior-specific praise (BSP) as a technique for maintaining positive behavior among students. Additionally, the facilitator referenced a local case study that demonstrated the successful application of BSP in an elementary classroom. Key findings from both studies were summarized in the presentation, and QR codes linking participants to the full articles were included for further reading.

Then, the facilitator invited an expert teacher with extensive experience using BSP to co-present during the session. The expert shared real-life examples of how BSP strategies were implemented in their classroom, including a brief demonstration. In a collaborative activity, the teachers were given the chance to practice demonstrating classroom management strategies they had learned. Both the facilitator and peers provided positive and constructive feedback. Sentence starters such as “What stood out in your output is...,” “What I like about your output is...,” and “You can even improve this by...” were used to emphasize performance strengths and provide constructive feedback. The references and links to additional articles and resources on classroom management were provided at the end of the presentation. This is for the participants to access a broader evidence base for further exploration and application.

Outcome: Teachers reported feeling more confident about adopting BSP strategies, knowing that the methods were both evidence-based and successfully implemented in local contexts. The published research and practical examples contributed to the credibility of the training. This combination of research and testimony motivated the participants to apply the strategies in their own classrooms.

Annotated Example Task: Motivate Teachers

Annotate the example to note where a Motivate Teachers mechanism is present and which characteristics are incorporated.

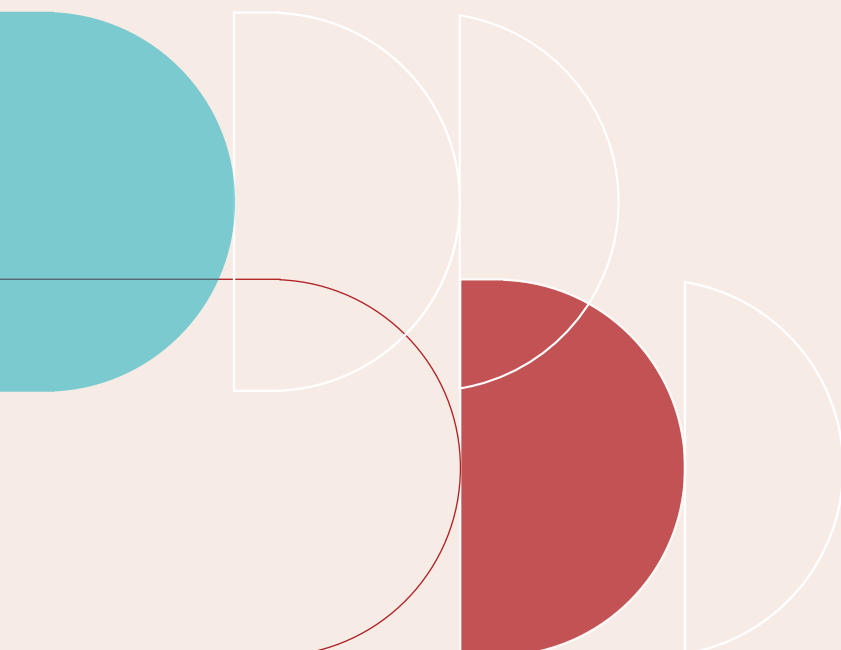
- Which mechanisms motivate teachers are contained within the example?
- Which characteristics of each mechanism are present?

Add any opportunities to add a Motivate Teachers mechanism to your annotations.

Check your responses using the answers at the end of the Guide.

Self-assess against the rubric based on your corrected responses to tasks you have completed so far within this group. If you have reached the proficient level, you are ready to continue. If not, please review the earlier materials.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Identifies the mechanisms for effective professional development design	Identifies examples of the mechanisms and their characteristics present within training materials	Matches characteristics to the mechanism	Connects the mechanism to the group



Apply to Practice: Motivate Teachers

Using mechanisms within your practice requires many considerations. Here are some questions to reflect on when incorporating Motivate Teachers mechanisms.

1. How will you determine that participants have understood your intention for each of your sessions?
2. How will you know if the learning goals you have set at the start of each session are agreed to by all your participants?
3. What is the best way to signal to your participants that the information is from a credible source? If you give lists of readings from academic papers, will your participants be able to access and/or understand them? What other methods can you use?
4. How will you extend participants who wish to do extra reading/learning on the topics you are presenting?
5. When will you structure opportunities for your participants to practice? How will you use these opportunities to provide feedback?
6. How will you manage to give feedback to everyone? Can you streamline processes so the load on yourself or other trainers is manageable?
7. What will be your approach if a participant does not accept your feedback?

Apply to Practice Task: Motivate Teachers

1. Within the PD program you want to design or revise, identify locations in the PD program where teachers may need motivation.
2. Are there already mechanisms from this group in those locations? Are there opportunities to add mechanisms to better motivate participants?
3. Select which of the mechanisms from this group are most appropriate to use at each location.
4. Consider the use of mechanisms from this group across the program as a whole. Adjust the use of the mechanisms to provide variety and ensure the load on participants is manageable.
5. Use the rubric to self-assess your use of the Motivate Teachers mechanisms within the PD program you have designed/revise. If you have reached Competent or Proficient, you are ready to progress to the next group.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Use mechanisms when designing professional development programs	Balances the use of mechanisms across professional development program to maintain participant interest	Locates mechanisms to meet the learning needs of the participants	Includes mechanisms in the professional development methodology design

Summary: Motivate Teachers

Setting and Agreeing on Goals for what should be achieved in a session or program is useful if the goals are realistic, specific and clearly stated. If a behavior change is required, then explicit explanation of what is required by the goal is required.

Presenting Information from a Credible Source, in the form of references or experts in the field, to justify the methods and assertions you recommend and use in your PD will enhance the credibility of your presentation.

Providing Affirmation and Reinforcement After Progress to participants recognizes the effort or change in practice and can improve motivation.



Develop Teacher Techniques

Develop Teacher Techniques: Mechanisms that Develop Teacher Techniques

Mechanisms that Develop Teacher Techniques are used to support teachers to be able to enact new learning. There are five mechanisms in this section:

- Instructing Teachers on How to Perform a Technique
- Arranging Practical Social Support
- Modeling the Technique
- Providing Feedback
- Rehearsing the Technique

Try to incorporate at least one of these mechanisms into the methodology you use for any professional development you design or present.

Mechanism: Instructing Teachers on How to Perform a Technique

PD programs that incorporate clear and guided instruction on how to enact specific techniques are more likely to positively impact pupil attainment.

For example: using explicit or guided instruction and asking scaffolding questions.

Analysis Task: Instructing Teachers on How to Perform a Technique

When teaching participants how to perform the three steps within a THINK, PAIR, SHARE, thinking routine (Ritchart, et al., 2011), which of the following would be considered instruction on how to perform the technique?

- a) Demonstrating each of the three steps
- b) Playing a video of an expert teacher using the three steps with a group of students
- c) Providing an explanation of what is involved in each of the three steps
- d) Prompting participants to brainstorm possible actions under each of the three steps
- e) Providing a graphic to help remember the three steps
- f) Use a matching task where participants match the steps with explanations

Mechanism: Arranging Practical Social Support

Peers often share a common language, culture, and knowledge regarding the problems they face in the classroom and are often able to provide emotional or informational assistance that supports a trainee in improving their practice. This could be offered using a variety of methods, e.g. coaching, regular meetings to discuss progress, and teachers working in pairs or triads.

For example: disseminating the knowledge and skills learned from the training by sharing them in a Learning Action Cell (LAC) session or Collaborative Expertise session.

Analysis Task: Arranging Practical Social Support

Which of the following would be effective ways of developing coaching support for a participant who lives in a remote area and is unable to access the usual support assistance.

- a) Invite participant to attend via Zoom
- b) Include participant in breakout rooms
- c) Include participant in all activities where possible
- d) Pair the participant with a person who can attend in person
- e) Arrange Zoom follow-up sessions with participant providing topics of discussion
- f) Create group chats for the participants providing topics of discussion or arranging conference calls when possible.

Mechanism: Modeling the Technique

Modeling is an effective way to help participants learn a technique, or improve their use of one. Providing an observable sample (model) of performance, either directly in person or indirectly (via film or pictures) allows participants to reflect on or imitate the sample. This could be videos of what effective practice looks like, or having it modeled by an expert practitioner.

Example: demonstrating the technique, showing a video depicting the technique being studied, showing worked examples or non-examples, and providing guided activities.

Analysis Task: Modeling the Technique

When teaching participants how to perform the three steps within a THINK, PAIR, SHARE, thinking routine (Ritchart, et al., 2011), which of the following would be considered modeling?

- a) Demonstrating each of the three steps
- b) Playing a video of an expert teacher using the three steps with a group of students
- c) Providing an explanation of what is involved in each of the three steps
- d) Prompting participants to brainstorm possible actions under each of the three steps
- e) Providing a graphic to help remember the three steps
- f) Use a matching task where participants match the steps with explanations

Mechanism: Providing Feedback

Supportive and formative feedback from coaches or peers can have a positive impact on performance. This should be clearly differentiated from high-stakes lesson observations linked to appraisal targets.

Examples: providing opportunities for feedback either done in collaborative groups or one-on-one sessions with a coach, using structured statements like “Praise-Question-Suggest” and regularly checking in with the participants.

Analysis Task: Providing Feedback

Which of the following provide feedback to a teacher on their practice of a technique?

- a) Explaining which parts of their practice align with the taught technique
- b) Explaining which parts of their practice do not align with the taught technique
- c) Telling them they are a good teacher
- d) Telling them they performed the technique correctly

Mechanism: Rehearsing the Technique

Prompt practice and rehearsal of a technique, at least once in a context outside of the classroom or training situation, may support teachers to enhance their skills and embed new habits. The rehearsal should occur at a time other than when the participant is using it in their practice. For example, they should rehearse a technique after learning about it during training and prior to using it when teaching their students.

Examples: Working one-on-one with a mentor, using the technique during an actual observation, and demonstrating the technique to your colleagues during LAC sessions.

Analysis Task: Rehearsing the Technique

In which of the following situations is the participant rehearsing the new technique?

- a) Using the technique during a roleplay within the training
- b) Demonstrating the technique to another participant for feedback
- c) Practicing the technique with their colleagues back at school
- d) Using the technique with their students during a lesson

Examples In Context: Develop Teacher Techniques

Here are two illustrative examples of a scenario from a professional development program that uses Develop Teacher Techniques mechanisms. Please annotate it by identifying where the mechanisms are, noting that a single activity within a PD program may contain more than one mechanism. Write additional notes where you can see an opportunity to add more features of Develop Teacher Techniques mechanisms to improve the PD.

Context: As part of the National Mathematics Program, a school district created a professional development (PD) program that focuses on equipping teachers with high-impact instructional strategies to strengthen pupils’ conceptual understanding of basic numeracy skills. The session caters to novice elementary teachers who are supporting pupils in their remediation sessions.



Challenge: The program management team identified two challenges. First, the teachers needed clear guidance on implementing the selected instructional strategies effectively in their classrooms. Second, participants expressed concern about the lack of ongoing support after the training, implying a need for structured feedback and peer collaboration.

Strategies: The facilitator began the session by presenting research evidence on the effectiveness of Concrete-Representational-Abstract (CRA) Approach. The participants were introduced to various manipulatives. A live demonstration followed, with the facilitator modeling how place value blocks and counters can be used in teaching counting and introducing addition. Then, the participants collaborated in small groups, discussing how to adapt CRA for their specific classroom contexts. The facilitator guided these discussions, providing practical suggestions. As the sessions progressed, teachers were gradually introduced to the other components of CRA approach, along with practical strategies for its implementation. The training was enriched with sample lesson plans and instructional videos to provide clear examples to support their understanding and application of this teaching method. As the final output of the training, the teachers were asked to modify their existing remediation plan to incorporate CRA. A team of facilitators went around to provide feedback about their work. The facilitator also encouraged participants to utilize their Collaborative Expertise Sessions (CES), scheduled twice weekly, to share challenges, offer constructive feedback, and brainstorm solutions for their remediation classes.

Outcome: The combination of live demonstrations, instructional videos, coaching, and CES supported the teachers to feel more confident in implementing CRA. They left the session with a clear understanding of this approach, supported by practical experience and insights. Additionally, the CES system fostered a supportive professional network in the school, which provided a platform for continuous learning. A month after the training, the school district reached out to the participants. The teachers reported greater confidence in integrating CRA into their lessons and they reported better student engagement and learning outcomes.

Scenario 2:

Context: To respond to the secondary teachers' need for PDs on literacy development, a team designed a three-day training to enhance teachers' ability to teach reading across content areas. The training ultimately aims to provide an opportunity for teachers to refine their strategies of promoting reading skills in their own subjects.

Challenge: Some participants expressed reluctance in modifying their instruction to integrate effective reading strategies. A few participants also expressed difficulties about integrating reading-related tasks in their unique classroom contexts.

Strategies: The facilitator, who is an expert in the school division, modeled specific reading techniques, such as using graphic organizers for summarizing a scientific article. As the sessions progressed, teachers actively observed and engaged with facilitators as they demonstrated the integration of various reading strategies into content-specific lessons. Teachers were grouped into triads based on their content areas. Within these groups, they discussed progress, and shared ideas of integrating literacy-related activities in their teaching. Peer coaching sessions were scheduled at the near end of the training where teachers observed each other's lesson demonstrations and provided both positive and constructive feedback. For example: "Your use of a graphic organizer helped students determine the timeline of this era. Next time, you may want to consider..."

After the training, teachers were given weekly prompts to document their implementation of the strategies over two weeks. The prompts included statements such as "Which instructional strategy did you use today, and how did your students respond?" or "What adjustments did you make to fit your content and students' needs?" Participants shared their reflections during a follow-up survey.

Outcome: By modeling the technique and fostering a network of peer support, teachers felt more confident and supported in implementing content area reading in their lessons. Guided practice and constructive feedback helped refine their skills, while the monitoring encouraged them to evaluate their own teaching practice, identify areas for improvement, and make appropriate adjustments to enhance student learning.

Annotated Example: Develop Teacher Techniques

Annotate the example to note where a Develop Teacher Techniques mechanism is present and which characteristics are incorporated.

- Which mechanisms that develop teacher techniques are contained within the example?
- Which characteristics of each mechanism are present?

Add any opportunities to add a Develop Teacher Techniques mechanism to your annotations.

Check your responses using the answers at the end of the Guide.

Self-assess against the rubric based on your corrected responses to tasks you have completed so far within this group. If you have reached the proficient level, you are ready to continue. If not, please review the earlier materials.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Identifies the mechanisms for effective professional development design	Identifies examples of the mechanisms and their characteristics present within training materials	Matches characteristics to the mechanism	Connects the mechanism to the group

Apply to Practice: Develop Teacher Techniques

Using mechanisms within your practice requires many considerations. Here are some questions to reflect on when incorporating Develop Teacher Techniques mechanisms.

1. Can you think of a PD program where you learned a new technique? What experiences did you have during the PD that built your confidence with the technique? Is there a counter example? What happened during an PD program where you didn't learn a technique well enough?
2. Is it possible to provide objective feedback to your participants when you are presenting? If not, how might you provide feedback on performance and behavior of your participants?
3. The saying "Do as I say, not as I do" should not be followed in your position as a leader of a PD program. Can you think of examples of presenters you have observed who have provided positive examples of modeling and performance?
4. When discussing ideas with your participants, use language that is readily accessible. Are there words that you use that could be misunderstood by your participants?



Apply to Practice Task: Develop Teacher Techniques

1. Within the PD program you want to design or revise, what techniques do you want participants to learn during your PD program?
2. Where are opportunities for them to learn and practice/rehearse the techniques located in the program?
3. Are there already mechanisms from this group to help participants develop their skills using the techniques at these locations? Are there opportunities to add mechanisms to better support the learning of the participants?
4. Select which of the mechanisms from this group are most appropriate to use at each location.
5. Consider the use of mechanisms from this group across the program as a whole. Adjust the use of the mechanisms to provide variety in learning, rehearsal, and feedback.
6. Use the rubric to self-assess your use of the Develop Teacher Techniques mechanisms within the PD program you have designed/revise. If you have reached Competent or Proficient, you are ready to progress to the next group.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Use mechanisms when designing professional development programs	Balances the use of mechanisms across professional development program to maintain participant interest	Locates mechanisms to meet the learning needs of the participants	Includes mechanisms in the professional development methodology design

Summary: Develop Teacher Techniques

The Instructing Teachers on How to Perform a Technique mechanism reminds us that being explicit about how to do something can have a positive impact on our professional development participants' attainment. The Arranging Practical Social Support mechanism tells us peers often share a common language, culture, and knowledge regarding the problems they face in the classroom and are often able to provide emotional or informational assistance that supports a trainee in improving their practice. This could be offered using a variety of methods, e.g. coaching, regular meetings to discuss progress, and teachers working in pairs or triads.

Examples shown through videos, worked examples or by the actions of an expert practitioner can help participants understand techniques to use in their own practice. These are examples of the Modeling the Techniques mechanism. Varying the format to include non-written examples can be an advantage, although it is acknowledged that this is not always feasible. To support improvement outcomes for participants making observations and providing formative feedback (the Providing Feedback mechanism) can have a positive effect on performance or a change in behavior. The Rehearsing the Technique mechanism reminds us that practicing, at least once, before using a new technique, may help support the skills and embed the habits of the technique.



Embed Practice

Embed Practice: Mechanisms that Embed Practice

Mechanisms that Embed Practice are used to support teachers to be able to apply new learning. There are five mechanisms in this section:

- Providing Prompts and Cues
- Prompting Action Planning
- Encouraging Self-Monitoring
- Prompting Context-Specific Repetition

Try to incorporate at least one of these mechanisms into the methodology you use for any professional development you design or present.

Mechanism: Providing Prompts and Cues

To ensure that teachers continue to alter and improve their practice, PD may provide a series of prompts and cues that nudge and remind teachers to carry out certain behaviors. The prompts and cues should exist within the teaching environment or social context where the behavior needs to be carried out.

Example: reminding teachers through group chats or emails, posting reflective questions on online discussion boards, posting pubmats to remind teachers, and providing a checklist on using the technique

Analysis Task: Providing Prompts and Cues

Which of the following would be useful as prompts or cues to encourage a change of behavior?

- a) Bookmark containing a reminder to practice
- b) Drop-in session (in-person or online) to discuss content covered in session or program
- c) Follow-up messages after a session or program
- d) Follow-up phone calls or texts after a session or program
- e) Online discussion boards to post reflections after the use of a technique
- f) Poster with graphic of a technique

Mechanism: Prompting Action Planning

Action planning is where a teacher plans how they will perform a technique, and their plan should include details around the context, frequency, duration, and intensity of when they will make use of the technique. It can include lesson planning, where teachers may attempt to use a technique learned in PD in a specific lesson.

Examples: Providing worksheets to facilitate the action planning activity, presenting their action plans to the group, or creating a collage documenting the training experience, accompanied by a caption that includes a brief action plan for implementing the skills learned.

Analysis Task: Prompting Action Planning

Developing an action plan to implement techniques learned and discussed in a professional development program is a useful way of enhancing and continuing the momentum generated in your PD program.

Which of the following elements should your participants include when they develop an action plan?

- a) How they will use the technique in their teaching practice
- b) Their current understanding of the technique
- c) Where/when they will use the technique within their teaching practice
- d) Who will provide them with feedback on the quality of their use of the technique

Mechanism: Encouraging Self-Monitoring

PD may be more effective if it supports participants to monitor and record their own performance. For instance, participants could be provided with reflective journals where they record their actions towards a specific goal and reflect on the success of them. Alternatively, they could keep a record of each time they use the technique and/or a rating of their performance on a pre-determined scale.

Examples: providing writing prompts for journaling, recording one's performance to draw areas of improvement, reminding participants through emails as a monitoring mechanism, or using a checklist to evaluate their own performance after a lesson.

Analysis Task: Encouraging Self-Monitoring

Which of the following are characteristics of self-monitoring?

- a) A record is kept of the action taken
- b) A record is made before the action is taken
- c) Reflections on the action are written
- d) The quality of the action is recorded

Mechanism: Prompting Context-Specific Repetition

Prompting teachers to repeatedly practice new behaviors within a specific context aids their adoption of a technique. This may be repeated rehearsal (Rehearsing the Technique mechanism) or repeated use in the same context as it would usually be delivered—in the classroom. Repeating the same action, at least twice, can support teachers to embed a practice.

Examples: Reminding participants using formal and informal channels to implement the skills learned, recording themselves applying the skill during two separate lessons and reviewing the recordings to identify improvements, and embedding the techniques in regular classroom observations.

Analysis Task: Prompting Context-Specific Repetition

Which of the following are examples of context-specific repetition?

- a) Once during rehearsal and once during teaching
- b) Twice during teaching
- c) Twice during rehearsal

Examples in Context: Embed Practice

Here are two illustrative examples of a scenario from a professional development program that uses Mechanisms that Embed Practice. Please annotate it by identifying where these mechanisms are, noting that a single activity within a PD program may contain more than one mechanism. Write additional notes where you can see an opportunity to add more features of Embed Practice mechanisms to improve the PD.

Scenario 1

Context: In response to the call for integrating 21st-century instructional design principles into the creation of effective learning delivery models, the senior high school science teachers in the School Division X participated in a PD program that focused on equipping them with techniques to integrate project-based learning (PBL) into their lessons.

Challenge: Feedback collected from the session evaluation form showed that participants seemed to be concerned whether they could sustain the use of this strategy in their classes. The program management team explored ways to assess whether participants in the PD program had made attempts to implement the techniques learned to their teaching practice.

Strategies: Teachers were provided with an action planning worksheet to detail how they will apply PBL. The worksheet prompts them to specify the topic they will teach, the frequency of implementation, the activities they will use, and the expected outcomes. Teachers then shared their action plans in small groups, receiving feedback to refine their strategies.



To support the teachers, the program management team made sure that the teachers received resource materials like demonstration videos, slide deck, and annotated lesson plans. At the end of the program, teachers were asked to submit an exit slip with the prompt: “How will you integrate inquiry-based learning into your lessons next week? Which science topic will you target for PBL?”. Two weeks later, follow-up emails were sent reminding participants to review their lesson plans and encouraging them to reflect on their progress. Finally, in an online discussion board the teachers were given a rubric for self-assessment when they use the technique and reflect on their implementation. Teachers can share their insights, challenges, and ideas about implementing PBL.

Outcome: Within a month, 75% of the participants implemented PBL, reporting increased student engagement in their Science classes. The strategies like action planning worksheets, resource materials, follow-up emails, and an online discussion board, supported teachers in sustaining their use of PBL. The online discussion platform fostered active sharing of insights and troubleshooting, while prompts for reflection encouraged continuous improvement. These efforts addressed initial concerns about PBL’s sustainability and boosted teacher confidence in using inquiry-based methods effectively.

Scenario 2

Context: A team designed a two-day PD program for elementary teachers on techniques to incorporate vocabulary-building strategies into their content lessons. The goal is to help students understand and recall content-area subjects like science and social studies.

Challenge: Meanwhile, the team is seeking ways to ensure that teachers apply the strategies and fit them to their context.

Strategies: At the start of the PD program, the facilitator told the audience their post-training output which is to document their implementation of the vocabulary-building strategies in their own classroom. Specifically, these strategies needed to be implemented in two different classes or two different lessons. To encourage teachers, the facilitator explains the concept of context-specific repetition and why teachers need to practice implementing what they learned in PDs multiple times in their classroom settings. Expert teachers were invited as resource speakers and co-facilitators.

To help teachers recall key points in the PD, a resource package was sent to their emails. After the PD, the teachers received weekly follow-up emails that included motivational tips and reflective prompts, such as “What adjustments might you make to improve student understanding?”. Teachers documented their experiences using structured templates, answering questions like “What worked well during the lesson?” and “What challenges arose, and how did you address them?”

The team had set one-on-one virtual check-ins to allow teachers to discuss challenges, share successes, and receive additional guidance. Finally, to receive their certificates, teachers need to participate in an online focused group discussion (FGD) which happened one month after the training. In the FGD, teachers shared insights, analysed student responses, and brainstormed solutions to common obstacles. These discussions allowed the participants to learn from each other’s experiences and refine their approaches. The teachers shared their plans in small groups, receiving peer feedback that helped refine their goals and timelines.

Annotated Example: Embed Practice

Annotate the example to note where a Embed Practice mechanisms are present and which characteristics are incorporated.

- Which mechanisms that embed practice are contained within the example?
- Which characteristics of each mechanism are present?

Add any opportunities to add an Embed Practice mechanism to your annotations.

Check your responses using the answers at the end of the Guide.

Self-assess against the rubric based on your corrected responses to tasks you have completed so far within this group. If you have reached the proficient level, you are ready to continue. If not, please review the earlier materials.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Identifies the mechanisms for effective professional development design	Identifies examples of the mechanisms and their characteristics present within training materials	Matches characteristics to the mechanism	Connects the mechanism to the group

Apply to Practice: Embed Practice

Using mechanisms within your practice requires many considerations. Here are some questions to reflect on when incorporating Embed Practice mechanisms.

1. A regular email or message after your PD session(s) to prompt participants and remind them to embed what they have learned can be useful. What approach would you take if your participants do not respond to these prompts?
2. How can you balance the needs of the participants as they embed the new techniques and understandings into their practice with the demands on your time? What strategies could be feasible in your context?



Apply to Practice Task: Embed Practice

1. Annotate the example to note where an Embed Practice mechanism is present and which characteristics are incorporated.
 - Which mechanisms that embed practice are contained within the example?
 - Which characteristics of each mechanism are present?
2. Add any opportunities to add an Embed Practice mechanism to your annotations.
3. Check your responses using the answers at the end of the Guide.
4. Self-assess against the rubric based on your corrected responses to tasks you have completed so far within this group. If you have reached the proficient level, you are ready to continue. If not, please review the earlier materials.

Learning Goal	Performance Indicators		
	Proficient	Competent	Beginner
Use mechanisms when designing professional development programs	Balances the use of mechanisms across professional development program to maintain participant interest	Locates mechanisms to meet the learning needs of the participants	Includes mechanisms in the professional development methodology design

Summary: Embed Practice

Participants can be assisted to Embed Practice by being supported to continue to change and improve their own practice and reflect on how this can be achieved. Providing Prompts and Cues to participants to remind them of the changes they could make or Prompting Action Planning to encourage them to incorporate what they have learned into the practice after the PD program is finished. Suggesting that participants reflect on their performance and record their thoughts in a reflective journal, or similar, can Encourage Self-Monitoring. Prompting Context-Specific Repetition by supporting the rehearsing and repeating of behavior or techniques to enhance the chance that they are embedded into the practice of participants long into the future.

If you have ten sessions in your PD program, you may like to consider the following guide.

Session	Mechanisms
Sessions 1 & 2	– Predominantly mechanisms from Build Knowledge and Motivate Teachers – Some mechanisms from Develop Teacher Techniques
Sessions 3 & 6	– Some Build Knowledge mechanisms – Predominantly Motivate Teachers and Develop Teacher Techniques mechanisms
Sessions 7 & 8	– Some Build Knowledge and Motivate Teachers mechanisms – Predominantly Develop Teacher Techniques mechanisms
Sessions 9 & 10	– Some Build Knowledge and Motivate Teachers mechanisms – Predominantly Develop Teacher Techniques and Embed Practice mechanisms



Conclusion

/References

/Answers

Conclusion

Designing effective PD programs requires more than including a variety of activities; it requires careful planning of how teachers learn best. This guidebook has outlined a balanced approach to designing effective PD using an evidence-based framework. The mechanisms presented provide a useful methodology for creating PD sessions that result in meaningful teacher growth. Incorporating these mechanisms into your PD designs can also encourage educators to translate what they learned into their teaching practices and, ultimately, enhance student learning outcomes.

Remember to incorporate at least one from each of the four groups of mechanisms into your PD programs. Additionally, keep in mind that a single activity can include multiple mechanisms. For example, a peer-coaching activity may incorporate the Providing Practical Social Support mechanism, the Providing Affirmation and Reinforcement After Progress mechanism, and the Encouraging Self-Monitoring mechanism.

To help you embed the use of the information in this Guide into your practice when you design PD programs, you can make an action plan. In the plan, you may wish to include:

- The goal to use at least one mechanism from each group within your PD methodology
- Prompts/cues for how you will remember to consult the Guide next time you design PD
- Social support that will encourage you to stick to your goal and assist you if you get stuck or need a second opinion.[#]

As you use the mechanisms to design future PD programs, please use the rubrics used in this guide for self-monitoring. Please don't be discouraged if you slip back to lower levels after not using the mechanisms for a time. You may wish to work through the guide to refresh your memory and increase your proficiency levels again or simply use it as a reference to check information about a group or mechanism.

Finally, we encourage you to share this guidebook and your experiences of using this resource to your fellow PD designers. This can be freely accessed at <https://doi.org/10.26188/27978156>. Collaborating and exchanging insights can inspire innovative approaches and strengthen the collective impact of your work. As you refine your PD designs and help educators grow professionally, you contribute to a continuous cycle of improvement that benefits both teachers and learners alike.

[#]By requesting that you make an action plan, we are using the Prompting Action Planning mechanism (page 25) to help you embed the use of the mechanisms into your practice.

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Answers

Analysis Tasks



Build Knowledge

Analysis Task:

Managing Cognitive Load

a, b, d are examples of Managing Cognitive Load

Analysis Task:

Revisiting Prior Learning

a, b, c and d are all effective ways of Revisiting Prior Learning



Motivate Teachers

Analysis Task:

Setting and Agreeing on Goals

1-c, 2-a, 3-b

Analysis Task:

Presenting Information from a Credible Source

c, d and e are ways of Presenting Information from a Credible Source

Analysis Task:

Providing Affirmation and Reinforcement After Progress

a, b, c and f are examples of Providing Affirmation and Reinforcement After Progress



Develop Teacher Techniques

Analysis Task:

Instructing Teachers on How to Perform a Technique

a, b, c, e and f are examples of Instructing Teachers on How to Perform a Technique

Analysis Task:

Arranging Practical Social Support

a, b, c and d are all effective ways of Arranging Practical Social Support

Analysis Task:

Modeling the Technique

a and b are examples of Modeling the Technique

Analysis Task:

Providing Feedback

a, b and d are all examples of Providing Feedback

Analysis Task:

Rehearsing the Technique

a, b and c are all examples of Rehearsing the Technique



Embed Practice

Analysis Task:

Providing Prompts and Cues

a, c, d and f are useful ways of Providing Prompts and Cues

Analysis Task:

Prompting Action Planning

a and c are elements of an action plan

Analysis Task:

Encouraging Self-Monitoring

a and d are characteristics of self-monitoring

Analysis Task:

Prompting context-specific repetition

b and c are examples of context-specific repetition

Annotated Examples

Build Knowledge

Example	Annotations
<p>Strategies: The designer created an initial activity where the facilitator asked the participants what they can recall about formative assessment and summative assessment. / The participants entered their answers via an online tool, creating a live poll. The facilitator asked one of the participants to create a working definition of formative assessment and summative assessment based on the answers in the poll. Using the responses and working definitions, the teachers were asked to sort what activities can be categorized as formative and summative. For incorrect responses, immediate explanations were given to clarify misconceptions and reinforce understanding.</p> <p>Before proceeding to the next part of the session, the facilitator provided a 3-minute brain break where the teachers get to stretch and breathe. These pauses allowed teachers to reflect on the information, consolidate their understanding, and renew their focus. After being reminded by the program management team, the facilitator was direct, clear and succinct with their talk, especially when demonstrating the selected online assessment tools designed for teachers and students. In applying what was learned, the teachers submitted an exit ticket which asked them to list 3 tools they can use in their lessons.</p>	<p>Mechanism: Revisiting Prior Knowledge Mechanism: Revisiting Prior Knowledge</p> <p>Mechanism: Managing Cognitive Load</p> <p>Mechanism: Managing Cognitive Load</p>

Annotated Examples (cont)

Motivate Teachers

Example	Annotations
<p>Strategies: The team restructured the program to include a goal-setting process and a collaborative task. At the onset of the program, the facilitator outlined overarching goals for the training. Displayed on the screen, the goals were explicitly connected to the target competencies outlined in the Philippine Professional Standards for Teachers (PPST). /</p> <p>Participants were encouraged to set personal goals that are connected to their teaching contexts. These goals were shared to the group, with the facilitator providing feedback for every response and reminding participants to keep their personal goals because they would refer to them later in the PD.</p> <p>The facilitator incorporated research evidence to validate the recommended strategies. In the Analysis phase of the PD session, a recent meta-analysis from a reputable education journal was included, citing the effectiveness of behavior-specific praise (BSP) as a technique for maintaining positive behavior among students.</p> <p>Additionally, the facilitator referenced a local case study that demonstrated the successful application of BSP in an elementary classroom.</p> <p>Key findings from both studies were summarized in the presentation, and QR codes linking participants to the full articles were included for further reading.</p> <p>Then, the facilitator invited an expert teacher with extensive experience using BSP to co-present during the session. The expert shared real-life examples of how BSP strategies were implemented in their classroom, including a brief demonstration. In a collaborative activity, the teachers were given the chance to practice demonstrating classroom management strategies they had learned. Both the facilitator and peers provided positive and constructive feedback. Sentence starters such as “What stood out in your output is...”, “What I like about your output is...” and “You can even improve this by...”, were used to highlight strengths of their performance and offer valuable feedback. The references and links to additional articles and resources on classroom management were provided at the end of the presentation. This is for the participants to access a broader evidence base for further exploration and application.</p>	<p>Mechanism: Setting and Agreeing on Goals</p> <p>Mechanism: Setting and Agreeing on Goals</p> <p>Mechanism: Presenting Information From a Credible Source</p> <p>Mechanism: Presenting Information From a Credible Source</p> <p>Mechanism: Presenting Information From a Credible Source</p> <p>Mechanism: Presenting Information From a Credible Source</p> <p>Mechanism: Providing Affirmation and Reinforcement After Progress</p> <p>Mechanism: Presenting Information From a Credible Source</p>

Develop Teacher Techniques

Example	Annotations
<p>Strategies: The facilitator began the session by presenting research evidence on the effectiveness of Concrete-Representational-Abstract (CRA) Approach. The participants were introduced to various manipulatives. A live demonstration followed, with the facilitator modeling how place value blocks and counters can be used in teaching counting and introducing addition.</p> <p>Then, the participants collaborated in small groups, discussing how to adapt CRA for their specific classroom contexts. The facilitator guided these discussions, providing practical suggestions.</p> <p>As the sessions progressed, teachers were gradually introduced to the other components of CRA approach, along with practical strategies for its implementation. The training was enriched with sample lesson plans and instructional videos to provide clear examples to support their understanding and application of this teaching method. As the final output of the training, the teachers were asked to modify their existing remediation plan to incorporate CRA. A team of facilitators went around to provide feedback about their work. The facilitator also encouraged participants to utilise their Collaborative Expertise Sessions (CES), scheduled twice weekly, to share challenges, offer constructive feedback, and brainstorm solutions for their remediation classes.</p>	<p>Mechanism: Modeling the Technique AND Mechanism: Instructing Teachers on How to Perform a Technique</p> <p>Mechanism: Arranging practical support</p> <p>Mechanism: Modeling the Technique AND Mechanism: Instructing Teachers on How to Perform a Technique</p> <p>Mechanism: Rehearsing the Technique AND Mechanism: Providing Feedback</p>

Annotated Examples (cont)

Develop Teacher Techniques (cont)

Example	Annotations
<p>Scenario 2:</p> <p>Strategies: The facilitator, who is an expert in the school division, modeled specific reading techniques, such as using graphic organizers for summarizing a scientific article. As the sessions progressed, teachers actively observed and engaged with facilitators as they demonstrated the integration of various reading strategies into content-specific lessons.</p> <p>Teachers were grouped into triads based on their content areas. Within these groups, they discussed progress, and shared ideas of integrating literacy-related activities in their teaching.</p> <p>Peer coaching sessions were scheduled at the near end of the training where teachers observed each other's lesson demonstration and provided both positive and constructive feedback. For example: "Your use of a graphic organizer helped students determine the timeline of this era. Next time, you may want to consider..."</p> <p>After the training, teachers were given weekly prompts to document their implementation of the strategies over two weeks. The prompts included statements such as "Which instructional strategy did you use today, and how did your students respond?" or "What adjustments did you make to fit your content and students' needs?" Participants shared their reflections during a follow-up survey.</p>	<p>Mechanism: Modeling the Technique AND Mechanism: Instructing Teachers on How to Perform a Technique</p> <p>Mechanism: Arranging Practical Social Support</p> <p>Mechanism: Arranging Practical Social Support AND Mechanism: Rehearsing the Technique AND Mechanism: Providing Feedback Mechanism: Arranging Practical Social Support AND Mechanism: Rehearsing the Technique AND Mechanism: Providing Feedback</p>

Embed Practice Techniques

Example	Annotations
<p>Strategies: Teachers were provided with an action planning worksheet to detail how they will apply PBL. The worksheet prompts them to specify the topic they will teach, the frequency of implementation, the activities they will use, and the expected outcomes. Teachers then shared their action plans in small groups, receiving feedback to refine their strategies.</p>	<p>Mechanism: Action Planning</p>
<p>To support the teachers, the program management team made sure that the teachers receive resource materials like demonstration videos, slide deck, and annotated lesson plans. At the end of the program, teachers were asked to submit an exit slip with the prompt: “How will you integrate inquiry-based learning into your lessons next week? Which science topic will you target for PBL?”. Two weeks later, follow-up emails were sent reminding participants to review their lesson plans and encouraging them to reflect on their progress.</p>	<p>Mechanism: Providing Prompts and Cues</p> <p>Mechanism: Encouraging Self-Monitoring</p>
<p>Finally, in an online discussion board the teachers were given a rubric for self-assessment when they use the technique and reflect on their implementation. Teachers can share their insights, challenges, and ideas about implementing PBL.</p>	<p>Mechanism: Encouraging Self-Monitoring</p>
<p>Strategies: At the start of the PD program, the facilitator told the audience their post-training output which is to document their implementation of the vocabulary-building strategies in their own classroom. Specifically, these strategies needed to be implemented in two different classes or two different lessons. To encourage teachers, the facilitator explains the concept of context-specific repetition and why teachers need to practice implementing what they learned in PDs multiple times in their classroom settings. Expert teachers were invited as resource speakers and co-facilitators.</p>	<p>Mechanism: Prompting Context-Specific Repetition</p>
<p>To help teachers recall key points in the PD, a resource package was sent to their emails. After the PD, the teachers received weekly follow-up emails that included motivational tips and reflective prompts, such as “What adjustments might you make to improve student understanding?”. Teachers documented their experiences using structured templates, answering questions like “What worked well during the lesson?” and “What challenges arose, and how did you address them?”</p>	<p>Mechanism: Encouraging Self-Monitoring</p> <p>Mechanism: Providing Prompts and Cues AND Mechanism: Encouraging Self-Monitoring</p>
<p>The team had set one-on-one virtual check-ins to allow teachers to discuss challenges, share successes, and receive additional guidance.</p>	<p>Mechanism: Encouraging Self-Monitoring (Note: This can also be Mechanism: Providing Feedback)</p>
<p>Finally, teachers were asked to include pictures that capture their use of vocabulary-building strategies in their accomplishment report at the end of the month.</p>	<p>Mechanism: Prompting Context-Specific Repetition</p>

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