Metacognitive Reflection:

**Using metacognitive reflection to enhance your professional development learning.**

## **Why is metacognitive reflection important?**

Metacognition is thinking about how you think and learn. Metacognitive reflection allows you to plan, monitor, assess and make changes to your own learning behaviours and attitudes in order to confront challenges more effectively. It can be understood as “thinking about thinking”, describing higher order thinking that questions why and/or how you interpret a learning experience in a particular way (Flavell, 1979). It is an important part of the critical thinking process which facilitates the ability to identify, interpret, integrate, and articulate knowledge (Bassett, 2016). It does so by enabling you to become aware of your own working habits, how you understand the task at hand, and how you would approach the task based on this prior information (Flavell, 1979; Jiang et al., 2016). As a result, metacognitive thinking is important in higher education—for both students and teachers—because it teaches everyone the skills needed to self-regulate learning, to become more self-aware, and to acquire critical analysis and problem-solving skills (Olin-Scheller & Tengberg, 2017).

## **What are the key benefits of metacognitive reflection?**

Enhancing metacognitive skills means that you are able to recognise your own cognitive abilities, direct your own learning, evaluate your performance, understand what caused your successes or failures, and learn new strategies to enhance future learning.

The key to metacognition is asking yourself **self-reflective questions**, which are powerful because:

* they allow you to take **inventory of where you currently are** (thinking about what we already know);
* **how you learn** (what is working and what is not);
* and **where you want to be** (accurately gauging if you have mastered the material).

Engaging in metacognitive reflection can help you:

* better understand your **strengths and weaknesses;**
* identify and question your underlying **values and beliefs;**
* acknowledge and challenge possible **assumptions** on which you base your ideas, feelings and actions;
* recognize areas of potential **bias or discrimination;**
* acknowledge your **fears;**
* identify possible inadequacies or **areas for improvement.**

Key benefits of metacognitive reflection can be also **categorized** in various ways (Adkins, n.d.; Zohar & Barzilai, 2013):

* **meta-memory (MM):** refers to the self-awareness of your own memory, and helps you make judgement about how much time they may need to complete a task.
* **meta-comprehension (MC)**: refers to your ability to judge your understanding of a given material, and at a broader level how you think about your own thinking.
* **self-regulation/monitoring (SR):** encompasses how you feel about your planning, monitoring, and evaluating of your learning.
* **schema training (ST):** refers to the kinds of training that strengthen skins in the organization and categorization of information, and the relationships between these categories.

## **How can you use metacognitive reflection across the certificates?**

Metacognitive reflection consists of guiding questions for metacognitive reflection in each of the certificates. Thinking metacognitively is the only way to effectively practice new skills/knowledge and teach it, and the changing higher education environment has made teaching metacognition an important aspect of teaching across all fields (Cummings, 2015; Jiang et al., 2016; Lawson et al., n.d.; Olin-Scheller & Tengberg, 2017; Richmond et al., 2017; Steiner et al., 2019; Zohar & Barzilai, 2013). The aim is to reflect on your learning in order to effectively integrate new skills and knowledge into your teaching practice. The reflective questions are generic and apply across all the certificates. There is no requirement for you to use this approach in order to complete a certificate. Nonetheless, we encourage you to use this reflection method in order to effectively integrate what you learn into their teaching practice and to be able to articulate the learning experience (e.g., in your documents). You can use it after completing each component of a certificate—workshop, practicum, deliverable, etc. This method will also help you prepare for the required Certificate Reflection [hyperlink], which you will be asked to submit as the final element of completing a certificate.

# Reflective questions:

## **THINKING ABOUT WHAT YOU KNOW (reflecting on past knowledge and how it changes)**

* Think about an idea from this learning experience (workshop/certificate) that seems familiar to you. Has your understanding of it changed now that you have engaged with it using different material? If so, how, and if not, why do you think that might be the case?
* Think about an idea from this learning experience (workshop/certificate) that challenges a preconceived notion. Why is this the case? Draw on both learning, professional, and embodied experiences.
* Think about external factors that have influenced your thinking about teaching. How do ideas from this learning experience (workshop/certificate) further complicate or enrich your thinking about teaching?

 [Jot down your answers below. You do not have to respond to every prompt.]

## **THINKING ABOUT YOUR LEARNING (reflecting on what you’ve learned)**

* Describe an idea you learned in this learning experience (workshop/certificate) that reminded you of a time in when you were a student. How do you think your past learning experiences informed how you interpreted this idea?
* Think about an idea or engagement in this learning experience (workshop/certificate) that was new and that you found difficult, or that struck you oddly. What made it difficult? Have past learning experiences influenced you to think another way, and if so, how? How would you have approached this task differently in the future now that you know how it is used?
* Reflect on an area of this learning experience (workshop/certificate) that you want to know more about. What follow-up questions do you have about? What could you do to answer this question?

[Jot down your answers below. You do not have to respond to every prompt.]

## **CONNECTING YOUR THINKING (awareness of thinking and its influence)**

* List the skills that you have strengthened because of being a researcher. How do you think these skills influence how you interpret the responsibilities of teaching?
* Consider the various kinds of information organizing techniques you have learned. Which of these organizes information in the clearest way to you and why? Which is the least clear and why? How does the way you organize information affect how you might apply concepts you’ve learned?
* Reflect on a task/practicum/project you completed for this learning experience (workshop/certificate). Assess how you might have approached it differently under different time or environmental constraints.

[Jot down your answers below. You do not have to respond to every prompt.]

## **SITUATING YOUR LEARNING (what is difficult now and what to do about it)**

* Consider your positionality in relation to this learning experience (workshop/certificate). How did you get here? Do you feel like you are progressing as a teacher? How do you know this?
* Think about where you were when engaging a difficult concept. How did your environment impact your learning? How would you have approached this concept in a different environment?
* Consider the resources you have discussed in this learning experience (workshop/certificate). How could you use these to approach your own learning about teaching?

[Jot down your answers below. You do not have to respond to every prompt.]