

LEARNING AND TEACHING STRATEGIES

Recommended Learning Strategies

- A. For each session
- B. Preparation for each session
 - 1) Reading
 - 2) Participation in the Discussion Forum
 - 3) Practice, Practice, Practice

Pedagogical strategies we will use

The course plans to achieve its goals through:

1. A one-hour zoom session once a week, which includes
 - a) 30 to 40 minutes of exposition, and
 - b) 20 to 30 minutes of Q and A
2. Learning materials distributed prior to each zoom session: one chapter of a textbook, around 10 pages per chapter. Each chapter includes a “Research Gym” for practice of research abilities.
3. A discussion forum, where learners are encouraged to ask questions.

RECOMMENDED LEARNING STRATEGIES

You must be familiar with courses that aim at:

- introducing you to the **information** in a body of established knowledge, which you can remember and recall in response to questions. (e.g., What is the atomic weight of lithium? What is the definition of pluripotency? What were the causes of World War II?)
- **applying that information** or knowledge to solve a set of problems at high speed. (e.g., to solve a quadratic equation)

The learning strategies that you have used in such courses **will not help you** with what you would need to learn in this course. So, what learning strategies can you use here, such that you can effectively and efficiently learn what we have to offer?

Here are some tips:

A) FOR EACH SESSION

read the assigned chapter;

come prepared to ask questions, and answer questions;

listen (with attention) to the exposition in the first part of the session (it goes beyond what you have read), to make connections and integrate the new learning with your prior learning.

B) PREPARATION FOR EACH SESSION

1) READING

- a) Read the entire chapter once, and try to summarise the gist of it in a few sentences. Someone who hasn't read the chapter should understand what YOU see as the chapter's core message) from that sentence.
- b) Write down what you learn from the reading.
- c) Work through the exercises in the chapter.
- d) Read the chapter again, this time connecting one or more of its central ideas (concepts and statements) to what you have ALREADY learnt, or have experienced.
- e) Formulate a set of questions such that the summary of the chapter would be the answers to those questions.
- f) Now, expand your summary into a paragraph or two. Again, do it in a way that someone who hasn't read the chapter would get what YOU think is the essence of the chapter.
- g) Ask questions of the form, "What is X?" where X is an important concept in the chapter. Try to answer them to the best of your ability. This is a good way to figure out if you have understood a concept, and how well you have understood it.

If you don't invest time and come prepared for the class discussion along the lines indicated above, you may find it difficult to follow what happens in subsequent sessions.

2) PARTICIPATION IN THE DISCUSSION FORUM

*Once the course begins, you will be part of the course discussion forum. This will be the hub for you to interact with your peers and learn from one another. For effective learning, it is **important** that you are in the habit of:*

- a) **asking questions** about what you do not understand and what you disagree with. and
- b) **responding** to the questions raised by the other participants.

Here are a few pointers for such learning:

- 1) Post your questions in the Discussion Forum. We hope that your questions would trigger a discussion. Such discussion leads to **peer learning**, which is learning achieved through interaction with fellow learners.
- 2) If you find the discussion to be insufficient, send an email to itr@thinq.education
Given that the course has more than a thousand participants, we are not in a position to respond to each of your questions. We will respond to questions that we **judge to be important, and of value to participants in general**.
To help streamline the process, we request that you first discuss your questions in your **Affinity Group**; and those that remain unresolved, send to us as a group, copied to all members of your group.

3) The idea of Affinity Groups

- a) An Affinity Group (AG) is a group of learners who engage in peer learning outside the sessions, on a regular basis.
- b) An AG should have **at least five** members, **and not more than fifteen**. The group membership would remain the same throughout the course (unless there are reasons for a particular learner to join some other AG).
- c) The AG will meet *face to face* or on *zoom* each week, to discuss their learning problems, and seek help from others. They may also exchange their ideas on their own social platform, such as reddit or discord.
- d) Jointly select a **representative** for the group, on a weekly rotation basis. This is to give every member a near-equal opportunity to represent the group. Discuss your questions, answers, and difficulties with the members of the group.

The AG becomes the base for discussions — a way of learning together and helping one another. In this sense, it serves as a support group throughout the course.

- e) If a question is discussed in the group, and the group members are not satisfied with the answer that emerges, the representative can send an email to itr@thinq.education, with a note on the nature of the problem(s) the group faced.

What we have outlined in (1)-(3) is a **learning opportunity**, which we hope you will make full use of.

For posting in the forum, please avoid individual posts, and let the AG representative for the week do the posting on behalf of the group.

3) PRACTICE, PRACTICE, PRACTICE

In most courses where the learning outcomes include skills or abilities, practice is a crucial part of learning. For instance, we cannot learn to swim or play tennis or solve mathematical problems without investing time on practice. Even memorising requires learning through practice.

For something like classical music and classical dance taught by an expert, learners need two kinds of practice:

- *Supervised practice*, where the teacher observes the practice and gives feedback to the learner. This includes practice in the classroom where the feedback is immediate, and practice in homework assignments (exercises, project work) where the feedback involves a time lag.
- *Unsupervised practice*, where the learner sets aside a fixed time each day for practice by oneself, typically in the morning. This is called *saadhakam* in the South Indian tradition, and *riyaaz* in the North Indian tradition.

Saadhakam/Riyaaz is an essential part of research as well, if you wish to acquire research abilities. Systematic intellectual *riyaaz* can happen during a fixed time of the day, as in the case of classical music and dance. But it can also happen in the mind in a fruitful way when one is out for a walk, or taking a shower, or falling asleep, until it becomes an unconscious habit of mind.

PEDAGOGICAL STRATEGIES WE WILL USE

The ability to paint with water colours, or to choreograph a dance within a particular style like Bharathanatyam or Ballet, is best acquired through a form of *apprenticeship* that involves supervised and sustained practice over several years. Such apprenticeship calls for the actual practice of painting and choreographing-dancing.

It is much the same with research abilities. The required apprenticeship cannot be achieved through a textbook, or even through a face-to-face course with a large student cohort.

In this course, we will focus on what *can* be achieved through printed or video materials. Although a video course on water colour painting cannot provide the kind of apprenticeship that a face-to-face class with a master of water colour can, the teacher can *demonstrate techniques and strategies* on video, and take learners through significant *examples* of painting as models to emulate. A learner can then develop to a considerable extent the necessary abilities, through self-monitored practice, though without feedback on the practice. And that is the pedagogical strategy we will adopt in this course to help learners develop their research abilities.

For the understanding component of the course, we will rely mainly on exposition. For the abilities component, we will share exercises for you to do. We will also go through examples of exercises, with commentaries on how and why we are doing them in a particular way. The two components have a symbiotic relation: each enhances the other.

Your success in developing any ability depends not just on supervised practice but also on your systematic as well as incidental *saadhakam / riyaz*.