

3.1 Develop expert learners: Teach students how to learn



Essence >
The teacher develops students' understanding of learning and expands their strategies for thinking, learning and working collaboratively.

Key actions: Teachers

Develop students' learning dispositions

- Model curiosity, excitement and appropriate habits of mind as a learner
- Actively promote risk-taking and discovery, so that students learn to challenge themselves

Develop students' self-concept

- Affirm effort and committed approaches to learning
- Share personal stories of learning, and together reflect on the thinking and feelings involved in learning experiences

Develop students' understanding of how we learn

- Lead students to explore how the human brain functions, and how there are optimal conditions for learning

Develop students' metacognition

- Structure activities in a variety of learning modes, encourage learners to reflect on modes of choice and what they tend to avoid, to increase students' awareness of their strengths and areas for refining their skills
- Teach the language of and specific strategies for thinking, learning and working together

Extend students' learning potential

- Teach strategies, and design opportunities for creative and critical thinking and inquiry
- Deliberately plan for students to use different strategies to reflect on what they have learnt, how they learnt, why it had that outcome and where it might lead

Manage and direct learning

- Create a range of tasks where students can decide to work individually or in groups, and discuss how those decisions affected their subsequent learning outcomes
- Model, teach and reinforce goal setting, time management and organisation procedures and strategies
- Reassure students that learning can be hard and requires persistence and practice

Work collaboratively

- Explicitly teach and articulate strategies for effective collaboration: role taking, listening to and respecting others' points of view, appreciating different contributions and playing your part

Key actions: Students

- Find out how I can use different strategies to help me concentrate
- Develop skills for learning in different ways—be creative and think 'How?', 'Why?' and 'What if?'
- Talk with others about how they learn best, and share tips that work well when we're facing a challenge
- Use time management and organisation skills to make the most of my learning time
- Value other people's help and advice, and keep reflecting on how I'm going
- Keep trying with my learning even when I find it hard

- Identify people such as other students, parents and teachers who have particular strengths, and learn from them and use them as models
- Be prepared to use my strengths to help others learn



If you never change your mind, why have one?
Edward de Bono

Justice alert

Whose learning thrives and whose learning is stifled by classroom norms?

Ways to teach students how to learn

Strategies to support learning:

Useful strategies include Gardner's Multiple Intelligences, Costa's Habits of Mind, Bloom's Taxonomy, and Thinker's Keys. Design tasks for students to experience how these specific approaches help them to learn more effectively.

Metacognitive learning journals:

Learners are capable of higher levels of critical thinking and learning when they are aware of their thought processes. In this style of journal, learners are encouraged and supported to think about their own thought processes after reading or other class activities.

When students discuss ways of thinking with the whole class or with other individual students, it helps them to know their strengths in, or heightens their awareness about, other strategies to try.

Metacognitive Journal	
What I learnt	How I learnt it

Thinking aloud: Provide dedicated time and opportunities for students to verbalise their emerging ideas. Thinking aloud helps students to talk their way into their learning by sorting and clarifying ideas, and putting words to their thinking. Listening to others think aloud provides models of a range of thinking strategies to try.

Reciprocal reading: This is a structured process where students read together and monitor their comprehension by stopping, asking questions and explaining to each other what the text means.

Future-based planning: Learners envisage what it will look like when they've achieved their learning goal. They write/draw it on a flip-chart with a target date; they then decide what they'd have to do the day/week before, then two days/weeks before, then three, moving back in time to the present. They can then ask the question: 'Now, what do I need to do first?'

Continued page 48

Create space for many ways

A great way to get the minds 'ticking' in the morning is to have a 'problem of the day'. Maths problems, such as the Prisoner's Puzzle, provide an exciting challenge for students to work on individually or as a group. The process involves students in thinking about:

- How did I work this out?
- Were there other ways I could have done this?
- Which strategies work best for me?

The Prisoners' Puzzle¹:

Fifty prisoners are locked in cells in a dungeon. The prison guard, not realising the doors are locked, passes each cell at bedtime and turns the key once. A second guard comes later and turns the locks on cells 2, 4, 6, 8 and so on, stopping only at multiples of 2. A third guard does the same, but stops at cells 3, 6, 9, 12 and so on, and a fourth guard turns the locks in cells 4, 8, 12, 16 and so on. This carries on until 50 guards have passed the cells and turned the locks, and then all the guards go to bed. Which prisoners escape in the night?

This problem aroused great excitement amongst my Year 6/7 students. Groups quickly galvanised to try and come up with a solution. The allocated 15 minute timeslot was soon up, and the students negotiated to spend more time on it later that day. We scheduled the last 20 minutes of the day for groups to share their strategies—both successful and unsuccessful—and to discuss how issues were dealt with and new discoveries made.

The strategies used by different groups were amazing:

- One group had negotiated with the class next door to join us for the last 20 minutes of the day as they needed the extra 'bodies' to act out the problem. What fun the neighbouring class had in being prisoners and keeping track of whether their cell was locked or unlocked as each guard passed!
- There were several interpretations through drawings and tables used by a number of groups—lots of versions were shown.
- One group meant business. They enlisted the aid of a teacher who was good at maths to help them work out a formula and they proceeded to explain how it worked.

Then there was the group who gave up. Having exhausted all the strategies they thought they could use, they couldn't decide which way to go next. For this group in particular, the sharing led to significant learning because it opened their minds to new ways of thinking. By listening to others describe how they'd persisted and finally come up with a strategy that worked, this group realised that they'd definitely given up too quickly.

Through this new learning challenge I gained valuable insights. I hadn't needed to enforce limitations on students. I hadn't restricted them to working within the classroom. The group who needed the extra 'prisoners' came up with the idea of using more students, and they successfully engaged the interest of that teacher and her class. The experience showed me that I must continue to actively support creative ways of thinking.

Upper primary teacher

¹ Dorling Kindersley & Ball J, Think of a number, 2005, p 44

