# Creative, Critical, Caring Thinking

Thinking is a key competency in the New Zealand Curriculum. Key competencies are the capabilities people have, and need to develop, to live and learn today and in the future. (Key Competencies online http://nzcurriculum.tki.org.nz/).To develop high levels of competency in thinking, gifted students need to understand how they think and how they can apply different types of thinking to enhance their learning.

*‘Thinking is about using creative, critical, and metacognitive processes to make sense of information, experiences, and ideas. These processes can be applied to purposes such as developing understanding, making decisions, shaping actions, or constructing knowledge. Intellectual curiosity is at the heart of this competency.*

*Students who are competent thinkers and problem-solvers actively seek, use, and create knowledge. They reflect on their own learning, draw on personal knowledge and intuitions, ask questions, and challenge the basis of assumptions and perceptions.’* (New Zealand Curriculum 2007)

There are many different thinking strategies and tools used in schools, but in and of themselves these do not necessarily lead to higher level, challenging. Thinking strategies are often used as an end in themselves without reference to their purpose or the type of thinking that is being used. When these types of thinking activities are analysed, they are often found to be at a low level and not challenging for gifted students.

Gifted students need:

* Higher order thinking that encompasses depth and complexity;
* Thinking made visible;
* Teachers who are able to articulate why they are using the strategy;
* To understand the type of thinking they are using and why it is applicable in the particular context;
* Depth rather than coverage. (Boswell 2012)

*‘We just think completely differently, like we have different views of the world and sort of compute things faster.’*

*‘I think non-gifted people tend to think in a straight line but I tend to think ‘if this happens then what else could happen?’*

(Conversations with Accelerated and Non-Accelerated Gifted Students Alison Kirby and Michael Townsend - University of Auckland http://www.giftedchildren.org.nz/apex/v14no1art02.php)

The type of thinking and the associated skills being used should be made explicit to students so that they develop the ability to identify their own thinking and know how to apply it appropriately when needed. Starting with an awareness of creative, critical and caring thinking allows students and teachers to understand the type of thinking that needs to be applied to the task in hand. Rather than starting with a strategy or tool, teachers should start with thinking about the type(s) of thinking that is needed and make the skills to be used explicit to the students. Learning the skills of creative, critical, caring thinking is intrinsically metacognitive as students and teachers will be continually analysing and evaluating their thinking in order to know which types of thinking will enhance an activity and how to use this to move onto the next stage or a higher level. This model of thinking is also impacted on by the cultural thinking of the students.

Thinking strategies and tools then become secondary to the type of thinking being used. Thinking tools are not always necessary when creative, critical and caring thinking skills are used as the starting point to engage gifted students in higher order thinking. The tools need to be applied in the light of the type of thinking being fostered and so only become relevant if the student and teacher are able to articulate the purpose of the tool.

Thinking classrooms are not about the tools, but they are about the thinking.

*‘Thinking is pretty much invisible. To be sure, sometimes people explain the thoughts behind a particular conclusion, but often they do not. Mostly, thinking happens under the hood, within the marvellous engine of our mind-brain.’* Visible Thinking Harvard EDU

Knowing about creative, critical and caring thinking and how to apply it makes thinking visible and helps to develop the disposition of thinking that will be necessary for students to become ‘confident, connected, actively involved lifelong learners’ (NZC Vision 2007)

## Key Features of a Thinking Classroom for Gifted Learners:

* Thinking is visible.
* Students use the language of thinking.
* Teachers show that they are good thinkers and share their thinking behaviours.
* Students learn how to think, not what to think.
* The emphasis is on learning to think and develop skills of effective creative, critical and caring thinking.
* Teachers recognise that gifted learners think differently.
* Students have time to think.
* Differentiation for gifted students allows for pace, depth, complexity and challenge.
* Student talk is valued and practiced.
* Students think and talk about their thinking with like minds.
* Teachers and students know the type of thinking they are using and why they are using it – teachers start by thinking about the type of thinking they will use, they don’t start with the strategy.
* Questioning is visible – students and teachers know how to ask and recognise higher level questions.
* Teachers have high expectations, accept diversity, encourage risk-taking
* Students are expected to demonstrate deep thinking through elaboration
* Students engage with authentic problems and apply thinking skills to the problem solving process

 (Boswell 2012)

*‘A brain is like Google. If someone gives you a question your brain searches for the answer by thinking.’* (Yr6 gifted student)

Students need to be aware of the skills of thinking and how to apply them. These could be written on a poster so that they can be referred to when necessary:

When we think creatively we GENERATE ideas……

* Fluency…We generate as many ideas as we can.
* Flexibility…We make sure that we generate a range of different ideas.
* Originality…We generate ideas that are clever, unusual and unique.
* Elaboration…We explain our thinking so that other people can understand it.

When we are good creative thinkers we use…………

* Curiosity… We are curious about what we are doing, ask questions and look for extra information.
* Complexity…We make connections and look for alternatives.
* Risk-taking…We are risk takers and try new and interesting ways of doing things, we experiment and take chances
* Imagination…We use our imagination to think of and visualise possibilities and ‘might bes’

When we are thinking critically, we FOCUS……..

* Affirmative judgment…We are through but positive when we are analysing, refining or choosing possibilities.
* Planning…We make and follow a plan and we know and use tools that can help us.
* Focus…We keep our eye on the goal. We focus on what we really want and need to accomplish.
* Open to Ideas… We remember to stay open to ideas and to look deliberately for new and unusual possibilities.

When we use caring thinking…

* Valuational...We consider different points of view and people’s values, attitudes and beliefs.
* Affective…We think about our feelings and the feelings of others and listen with empathy
* Active…We take action and help others
* Normative…We think about right and wrong and good and bad. We consider how and why things should be done.

For gifted students, the ability to integrate all three areas of thinking into complex thinking provides for the depth and complexity that they need.

**For example:**

A group of students, after carrying out extensive research, has identified a major underlying problem with pollution and overuse of the river running alongside their school.

They apply **creative thinking skills** of fluency, flexibility, originality and elaboration by:

* Generating a number of possible solutions. (fluency)
* Aiming for a range of different types or categories of solutions. (flexibility)
* Developing solutions that are innovative or perceptive and haven't been used before. (originality)
* Being able to explain their solutions and how they might work. (elaboration)

They apply **critical thinking skills** of affirmative judgment, planning, focus and open to ideas to focus on their solutions to choose those which are likely to be achievable and to have the greatest impact on the health of their river.

* They use a tool such as ALoU or a criteria grid to select possible solutions. (affirmative judgment)
* They develop a comprehensive plan of action and plan for the implementation. (planning)
* They continually refer back to the problem they have identified to make sure they are in fact solving it. (focus)
* They continually evaluate their progress, take on board new ideas as they arise and adapt their actions as a result. (open to ideas)

They use **caring thinking skills**; valuational, affective, active and normative. To consider the impact of their possible solutions before or as they implement them.

* They explore the points of view of people who use the river and why they think the way they do (valuational)
* They consider how people might feel about their attempts to make changes and try to understand why people feel the way they do – eg the farmers whose cows were polluting the river (affective)
* They put their action plan into place (active)
* They consider the impact of their solutions – which might be active and positive, which may cause more problems or harm. They adapt and modify their solutions accordingly (normative)

*"Every day thinking, like ordinary walking, is a natural performance we all pick up. But good thinking, like running the l00-yard dash, is a technical performance... Sprinters have to be taught how to run the 100-yard dash; good thinking is the result of good teaching, which includes much practice." -* David Perkins, Howard University