

Simple and Effective THINKING & COMMUNICATION TOOLS for Classrooms and Schools

Improving Thinking Skills, Achievement and Behaviour

Practical thinking tools that enable students to:

- Identify the key ideas or issues within a lesson or text
- Sequence what they have learned into a logical order for improved understanding
- Expose and check the validity of assumptions
- Identify inconsistencies in logic
- Clarify problems and create their own thoughtful arguments and solutions
- Set their own goals and develop a logical plan for achieving them
- Resolve conflicts
- Communicate clearly
- Know how to predict the consequence of their own actions and behaviours

The immediate results are that students participate more enthusiastically, attain higher grades and transfer logical thinking skills from the classroom to solve personal issues. These life skills will directly improve student attainment and behaviour, and aid teachers to deliver the curriculum more effectively with less effort.

Rapid worldwide adoption

Since the inception of **TOC for Education** in 1996 the thinking tools have been adopted:

- In 24 countries
- Over 5 continents
- In more than 50,000 classrooms
- By more than 200,000 teachers
- 4 national education systems
- Impacting more than 8 million children and young adults from kindergarten through to post graduates.

The impact and success of these thinking tools is evidenced through numerous and inspiring case studies that extend well beyond the classroom and their efficacy is now well proven.

TOC ('Theory of Constraints') provides a set of logic-based, practical and generic thinking tools that are proven to work regardless of age, cultural differences or political systems.

They are simple enough to be used by small children and profound enough to be used by CEOs, enabling students of all ages to accomplish goals, effectively analyse problems and communicate clearly.

Overcoming inertia and resistance to yet another change

Is it fair to say that there is justifiable skepticism by teachers and principals to the seemingly endless reforms and improvements to teaching methods in the education system? Is this just another one of those attempts?

The results for students and teachers worldwide using the thinking tools suggest otherwise. So how is it that a few thinking tools can have such an impact?

We have to start with asking what is the problem and how can we improve?

There are two types of solutions, temporary relief from symptoms and longer lasting cures that remove the causes of the problems. The **Theory of Constraints (TOC)** deals with the latter.

In order to create desired and ongoing improvement in any system, we need to be able to answer three simple questions:

**What to change?
What to change to?
How to cause the change?**

1. What to change?

What is the problem?

Are there, in spite of the volume of proposed changes and the good intentions of those implementing these changes, still long-standing problems at schools such as:

- Students do not know how to solve their own problems
- Students are unable to control impulsive behaviour
- Students memorise rather than understand what they are taught
- Students cannot apply what they learn to authentic situations
- Many students do not see the value of education to improve their lives
- Students leave school before graduating
- Educational leaders are expected to meet the individual learning and behaviour needs of all students without sufficient resources

So, if many students do not take responsibility for their own learning and behaviours, and teachers must intervene to achieve results, and if at the same time teachers know that they cannot empower students to learn and think on their own if they intervene, what can be an effective solution to this dilemma and how can it be achieved

2. What to change to?

What is an effective solution?

What assumptions must we examine to successfully resolve this dilemma?

- Does the problem exist because educators are not earnestly trying? *No.*
- Does the problem exist because students are unwilling to be responsible? *No.*
- Does the problem exist because students lack necessary tools? *Perhaps.*

An effective solution is not found in blaming the teachers or children for the problem. What is needed, are simple, concrete, and practical tools. A powerful set of generic thinking and communication tools that will enable students of all ages, cultures and abilities to:

- Analyse problems from all points of view
- Think through consequences of their own actions so that they can make better choices on their own initiative
- Understand what they learn through the logical connections embedded in the information so that they could derive rather than memorise answers
- Apply what they learn in one subject to other subjects and everyday situations
- See relevance of what they learn to their every-day lives
- Set goals and think through a feasible plan to achieve them

If students were able to take responsibility for their own learning and behaviours, wouldn't that outcome leave more resources available to meet the incredible demands on teachers' time? For this to be accomplished within existing resource limitations classroom teachers must have effective tools that not only can be taught through existing curriculum content but also in a way that enhances the achievement of mandated standards and benchmarks.

3. How to cause the change? Implementing the solution.

The TOC thinking and communication tools for education can enhance students' abilities to take responsibility for their own learning and behaviours by enabling them to:

- Analyse problems
- Communicate clearly
- Accomplish goals
- Become life-long learners

They can be used to teach existing curriculum and life skills at the same time.

Although the process is simple enough to be used by very young children, it is also profound enough to be used by those in school governance and by members of the school community who are planning and managing school and system-wide projects.

The TOC thinking tools to cause the change are:

The Conflict (or Evaporating) Cloud
The Consequence Branch
The Ambitious Target Tree

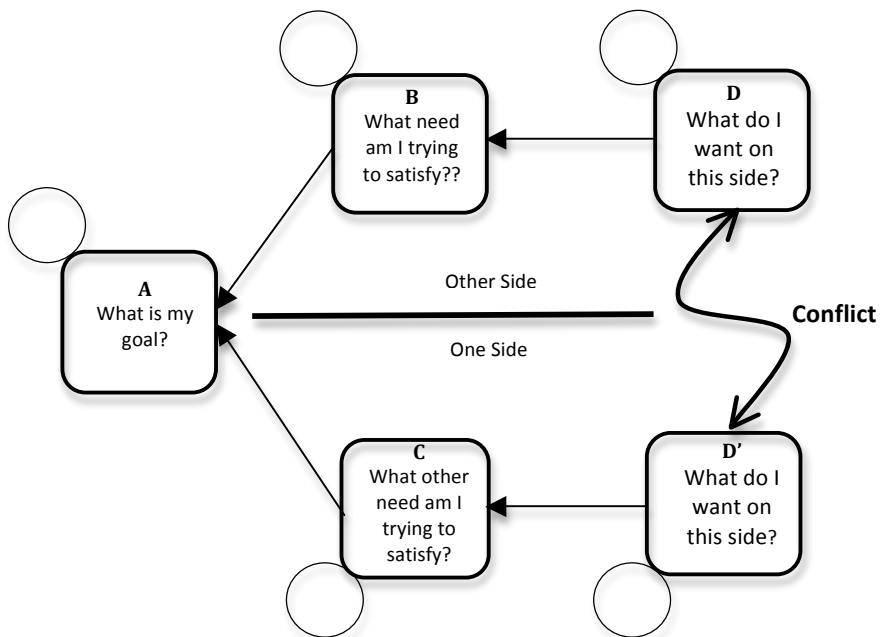
The Conflict Cloud (also known as the Evaporating Cloud): A tool to analyse conflict, choice and decision

The Conflict Cloud is a TOC thinking tool that analyses the details of a conflict in a fair and non-provocative way by focusing on five questions. This process uses a generic diagram of 5 boxes connected by logic arrows. Each box answers a question to help clearly describe the situation under study.

Additional guided questions are provided for deeper analysis to reveal the underlying reasons or assumptions in the logical connections between the boxes. These assumptions are often needed to provoke the thinking required to create simple and practical solutions.

The Conflict Cloud is a structured and dynamic systematic thinking tool that enables people to analyse conflict whether it is in a textbook lesson, on the playground or within a school management team. The process of construction and communication is an essential component of the Cloud.

The Cloud process allows the creation of win-win solutions. Most conflicts we experience usually result in a compromise. Most compromises leave at least one party worse off if not both. Children learn this tool to resolve their own internal and interpersonal conflicts.



Applications to behaviour:

- Counseling
- Peer mediation
- Classroom management
- Life management skills
- Conflict resolution among staff
- Parent conferences

The Cloud can be used to analyse internal conflicts to enable more responsible decisions and choices, and interpersonal conflicts to resolve disputes peacefully through:

- Understanding of problems from all points of view
- More responsible decisions and choices that accommodate the needs of others
- Ownership of responsible solutions and commitment to their implementation
- Emotional understanding and empathy
- Clarity of language and focused communication
- Problem changes from 'you against me' to 'you and me against the problem'
- Initiative to responsibly solve own problems
- Improved relationships

Applications to content:

- Analysis of narrative and informational text (oral and written)
- Development of communication skills (oral and written)

The Cloud provides a scaffold to assist students in analysing conflicts, actions and decisions in narrative and informational text. By deepening and enhancing their understanding and ability to communicate what they have learned, students will be in a better position to:

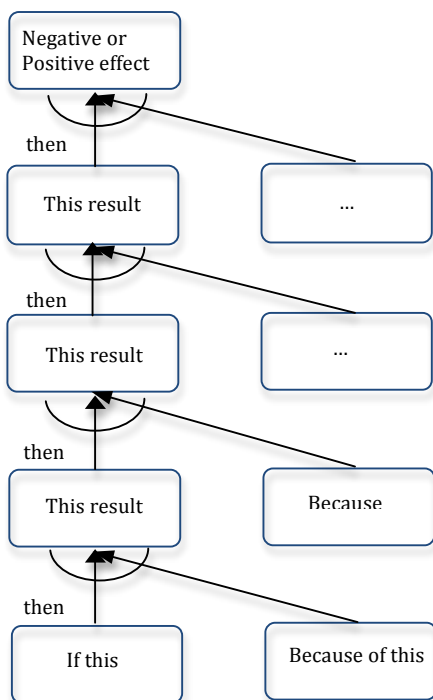
- Clearly and succinctly retell and remember key points of text
- Draw conclusions from text
- Think beyond a literal interpretation
- Understand deeper and broader perspectives of all sides of a problem or situation
- Relate existing curriculum to students' daily lives
- Apply new knowledge to authentic situations
- Evoke classroom discussions that are more focused and meaningful
- Identify essential, yet less obvious details in text by surfacing assumptions underlying main ideas
- Improve existing solutions and create new ones

The Consequence Branch:

A tool to analyse consequences in academic and life situations

The Consequence Branch is a TOC thinking tool that analyses relationships in information by using cause and effect logic. The information in the boxes is connected through 'if – then' statements.

The Branch is a structured and dynamic systematic thinking tool that can be used by students of all ages as well as by those who lead them.



Applications to behaviour:

- Counseling
- Classroom management
- Life management skills
- Parent conferences

The Consequence Branch enables students to think through consequences of their actions. If students identify these relationships for themselves, they are much more likely to take corrective, responsible actions on their own. In doing so, they not only gain confidence in their ability to solve their own problems but often they are also able to prevent conflicts

with others. As a result, the learning environment is significantly improved, as students:

- Understand why they should change behaviours
- Change behaviour without feeling the need to demonstrate their independence
- Become more and more responsible for their own behaviours
- Develop the habit of 'thinking before acting'
- Develop academic skills of using cause and effect logic

Applications to content:

- Analysis of narrative and informational text (oral and written)
- Development of communication skills (oral and written)

The Consequence Branch enables students to logically organise and explain information. They are able to understand content through the logical connections embedded in the information, and therefore, are more likely to remember what they are learning, and to:

- Meaningfully participate in lessons regardless of prior content knowledge
- Clearly and succinctly retell and remember key points of text
- Draw conclusions from text
- Identify essential, yet less obvious details in text by surfacing assumptions underlying main ideas
- Focus thinking beyond a literal interpretation
- Derive rather than memorise answers
- Resolve inconsistencies in logic to support a position

The Ambitious Target Tree:

A tool to analyse steps needed to accomplish goals

The Ambitious Target Tree is a TOC thinking tool that analyses the steps that are needed to achieve goals. The first part of the tool is a table that clearly states the desired target or goal, lists the obstacles that prevent its achievement and corresponding steps to overcome those obstacles, know as intermediate objectives I.O.'s (stepping stones).

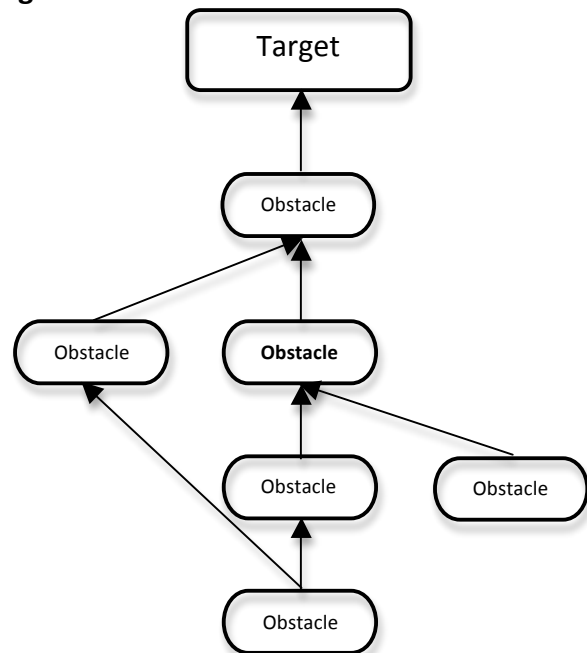
Target:	
Obstacle	I.O.
1.	
2.	
3	
4. and more	

These obstacles and intermediate objectives are then sequenced into a map, a logical tree.

The Target Tree is a structured and dynamic systematic thinking tool that can be used to plan projects, address behaviour problems and to analyse curriculum.

Applications to behaviour and school-wide projects:

- Personal goal setting with students
- ‘Contracts’ with students or classes to improve conduct or to complete academic work
- Classroom discussions that are more focused and meaningful
- Completion of academic work
- School improvement plans
- Planning of school events



When applied to projects, the Target Tree enables individuals and groups to think through the logical steps needed for success:

- Ensures the target itself is clearly understood
- Provides more focused and deeper understanding of what is needed to ensure success
- Improves clarity of communication
- Provides a concrete, written plan that is logical and easy to follow
- Evokes participation and commitment of all team members in group projects
- Ensures genuine collaboration among team members
- Eliminates non-essential actions that waste time
- Fosters confidence and momentum needed to achieve a goal

Applications to content:

- Analysis of narrative and informational text (oral and written)
- Academic projects (group and individual)
- Development of communication skills (oral and written)
- Lesson plans

Applied to curriculum content, the Target Tree enables students to analyse events and procedures in a way that deepens their understanding and their ability to apply what they learn to their everyday lives.

When teachers use the Target Tree with students in order to develop a plan to achieve curriculum objectives (standards and benchmarks), students are able to verbalise what they need to learn and their own responsibilities in the learning process. They will:

- Deepen their understanding of successes and failures in analysing events and procedures
- Focus thinking beyond a literal interpretation
- Predict potential obstacles in text or in projects, and think through how to overcome them
- Improve ideas that did not succeed and/or create new ones
- Logically sequence new knowledge
- Identify essential, yet less obvious details in text or academic projects by thinking through the reasons for actions
- Engage in focused and meaningful classroom discussion
- Logically plan a group or individual curriculum content project

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The TOC Thinking and Communication tools are now being offered in Australia.

Workshops:

- Train the trainer workshops for teachers (school program)
- Workshops for community leaders
- Workshops for not-for-profit community based organisations
- Workshops for parents
- Workshops for children

Introductory seminars are available on request.

For more information please contact:

TOC for Education – Australia

Andrew Kay
International Certified TOCICO Expert Practitioner and Certified TOCfE Master Trainer

Karin Waldmann
TOCfE Development Manager

Email: info@tocfe-australia.com.au
Phone: 1300 919 761
PO Box 551, Glebe NSW 2037