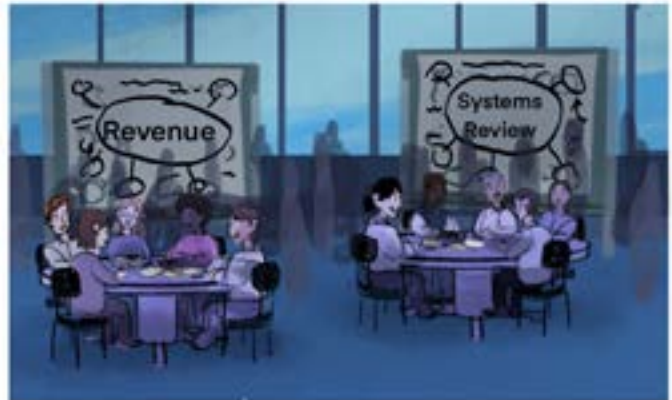
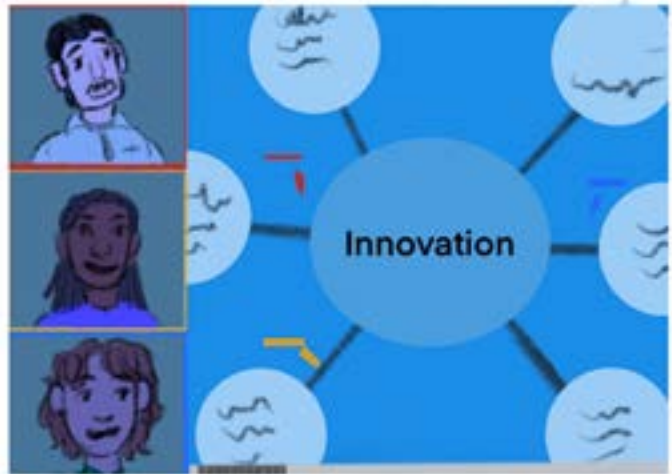


# FOR INSTRUCTIONAL DESIGNERS, TRAINERS, & LEARNING OFFICERS

THE FREE TEREGO IDEATION METHOD™  
WORKBOOK

INCLUDES iTIM™ the Knowledge-Mining Tool

THINK THINGS THROUGH THOROUGHLY EVERYTIME GUARANTEED



GET YOUR FREE TEREGO IDEATION METHOD™ FACILITATOR CERTIFICATION

Complete this Workbook to Become a Certified  
Terego Ideation Method™ Facilitator  
And Display the iTIM™ Logo

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This Workbook is a companion to my book **'HYBRID LEARNING'**



## Workbook Summary :

Step-by-Step Instructions on How to Mine Knowledge by Rapidly Ideating – Prototype – Possible Solutions.

- Uncover Facts
- Discover New Information
- Synthesize the Two Into an Ideated Prototype
- Repeat
- Communicate Outcomes
- Thinking Things Through Thoroughly - Everytime© On-Demand

## What Does an iTIM™ Certification Mean for You, Your Colleagues and Your Company?

- As an iTIM™ Certified Facilitator, instructional designers, trainers, or learning officers, can expand your function and differentiate your approach to designing and communicating solutions through analysis, design, development, implementation, and evaluation. A process I call Iterative Ideation.
- The Terego Ideation Method™ or iTIM™ is a tool designed to help Instructional Designers, Trainers, and Learning Officers transition from a *Sage on the Stage* to the *Guide on the Side*. It will help you be more of a *Servant Leader* helping you transition your unit to a learning-centric Blue Ocean. (See later section)
- As an iTIM™ Certified Facilitator, you will learn the art of Servant Leadership.
- As an iTIM™ Certified Facilitator you will ensure that colleagues think things through thoroughly – Every time.
- iTIM™ certification ensures you will conduct guided practice sessions focused on outcomes.
- iTIM™ certification is not aimed at solving your organization's problems but helping address them by giving you access to the tools to look at things differently.
- Your decisions are your own. With iTIM™ certification you can be sure that those decisions will be informed through knowledge mining.

- iTIM™ certification empowers you to train people to rapidly prototype and tailor their own instructional design processes to suit the problems being addressed.
- As an iTIM™ certified trainer, instructional designer, or learning officer, you can help colleagues build mental models - thought experiments.
- iTIM™ helps take the guesswork out of problem solving.
- Using iTIM™ you can ensure your colleagues look back using memory (theirs, their colleague's, and Google's) and look forward using imagination.
- iTIM™ helps facilitate creative, divergent, innovative, collaborative or design thinking – anywhere, anytime, and on-demand. And thoroughly.
- iTIM™ ensures that enhanced critical thinking, teamworking, problem solving, and communications are always brought to bear on a problem.
- iTIM™ ensures that all parties *'buy-in'* to a solution.
- As an iTIM™ certified trainer, instructional designer, or learning officer, you become a trusted trainer in the art of *'Knowledge Mining.'*
- Using iTIM™ you can make sure the *'right'* problems are being addressed.
- With iTIM™ you can train participants to optimize teamwork.
- Using iTIM™ you can become a consensus-builder when addressing problems.
- Using iTIM™ you can make sure there is a shared understanding about solutions.
- With iTIM™ you can optimize problem solving and decision making.
- iTIM™ can help engender confidence among those tasked with learning and decision making.
- Using iTIM™ you will become more confident in your ability to train people to address and solve issues.
- Using iTIM™ you can ensure that all those responsible for problem solving and decision making are heard and involved. *"Tell me and I'll forget, teach me and I may remember, involve me and I will learn."* Ben Franklin quoting Confucius.
- With iTIM™ you can make sure that participants are trained to trust *their* analysis and *their* solution to problems.
- Using iTIM™ you can ensure that all those who participate are trained to optimize results.
- Using iTIM™ you can make sure that the network effect of a group solution is optimized.
- With iTIM™ you can ensure an immersive and enjoyable experience.
- iTIM™ ensures you will leverage the skills-diversity of all your colleagues.
- Using iTIM™ anyone can intentionally ideate-on-demand.
- Using iTIM™ you can make sure your colleagues build mental models or conduct thought experiments *before* making decisions.
- Using iTIM™ you can leverage and optimize the innate skills all humans possess.

## Introduction:

Prior to entering the workforce, learning is primarily associated with preparation for life after school. In organizations of all kinds – both for profit and non-profit – learning is associated with adapting and evolving through problem-solving and decision-making towards a culture of continuous innovation.

The best way to solve problems and make decisions is by rapid prototyping. Building and testing mental models (thought experiments) of a problem and possible solutions is cheap and efficient. It's also easy because it is done by iterative questioning; something us humans can't help but do. The word that is missing in that last sentence is '*structured.*' iTIM™ is a simple, structured process that empowers anyone to Ideate-on-demand.

Companies and other organizations are actively adopting a more learning-centric culture. This movement has been fueled by two realizations: learning is a competitive advantage, and learning-teaching can now be more easily deployed due to the widespread availability of technology – especially collaboration platforms.

Currently *Learning How to Learn* is a popular buzz phrase in business circles. In reality, all of us already know how to learn. Even infants can think, collaborate, solve problems, and communicate. It is a basic survival skill. We come equipped to do this.

What children and adults really need is encouragement and coaching to deploy and polish our learning skills. That is the basis for iTIM™.

With a trained iTIM™ Facilitator's help, all the stakeholders in for-profit and non-profit organizations can use these skills to reinforce themselves and others, reflect, debate, be good peers or mentors, grow emotionally, be flexible, adapt and innovate. Most of all, you can capitalize on our innate skills to Ideate. Regardless of station in life, all of us are highly skilled Ideators. You just guide.

Instructional Designers, Trainers, and Learning Officers are uniquely positioned to help their company and colleagues move towards a learning culture and foster continuous innovation.

A learning culture can only be achieved if

- Upskilling, reskilling, and learning are prioritized by senior management
- The learning experience is personalized
- The learning experience results in mutual engagement
- Individuals *Buy-in*
- And learning becomes habitual

All of these conditions can be met by anyone by *on-demand Ideation*.

The good news is that employees naturally want to learn. And the board of directors should also want them to learn. "*Learn continuously. There's always one more thing to learn.*" Steve Jobs.

All stakeholders see the advantages of wanting to learn how to regularly take the guess-work out of problem-solving and decision-making. Again, intentional Ideation is the key and iTIM™ is designed to help.

Of course, a move to a more learning-centric culture depends on the capacity of all the people in the company or organization to learn and teach. In other words, how well can people ideate in a group or individually? And instructional designers, learning officers, trainers, coaches, mentors, consultants, and managers can all futureproof their companies and themselves by accelerating the shift to a learning culture through on-demand ideation.

This ideation workbook is a step-by-step method which when taught and practiced will make the learning experience both personal and collaborative; it will create buy-in; become habitual; all when working on actual problems.

Think of Ideation as *“Knowledge Mining.”*

## The Terego Ideation Method™ (iTIM™)

*“Innovation is taking two things that already exist and putting them together in a new way.”* Tom Freston.

The goal of this workbook is for instructional designers, trainers, and learning officers to become certified in the rules-based Terego Ideation Method™ of learning and teaching, and use iTIM™.

This workbook will teach you how to lead others as they systematically interrogate any issue, subject, or problem and ideate a solution. From even the smallest projects undertaken by an individual to large ones such as systems overhauls or plan fixes, even discussions around innovation, content creation, strategy, sustainability, big data, blockchain, project management, employee engagement, finance, marketing, engineering, staffing woes, schedule flexibility or customer service.

Here’s the *Caveat*: The company will not know if your proposed ideated solutions have worked until after time has passed of course. Your job is to guide individuals or teams to take suggestions, thoughts, guesses, and even wild speculations and turn them into Ideations, and become better at creating opinions - outcomes.

Companies usually don’t have a lot of time to fix a problem. So, getting it right in the first place is the optimal goal of a learning culture. Building a learning culture means learning how to help others address *any* subjective issue by,

- Uncovering all the objective, and relevant facts about it.
- Then, putting those facts together with new intelligence discovered by structured brainstorming through rigorous questioning.
- And then synthesizing the facts and new information into knowledge in the form of a written opinion. It could also be in the form of a video, narration, PowerPoint, or animation.
- And finally, communicating that opinion to those needing solutions when a decision is required, or a problem solved.
- In other words, by *Knowledge Mining and Sharing*.

The good news is that participants will not need any more prompting than an inferred or explicit question to automatically begin deploying their innate thinking, collaboration, problem solving, and communications skills. And the result of this is an Ideation. And it begins with Questioning. And anyone can do it. That makes iTIM™ easy to implement and very engaging; who doesn't want to showcase their innate hybrid skills?

You can use this system to help facilitate people to learn how to design *their* solutions, based on *their* authentic and justified belief. Learning to use this method will expand your instructional designer, trainer, learning officer role a little and show you how to become a *Guide on the Side*. More like a midwife actually. Socrates invented this method of inquiry and called it *maieutic* from the Greek word for midwife.

The Terego Ideation Method™ is designed to unleash all the [hybrid skills](#) that are already in place in all of us from birth, not just thinking, collaboration, solving and communications.

This method will encourage you and others in your team to intuitively practice all these skills. They *will* think critically, solve problems, work together, and communicate. If they are allowed, they can make a game of it, tell stories, and look for patterns. They will look back using memory and forward using imagination. All the while working on the right problems that demand solutions *before* informed decisions can take place.

But none of those skills can be awakened without the mighty oak of our skillset - QUESTIONING. Questioning is the sound your mind makes when it thinks. Ideation does not happen without asking questions, answering them, and then questioning the answers. It's worked for us for hundreds of thousands of years. It still does.

*“I keep six honest serving-men  
They taught me all I knew.  
Their names are What and Why and When  
And How and Where and Who.”*



## Understanding People's Hybrid Skills:

In the above video of an actual session, notice that participants instinctively used all of their hybrid skills to come to their conclusion. What follows will give you an understanding of the importance of each of our hybrid skills.

*Questioning.* Thinking is *not* driven by answers. Thinking is driven by questions. Answers are not the answer to learning, questions are. Questions stimulate thinking and thinking wakes up learning. Questions are the impetus for cognition. Questioning is learning and learning is questioning. That is why questioning is your #1 Killer App. In fact, questioning is the sound our minds make when we think.

*Game Playing.* As children we are hard wired for gameplay. Freud observed, “*Play is the child's most useful tool for preparing himself for the future and its tasks.*”

*Storytelling.* Once humans had tools to help feed themselves, a campfire to sit around, an extended family with some leisure, plus the gift of the spoken word, they would have occupied their time telling stories, as well as gameplay, and doing art also. Some of these stories were meant to entertain, but the goal of others must have been to pass down cultural traditions and knowledge. And stories convey an idea, which itself originates as an ideation.

*Pattern Recognition.* From birth on, we are pattern-recognition machines. Subconscious or conscious questioning allows us to see patterns. It is an enormous cognitive advantage which helped us survive because these thinking patterns are efficient, super-fast, automatic, reliable, usually correct in context, and help avoid lethal risks and help achieve life enhancing goals. It is by definition a primal hybrid learning and coping skill. As our cerebral cortex evolved and increased in size, so did our ability to do a better job of recognizing patterns. According to Dr. Mark Mattson of Johns Hopkins University, we did this by not just expanding the raw, cognitive power available for pattern recognition by utilizing many different brain regions and neuronal networks, but also by developing novel ways of recognizing patterns. By far the most amazing and novel capability we have developed is the way in which we process patterns. Unlike even the most powerful computers which currently process data sequentially – one task at a time – we analyze data by means of their massively parallel processing capacity.

*Imitation.* This may well be the first way we learn. Imitation allows us to download the ideas and ways of thinking of those they associate with. This allows us to take on not just the veneer of its family customs, but the deep-seated behaviors needed to thrive.

*Critical Thinking.* This is the art of intellectually and emotionally analyzing and evaluating thinking with a view to improving it. It is done by using rational thought to evaluate issues and develop logical opinions into a *Justified Belief*; the truth Aristotle deemed to be the goal of learning.



*Collaboration.* Ants, bees, and wolves co-operate, but only in limited groups whose members all know each other. We humans, however, co-operate on a daily basis with others about whom we know little except that they believe in the same stories. And teamwork really pays off. *“It is the long history of humankind (and animal kind, too) that those who learned to collaborate and improvise most effectively have prevailed.”* Charles Darwin.

*Problem solving* A problem exists when an individual becomes aware of a significant difference between what actually is – reality - and what is desired. We all have to solve problems and make decisions, and the decisions we make are only as good as our problem-solving ability. To state the obvious, informed decision-making is a critical life skill.

*Communication.* There are many ways of communicating: writing, drawing, painting, sculpting, speaking, singing, playing an instrument, dancing, making a movie or a play, sign language, body language, mime, Morse code, via video or animation, smoke signals, bugles, drums, and whistles. What matters is the message. The content can be relayed with great style of course, but the message or content is what matters.

*Ideation* is the outcome of all the other skills combining so that we can learn what is necessary to form an opinion, a truth, a *Justified Belief* on any scale of importance, and even when done subconsciously.

*Multiple Intelligences.* Prof. Howard Gardner wants us to think of our intelligence as a network of specialized computers. Some parts are better at some tasks than others. Some parts of the network are better at certain times of the day. *“By 1981 I was claiming that all human beings possess not just a single intelligence rather we human beings are better described as having a set of autonomous intelligences.”* Gardner’s multiple intelligences – we all have eight in differing degrees of proficiency - are how we process and share ideations.

### **This is How Your Hybrid Skills Work Together to Ideate.**



## Becoming an iTIM™ Facilitator:

### Understanding that Knowledge Mining is Best Accomplished by a Rules-based Procedure is at the Heart of Facilitating iTIM™ Sessions.

This is how it works. The facilitated or self-governing team collaborates by asking a series of questions in a sequence. They learn to always think in *context* by *zooming out* first, examining the topic/issue/problem by thinking up, and around it.

Next, they *zoom in*. Following the rules, the team or individual find facts through questioning, discovers new information, again through questioning and diligent research and group discussion – brainstorming – *before* synthesizing facts and new information.

The team or individual then votes for their best ideas and blends their collaborative ideations into an agreed outcome, report, position paper, or thesis statement, or PPT or video presenting their optimal solution for a given problem or topic.

Since each member or an individual has *bought-in* to the proposed ideation by actively mining for knowledge, each team member will be able to clearly communicate their authentic opinion or point-of-view on the subject and easily explain and defend their rationale for coming to that conclusion; they will even have a paper trail on how they reached their conclusion.

The Terego Ideation Method™ applies across all human behaviors, especially learning. It is based not on memorization but seeking understanding through critical thinking and triggering that with rigorous questioning.

The three goals of the Terego Ideation Method™ are:

1) To encourage participants to understand and buy-in to the fact that the four most important skills that all employers need are:

- Critical Thinking
- Problem Solving
- Collaboration
- Communication

2) To encourage participants to work together to master and deploy these skills.

3) To encourage a facilitator to move from the role of *Sage on the Stage* to *Guide on the Side*.

Before each session, the iTIM™ Facilitator and the participant(s) review a) the Facilitator's objectives and b) participant's hoped-for outcomes. There may be only a single member participating, but five to seven is an optimal number for a team. After a session has been completed there is a test to check how well the participants did on achieving their outcomes.

The following sample sessions are designed so that the Facilitator's participation is high during the first two as the Facilitator explains the method using the following Power Points examples, and the participant(s) get used to the idea of addressing issues through questioning and ideation. During the later sessions the Facilitator's role lessens, and the participant's involvement grows until they are totally self-directed. As the participant(s) become more self-directed, they may get stuck and need to use the "cheat sheets" provided.

## An Exercise in Thinking About Thinking Using the Terego Ideation Method™:

The first skill is to be examined and understood is *thinking critically*. So, begin by showing your participants the value of this ideation method and how anyone can easily examine even complex issues such as their own capacities for thinking.

Metacognition is a fancy word for a simple idea: thinking about thinking. If your teams or individuals are going to polish their learning skills, it would be advisable to first have them figure out for themselves and understand how they learn by thinking.

Here's how. Begin by demonstrating how participants can use the Terego Ideation Method™ (iTIM™) to examine the issue of **Thinking**. Show them this 9 minute Power Point ([Insert Booker CT Module 1 v4 PPT](#)) of how I led a group as they examined the idea of 'Thinking' by thinking about it in a structured manner.

Now, introduce participants to the discipline of **Collaboration**.

show them this PPT ([Insert Booker CT Module 4](#)) with only the introductory slides and leaving the rest up to them.

- File will only have this slide, please either on your own or with a group fill out the remaining sections.



Introduce the participants to the concept of **Communications**. This time with only the first slide complete. ([Insert Booker CY Module 5](#)).

- File will only have this slide, please either on your own or with a group fill out the remaining sections.



Now that the participants understand the methodology, leave them to work through iTIM™ as they examine the skill of **Problem Solving**.

## Measuring Progress

iTIM™ Facilitators, please point out that even though the issue or problem has been interrogated and analyzed thoroughly, the ideated outcome is still an opinion; it is by definition subjective, not provable at the moment it is ideated. It can only prove its worth after some time has passed, and the opinion as seen in retrospect is judged to be well-founded, or way-off-the-mark, or somewhere in between.

An iTIM™ Facilitator can, however, estimate after the exercise how well or how badly the participants performed and use these measures to improve performance.

- Were the participants able to demonstrate an understanding of the theory behind critical thinking? A. B. C. F.
- How well did they understand the importance of context? A. B. C. F.
- How well did they understand the value of developing an authentic point of view? A. B. C. F.
- How well did they understand the step-by-step methodology? A. B. C. F.
- How focused and helpful were they on helping find a solution? A. B. C. D. F.
- How involved were they? A, B. C. F.
- How well did the participant persuade others? A. B. C. D. F.
- How respectful of the process and other team members? A. B. C. D. F.
- Comments: \_\_\_\_\_

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You can also use the following as a gauge in checking how well a participant is doing at upskilling their Ideation abilities.

Ask participants to insert the missing words in the following description of the step-by-step Terego Ideation Method™. I have included the correct answers.

1. Write the issue or problem being discussed in the \_\_\_\_\_ of your Paper, White Board or Computer and begin examining the context of that word.
2. Zooming Out first is a \_\_\_\_\_ first step.
3. Ask and answer the question “What is the issue or problem a constituent \_\_\_\_ of?”
4. Write a \_\_\_\_\_ of the main word(s) in the problem.
5. Insert the definition \_\_\_\_\_ the prompt.
6. Look up antonyms and \_\_\_\_\_ and write beneath the definition.
7. Divide the diagram into \_\_\_\_\_ segments
8. Write the words WHO, WHAT, WHY, WHERE, WHEN and \_\_\_\_\_ in each of the segments.
9. Ask and answer as many questions as you can \_\_\_\_\_ with these words.
10. Write your answers in the \_\_\_\_\_ segment.
11. Decide by vote on which of the best answers are best \_\_\_\_\_ for inclusion in the final \_\_\_\_\_.
12. Write these answers down
13. Create a thesis statement – your \_\_\_\_\_ – by combining them.

Correct Answers:

1. middle
2. critical
3. part
4. definition
5. below
6. synonyms
7. six
8. HOW
9. beginning
10. appropriate
- 11A. suited
- 11B. Ideation
13. Ideation

### Assists for iTIM Facilitators.

At the beginning when first introduced to this idea, participants may be reluctant to make suggestions upon being asked to ask multiple questions beginning with the words Who, What, Why, Where, When and How. Here are some suggestions that can be used when looking at the four skills of **Thinking, Collaborating, Problem solving, and Communications.**

Note: There are no bad questions.

### Thinking

**Who** benefits from thinking?

**Who** invented thinking?

**Who** values thinking?

**What** is thinking?

**What** makes us think?

**What** stimulates thinking?

**Why** does thinking matter?

**Why** don't people think more often?

**Why** do we think?

**Where** does thinking take place?



**Where** is thinking important?

**Where** is thinking valued?

**When** do we think?

**When** do we not think?

**When** did thinking begin?

**How** many kinds of thinking are there?

**How** do we think?

**How** has thinking helped us?

## Collaboration-Teamwork

**Who** benefits from teamwork?

**Who** values teamwork?

**Who** needs to work in teams?

**What** are the benefits of teamwork?

**What** forms does teamwork take?

**What** other species use teamwork?

**Why** does teamwork matter?

**Why** don't more people use it?

**Why** do we cooperate?

**Where** is teamwork best used?

**Where** is teamwork not used and should be?

**Where** did teamwork originate?

**When** is it best to act as a team?

**Who** solves problems?

**Who** are examples of good problem solvers?

**What** is the value of solving problems?

**What** is a good example of problem solving?

**What** is an example of an outcomes of a problems being solved?

**Why** do problems need solving?

**Why** are problems so difficult?

**Why** does problem-solving matter?

**Where** do most problems appear?

**Where** do problems most affect us?

**Where** can we find resources to help solve problems?

**When** is the best time to solve problems?

**When** is it too late?

**When** does it matter most?

**How** many ways are there to solve problems?

**How** do I know there is a problem?

**How** can I find resources to help with a problem?

1) Answer as Many Questions as Possible Including Your Own.

2) Vote on which are the Most Important Answers.

3) Write an Opinion in the form of a Thesis Statement. A Justified Belief. An Ideation.

## Communications

**Who** benefits from communications?

**Who** could benefit from better communications?

**What** are the main discoveries/inventions involving communications?

**What** can we do without communications?

**What** is more important – communicating with others or with yourself?

**What** did the invention of writing do for communications?

**Why** is there a need for communications?

**Why** is there a need for symbols when communicating?

**Where** do communications take place?

**Where** would we be without communications?

**Where** were communications first used?

**When** did communications evolve?

**When** are communications most helpful?

**When** are communications necessary?

**How** do we communicate?

**How** important are symbols?

**How** important is communication?

## Test

Fill in the steps to be taken after being given a WORD (problem) to examine?

Write the WORD in the \_\_\_\_\_ of the whiteboard or paper. Now write a \_\_\_\_\_ of the WORD underneath. Write examples of \_\_\_\_\_ and antonyms of the WORD below the definition. Now ask and \_\_\_\_\_ the question “What is the WORD a part of?” Write your answer \_\_\_\_\_ the WORD. Now ask and answer the question “What is that a part of?” Write the answer one step above. Now divide the paper into six \_\_\_\_\_. Insert the Who \_\_\_\_\_ Why, Where, When and \_\_\_\_\_ questions. Ask and answer as many questions beginning with these words and \_\_\_\_\_ in appropriate segment \_\_\_\_\_ for the best. Create a thesis \_\_\_\_\_ from the best answers.

These are the correct answers.

Write the WORD in the middle of the whiteboard or paper. Now write a definition of the WORD underneath. Write examples of synonyms and antonyms of the WORD below the definition. Now ask and answer the question "What is the WORD a part of?" Write your answer above the WORD. Now ask and answer the question "What is that a part of?" Write the answer one step above. Now divide the paper into six segments. Insert the Who, What, Why, Where, When and How questions. Ask and answer as many questions beginning with these words and insert in appropriate segment. Vote for the best. Create a thesis statement from the best answers.

Remind your colleagues of what Robert Langer of MIT says, *"When you're a student you are judged by how well you answer questions, but in life you're judged by how good your questions are."* The man who invented management, Peter Drucker agreed, *"Your most difficult and important job is not to find the right answers but to find the right questions. There are few things as useless, if not dangerous, as the right answer to the wrong question."*

### The Theory Behind Knowledge-Mining

Throughout this workbook I have stressed the importance of discovering the facts about an issue, and identifying new information through questioning, and then synthesizing the two into a statement – what Aristotle called a *Justified Belief* - before disclosing that statement.

There are two problems all of us struggle with when trying to do this.

The first is the sheer volume of raw data that is available for refining into knowledge. The second has to do with the cognitive skills needed to uncover new information, and refine it to become information, and further refine to become knowledge. It takes divergent, creative, critical, design, discovery, innovative thinking to do this. And questioning is the answer.

But that is the skill which employers need and will always need if they are to shift to or maintain or improve their culture of learning. iTIM™ is the best practice.

### Learning and Teaching Knowledge Mining or Infoliteracy

Think about the early explorers navigating the oceans. They had known for a long time how to navigate from north to south, and back again. The Sun helped them. They knew that there were lands to the east and west, but they had no reliable way of navigating in those directions. Like in an algebra equation, *something was missing*. They knew that they needed an instrument to give them the *missing* information – new knowledge - they needed to guide them as accurately east and west as they could already navigate north and south. And that led to the invention of a clock that could help them keep time at sea, and therefore plot their position. And all that led to longitude and latitude; a grid system that allowed anyone to navigate anywhere in the world. Look how far that needed bit of information has brought us; now even cars and cell phones keep note of our position; without even being asked. Without someone knowing what they did not know and needed to know the Global Positioning Satellites would not be with us, neither would autonomous vehicles.

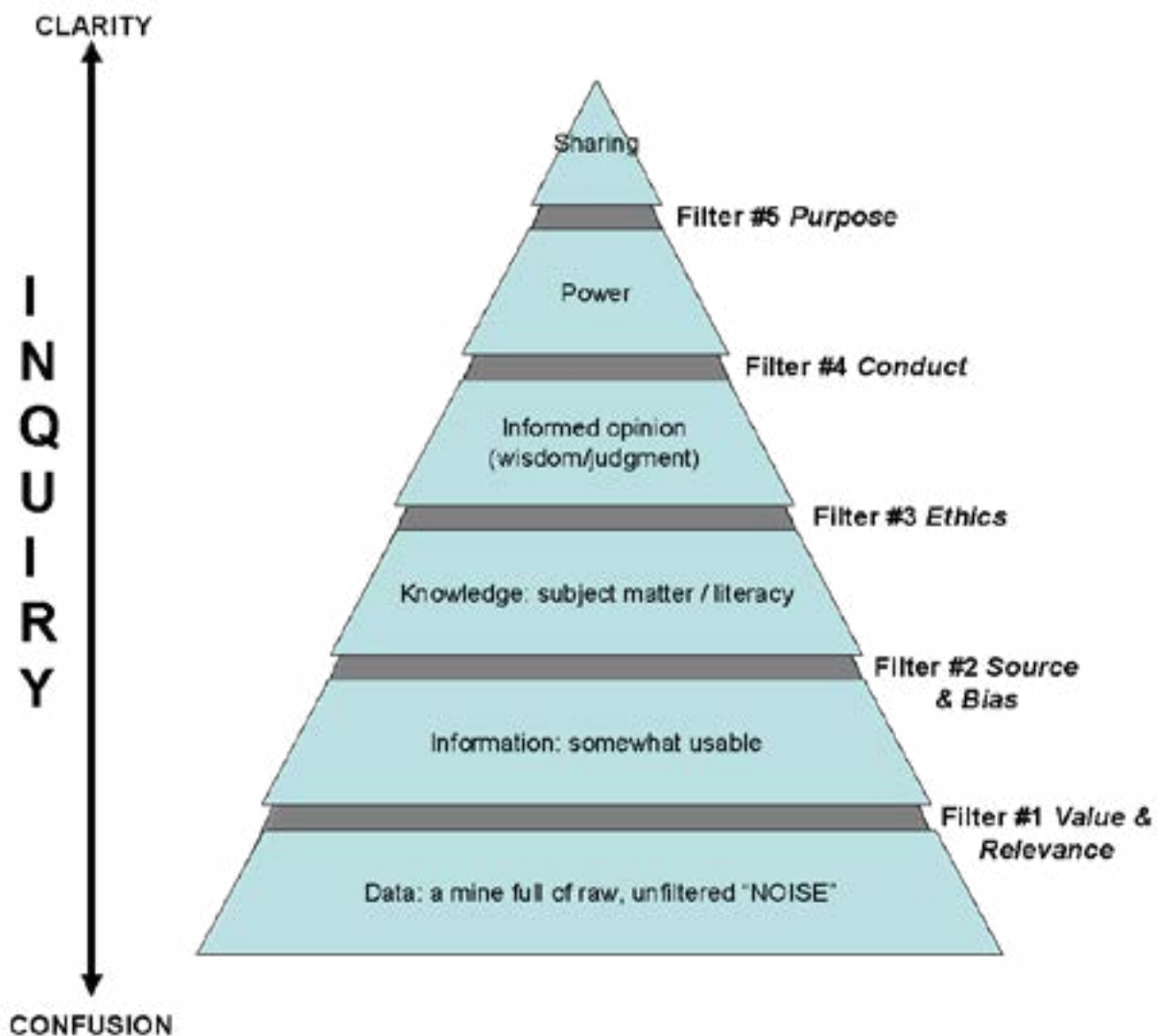
*Necessity is indeed the mother of invention. However, you need to be working on a problem to see the need.* That is why inquiry, investigation, exploration, scholarship—call it what you like—is so rewarding. If you are puzzling about something, you will learn more than if you are simply memorizing facts and figure. We are born problem-solvers and it is only when we are in that natural state—looking for answers—that we understand when we do not know something, *why* we do not know it, and *why* we must know it. And that leads to the *how*.

What follows can be viewed as a best practice for all of us who wish to mine and refine data into knowledge.

So, look at the following pyramid diagram before reading on. And encourage your colleagues to be skeptical and active, not gullible and passive.

How? Remember this: thinking is questioning; questioning is thinking; inquiry begins the search for clarity; only interrogation can ensure that knowledge will be acquired; and then ideation follows. The vital skill is making meaning from data. Ascending from the confusion of raw data to the clarity of a *Justified Belief*. That is *Knowledge Mining!*

Diagram A: Knowledge Mining. Managing the process of getting meaning from data through Inquiry.



Confusion is the same as ignorance, and clarity is the result of knowledge. And *inquiry* through questioning is the *only* way to get from confusion to clarity, from the dread and fear of – and too often comfort with – ignorance, to the safety and empowerment of knowing.

Data is the everyday noise is at the bottom of the pyramid in the diagram above, power is at the top. Confusion reigns at the bottom where all the data dwell. Clarity shines at the top because we mined and refined the data to produce information, and then by further inquiry we obtained knowledge, wisdom, judgment and finally power.

Your colleagues cannot get from raw data to literacy, and hence power, without disciplined, iterative questioning and hard work. Ascending from raw data to power via questions is what this workbook is all about. If you want that to become a habit for your colleagues, read on.

*Not All Noise Deserves Equal Weight: So, Filtering is Vital.*

We all put different values on different kinds of noise, and to a large extent we do this automatically. We just do not really know exactly how, but my theory is that the [Hybrid Skills](#) we all are born with have a lot to do with it.

It pays to understand these processes that we automatically employ so that we can be judicious in their application to other inquiries.

*A Pyramid of Human Understanding*

Think of the process of achieving knowledge through inquiry, and hence power, as a pyramid of human understanding. We should constantly climb this pyramid as each new piece of data comes to our attention; looking to make sense out of all the text, sounds and sights that bombard us.

We do a lot of things automatically such as walking and talking. That does not mean we are contemplating every step we take, in terms of kinesthetics, or considering every word before we utter it, although more of that is probably a good idea. But the better we understand the process of walking and talking, the better able we are able to deliberately improve on the skills. Physical therapy would not work otherwise.

The same goes for thinking; the more we understand the basics of this fundamental aspect of human nature, the better able we will be to practice it, improve upon it, and teach it to others.

I realize that any discussion of this way of looking at how to get from data to power is a little abstract. My purpose in explaining this concept is not so that you can have discussions with colleagues about this idea, but rather that you as an instructional designer or learning officer, trainer, coach, or teacher should try to understand the process so you will be in a better position to help your colleagues gain knowledge through inquiry; otherwise known as *Infoliteracy*. If you were helping them with their tennis serve or dribbling a basketball, it would help if you knew the rules of tennis or basketball and the mechanics of serving or dribbling first.



This pyramid has six levels, separated by five filters. This book is for people in a career. It has equal relevance – if not more – for children.

At the bottom is a mine full of raw data—sights, sounds, smells, text and touches, structured data, and unstructured data. This is largely unusable, unfiltered, unsorted, and therefore unavailable and unintelligible. Like fossilized carbon buried miles underground, it is full of potential. But that potential cannot be unlocked without certain processes being undertaken. The knowledge of where the fossil carbon is, and how to get at it, and process it or refine it turns the mereknowledge of where the fossil carbon is literally into power.

### *Filter #1—Value and Relevance*

The first filter is where we retrieve the data, evaluate it, retain some, and discard a great deal. This is the value phase. It is human nature to do this filtering automatically, but it helps to know how we are doing this so that we can know how to consciously adapt this process to all of our decisions and actions.

In discussing the nature of information with colleagues, an excellent exercise is to get them to ask themselves the following about raw data:

- *Do these data help?*
- *How do these data help?*
- *Do these data add to the process of learning, or solving a problem?*
- *Which pieces of data clarify, and which are irrelevant?*

Then ask them to discard some data and retain other data based on this filtering process.

At this stage we are looking for relevance. Our human nature gives us the skill to see and evaluate the relevance of data at the speed of light—and without it ever rising to the level of the conscious part of the brain—we seem to be subconsciously asking and answering these same questions over and again:

- *Does this piece of data (it is not information yet) help?*
- *Does this piece of data help clarify my situation?*
- *Does it help solve my immediate problem?*
- *Does it have value?*

Having established the value of some of the data because of its relevance, we retain it. It is now somewhat usable information and is beginning the process of changing its nature from data to information.

## *Filter #2: Source and Bias*

Now the raw data is getting closer to being information and is now ready for its second filter. In this stage, we are looking at the *source* of the information, and importantly we are on the lookout for *bias*. We are asking skeptical questions about authenticity, accuracy, and checking to see if the information is current. Information that is biased, inaccurate, or inauthentic is not valuable information. It is misinformation or disinformation. It needs interrogating and winnowing.

These questions help.

- *Do I trust the source?*
- *What are the characteristics of the source?*
- *Is it a mouthpiece for some other source?*
- *Have others checked this source?*
- *What evidence do I have that it is an unbiased source?*

After information has now passed through these two filters it can be deemed subject-matter-literacy: defined as accurate, authentic, unbiased information on a particular subject—any subject—of interest to us. We started with raw data; say a railroad timetable. We checked the data against our destination and preferred time of day. We checked the source, and it turned out to be an authentic, unbiased, and timely; an Amtrak timetable published a week earlier. Now it is no longer just numbers and letters on the pages of a book or website, it is truthful knowledge of the subject matter.

## *Filter #3: Ethics*

The third filter—and one that is *always* necessary, even with railroad timetables—is the one where the first ethical factor comes into play.

- *Did you buy the timetable so that you can take a journey for nefarious purposes or righteous ones?*
- *Did you come into possession of the information in the timetable lawfully?*

Passing through the ethical filter takes knowledge and transforms it into trusted wisdom, which is the realm of opinion and judgment. If an opinion has been arrived at using the concrete steps outlined, it has a much better chance of being a wise judgment based on the facts. Remember to teach your colleagues and your children that there are *always* ethical implications of *any* opinion, judgment, or decision. Without an ethical check, it cannot become a *Justified Belief*.

#### *Filter #4: Conduct*

The fourth filter is also one which controls ethical conduct. It is where questions of cultural awareness and respect for confidentiality, and the rights of others are asked, and answered.

- *Do I have a right to this information?*
- *Am I breaking a legal or moral obligation by having this information?*
- *What are my obligations regarding my possession of this information?*

Having passed the tests of the fourth filter, one should be in real possession of the power to make a wise judgment or hold a valued opinion. Data has now been transformed from useless, mostly irrelevant bits of random fragments that are nothing but potential, to instruments of personal power. And wielding personal power is a challenge. What is the purpose of wielding that power?

#### *Filter #5: Purpose*

The fifth filter has to do with purpose. Is power—so systematically gained by mining data, refining it into information and then knowledge, then wisdom and finally power—going to be used for good or evil? The final filter has to do with right conduct, using this power only for the benefit of all. This filter is where questions of cultural sensitivity, respect for confidentiality and private property, and good – i.e., ethical - conduct are asked again.

- *If I share this information, will it do harm?*
- *What are the consequences of sharing this information?*
- *What are my obligations regarding my possession of this information?*

Having filtered and refined and mined the data into knowledge, it can be considered valid for inclusion as part of the discovery of a *Justified* or *Warranted Belief*. And the belief, now justified, can now be shared with confidence.

#### *The Use of Power: Sharing knowledge*

Finally, we come to the use of power. Power only has a value when it is used. If you were the only person in the world, you would automatically have immense power, but in the absence of others it would be sterile and impotent; not really power at all. Another way of saying this is that *knowledge has much less value if it is not shared*. Knowledge should be as open-source as possible. The whole idea of gaining power is, or should be, to further the cause of humanity, otherwise wielding power becomes a purely selfish act, and does not advance the cause of humanity, but only the cause of an individual.

As an instructional designer, trainer or learning officer you are helping your colleagues how to decide what works best for them or the organization when wielding power: altruism or selfishness. This is the classical conundrum of human nature, remembering of course that we all have free will.

Data at the bottom of the pyramid of human understanding is a resource which, when undifferentiated from its surroundings, has no value. Power, at the top of the pyramid, without wisdom, and without sharing its benefits, is of value only to its holder.

## A Blue Ocean Strategy for Instructional Designers, Trainers, and Learning Officers

The goal of transitioning to a learning-centric culture is improvement for all stakeholders: directors, employees, shareholders, customers, and suppliers. One way of looking at this transition is to think of your company or not-for-profit as an ocean.

In October of 2005 W. Chan Kim and Renée Mauborgne, two professors at INSEAD (The Business School for the World) wrote a seminal book called [The Blue Ocean Strategy](#). It has transformed the way many businesses and organizations look at themselves and the marketplaces (*red oceans or blue oceans*) in which they operate. This thinking can be applied to the smallest units of the entire enterprise. And you can help.

*Red Oceans* represent known and well-understood spaces where boundaries are accepted, rules understood, and both have been around for a long time. Their products have long since turned into commodities, and their institutional legacy has stifled innovative thinking. New problems are responded to with old thinking.

*Blue Oceans* represent opportunities. They are unknowns. They are knowledge-based and complex. They rely on the effective and nimble acquisition and deployment of knowledge. They are the product of leveraging change. Above all they rely on teamwork, problem solving, critical thinking and a willingness to look at the big picture – the context - and communicate visions clearly. In *Blue Oceans*, leadership constantly challenges itself to adopt new ways of thinking and managing and adapting to changing circumstances. Crucially, ambiguity is seen as an asset.

I would argue that a good way for instructional designers, trainers and learning officers to operate is to look at the unit in which they operate as either a red ocean in need of becoming more learning-centric or a blue ocean on its way to being even more learning-centric. The principles remain the same.

The authors underscore that the ultimate peril for those operating in a red ocean is the tranquil, self-satisfied, and powerless feeling of floating, unaware that in reality they are in troubled, nutrient-poor, and stagnant waters. Consequentially, *Red Ocean* management resorts to tinkering and making incremental changes and modifications, instead of looking for transformative opportunities. The *Red Ocean* world view is one where boundaries and conditions are a given, unquestioned, and accepted. Consequently, their stakeholders, even the leadership, have no power to change the accepted rules.

Contrary to what one might think, in the world of business *Red Oceans* are constantly turning into *Blue Oceans*. Professors Chan Kim and Mauborgne prove that over the past century the vast majority of *Blue Ocean* businesses were spawned out of existing *Red Ocean* enterprises; not as we assume by the proverbial two people in a garage. That may change.

Of course, brand new *Blue Oceans* do arise seemingly from nowhere, such as Microsoft, Apple, eBay, Google, Starbucks, Amazon, Facebook, Twitter, or Tesla. However, the vast

majority are created out of *Red Oceans* by incumbents. But this only happens when boundaries and rules are breached by management with altered thinking, resulting in strategic shifts in direction.

As Chan Kim and Mauborgne write, “Blue oceans are right next to you.....the key is not large budgets, the key is making the right strategic moves, a product of managerial action.” This begins, as they point out, with all stakeholders collaboratively accepting and redefining the problem, followed by planning and bold decision-making. As educators operating in the ultimate Red Ocean - a monopoly designed during and for the Industrial Revolution - this should give us hope.

Why not make that your goal in designing learning for your colleagues.

### **Instructional Designers, Trainers, and Learning Officers as Servant Leaders:**

Servant leadership is a leadership philosophy in which the goal of the leader is to serve the community. This bottom-up approach is different from traditional leadership where the leader’s main focus is making sure their company or organization is thriving through top-down direction.

A servant leader shares power, puts the needs of the employees first and *helps people to develop and perform at an optimum level*. Instead of the people working to serve the leader, the leader exists to serve the people. As stated by its founder, [Robert K. Greenleaf](#), a Servant Leader should be focused on answering these questions: “*Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants?*”

Servant leaders exist to serve and nurture their community; large or small. They place the good of consumers, clients, and the lowest-level stakeholders at the top of the inverted pyramid. The typical qualities associated with servant leaders are listening skills, empathy, an ability to conceptualize, to heal, to be self-aware, persuasive, good at building a community, committed to the growth of those they serve, gifted with foresight, and finally good stewards of the well-being of those they lead through being their servant.

*Almost* all the teachers/trainers/instructors/coaches/mentors I have ever known, possess the qualities of listening, healing, nurturing, collegial self-awareness, wanting the best for others, self-sacrificing, protective, good stewards; that sounds like most ethical people too. Sounds like Mandela and Gandy or MLK Jr.

Servant leadership is exemplified by the leader who can make suggestions, encourage colleagues to do the work, not give them answers.

The Terego Ideation Method™ or iTIM™ is a tool designed to help you transition from the *Sage on the Stage* to the *Guide on the Side*. It will help you be more of a *Servant Leader* helping you transition your unit to a learning-centric Blue Ocean.

## Testimonials:

*"This methodology represents an enormous amount much needed cross-disciplinary, integrative thinking."* Dr. Peter French. Dean of the University of South Florida.

*"Game changing. Makes me ask the right questions. Using this method takes the guesswork out of problem solving,"* Rafael de Lima.

*"If you think like this method teaches, the ideas will find you."* Joshua McDowell

*"Instruction on a new way of thinking. Also a new way to strategize."* Bruce Compton Merkle

*"It's not just theory, it's useful."* Joshua Sun.

*"Your ideas and methods are revolutionary and extremely beneficial. Bravo Mr. Terego!"* Steven Sloan

*"This really altered the way I think about problems. I feel so much more confident in my thinking abilities. This was really fun and life-changing."* Alexis Agüero.

*"The Critical Thinking seminar was phenomenal. I have learned an essential concept that has been lying under my nose for quite a bit. It was like igniting a fire."* Zabdi Saint-Cyr.

*"This seminar will help me think more deeply about decisions in the future. This course taught me the necessary elements of critical thinking."* Deja Du Bose.

*"This was eye-opening. It gave me a whole new perspective."* Alyssa Johnson.

*"This method changed the way I think about every aspect of the world around me."* Elizabeth Betancur.

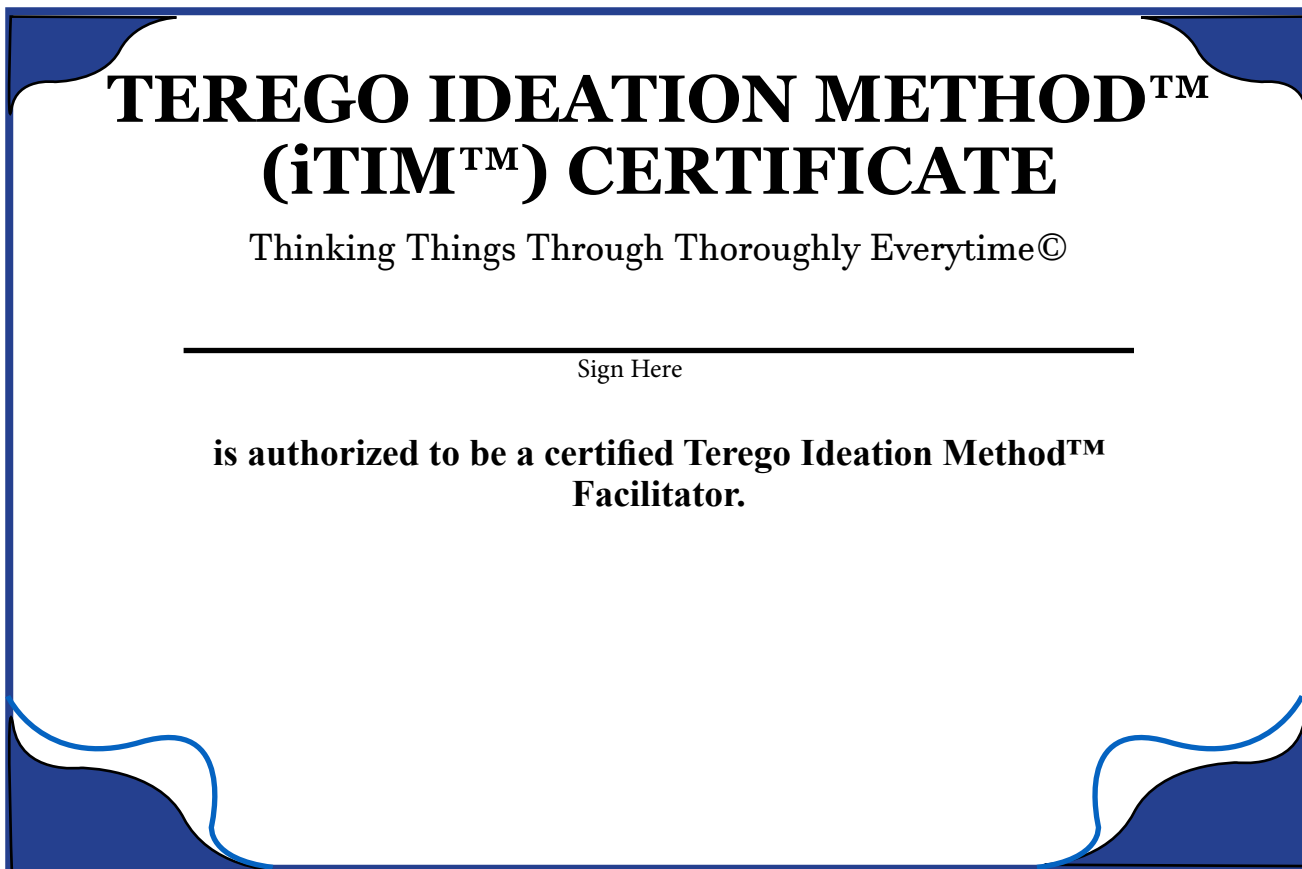
When Socrates was asked a question, he invariably answered by saying he didn't know. He put the burden back on the questioners shoulders knowing that the questioner had all the relevant skills to answer that and any question for himself – and should.

He called this method *Maieutic* from the Greek word for midwife. His mother was a midwife and that's how he saw himself too – a midwife for ideas. Now you can too.



**iTIM™ Certification is based on the Honor System.**

Name.....having fully studied and completed all the assignments contained in this course on the Terego Ideation Method™ I consider myself able to ethically use the method to help others.



# TEREGO IDEATION METHOD™ (iTIM™) CERTIFICATE

Thinking Things Through Thoroughly Everytime©

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