Intelligent people are in a continuous learning mode. They are invigorated by the quest of life-long learning. Their confidence, in combination with their inquisitiveness, allows them to constantly search for new and better ways.

People with this habit of mind are always striving for improvement, growing, learning, modifying and improving themselves. They seize problems, situations, tensions, conflicts, and circumstances as valuable opportunities to learn.

A great mystery about humans is that we often confront learning opportunities with fear rather than mystery and wonder. We seem to feel better when we know rather than when we learn. We defend our biases, beliefs, and storehouses of knowledge rather than invite the unknown, the creative, and the inspirational.

Being certain and closed gives us comfort, while being doubtful and open gives us fear. We have been taught to value certainty rather than doubt, to give answers rather than to inquire, to know which choice is correct rather than to explore alternatives.

Unfortunately, some adults are content with what they already believe and know. Their child-like curiosity has been extinguished. They are reluctant to discover the wisdom of others. They do not know how or when to leverage a love and lust of learning. As a result they follow a path of little value and minimal opportunity.

Teachers who continue to learn throughout their professional careers display the humility of knowing that they don’t know, which is the highest form of thinking they will ever learn. Paradoxically, unless you start off with humility, you will never get anywhere. As the first step, you must already have what eventually will be the crowning glory of all learning: to know – and to admit – that you don’t know and to not be afraid to find out.

According to current brain research, knowledge is a personal and social construction that each learner builds on his or her current reality. Process and content are one in this way. Our knowing is internalised through shared and reflected upon experiences. Thus, we come to trust and believe in what we know as we see it reflected in our own actions and beliefs and those of others.

The vicissitudes of day-to-day classroom life and the culture of the school provide fertile arenas of meaning making and knowledge formation for teachers. This rich environment provides numerous opportunities for learning and professional development if we can take the time for reflection and dialogue with others.

Six Domains of Continuous Inquiry

Here are six domains in which teachers can continue to learn throughout their professional careers. Sample questions provide invitations to reflect upon the experiences and derive meaning, which can be internalised and applied in future situations.

1. Continuous Learning about Collegial Interaction

While teachers may conduct their craft in the ‘privacy’ of their own classroom, they also function as a member of a team. Learning to work interdependently is a necessary professional role that does not develop without mindfulness, training and commitment to self and to others.

During staff, department or grade-level interactions, colleagues develop teaching materials together, plan together, seek each other’s help, watch each other teach and reflect together about their students and their teaching.
Coaching skills are a vital component in the collegial relationship. In too many settings collegiality is confused with congeniality. Constructive discussion moves beyond idle staffroom conversations to real structured dialogue about student learning and the craft of teaching.

**Reflection:** As a result of each group, team or community meeting, what insights about the collegial interaction have I gained? What did I learn about myself in relation to the group? What new appreciations have I gained about members of my professional learning community? What in my own actions was I aware of that contributed to or distracted from the group’s progress? What will I carry forward to future conversations?

2. **Becoming More Aware of the Cognitive Processes of Instruction**

Teaching is decision making. Our instructional actions are driven by sometimes invisible, undisclosed and unarticulated mental maps. These maps are the essential planning, in-flight monitoring and reflecting tools that support high performance teaching and continuous professional renewal.

Discussion with others provides an awareness of what goes on in your head when you teach. Surfacing, by talking aloud about our thinking and classroom decisions, energises us and causes us to refine our cognitive maps and opens the possibility of reshaping and reforming our belief systems.

According to Costa and Garmston, a teacher’s metacognitive processes before, during and after teaching may be the most important component in his or her professional portfolio of skills and awareness.

**Reflection:** As a result of teaching this lesson, what were the causal factors that contributed to the lesson’s success? How did student performance compare with the intended outcomes of the lesson? What was I aware of that I did (or I didn’t do) which produced the results I got? What insights will I carry forward to future lessons?

3. **Expanding our Knowledge of the Structure of the Discipline(s)**

To ensure high quality instruction in the academic disciplines, we must continually deepen our knowledge of the structure and organising principles, modes of inquiry and habits of mind that distinguish that discipline.

Each content has a logic which is defined by the thinking that produced it: its purposes, problems, information, concepts, assumptions, implications, forms of communication, technology and its interrelationships with other disciplines.

What makes a discipline a discipline is a disciplined mode of thinking. The terms: biology, anthropology, psychology, and cosmology, for example, end in ‘...logy’ which comes from the Greek, meaning logic. Thus, bio-logy is the logic of the study of life forms. Psycho-logy is the logic of the study of the mind, etc. Mathematics means being able to figure out a solution to a problem using mathematical reasoning.

Any subject must, therefore be understood as a mode of figuring out correct or reasonable solutions to a certain range of problems. Teacher's manuals and in-service sessions seldom open up this territory. The critical arenas for exploration here are: What do experts currently believe is the most valid content in a particular field? What are the processes of solving problems peculiar that field? How do they think about this field? What are the pathways from novice to becoming expert thinking and action in this field?

**Reflection:** How much do I know about the content I am teaching? What questions does this knowledge allow me to ask? How do I know that my students have grasped the significant concepts, found their interrelationships and responded to the essential questions? What new questions am I asking? What intrigues me about this content and want or need to learn more?
Teachers Matter

DR. ART COSTA

"We learn by reflecting on our experience."

4. Learning More about Ourselves: Self Knowledge
True professional capacities are rooted in the essential knowledge of self. As we search for clarity about the essence of our professional identity, we uncover our values and beliefs about living, learning and how to be successful.

Related to these areas of understanding are the issues of standards for performance and standards for products. These standards apply to our own work and to the expectations we hold for our students and others. Self-knowledge here is not enough; we need to constantly filter for congruence between our inner values and beliefs and our outer actions and communications.

**Reflection:** In what ways am I modeling what I am professing? (Walk the talk?) Are my actions congruent both in the school and in the larger community? What have I learned about my commitment to my values and beliefs? Do I so deeply believe in what I am doing that I am willing to defend my actions and beliefs publicly? What am I getting better at? What will I do to improve? What am I learning about myself as a continual learner?

5. Enhancing our Repertoire of Teaching Skills
Like the queen on a chessboard, the teacher with the most moves has the most options and the greatest degree of influence. There are always alternative instructional strategies. Marzano, Pickering and Pollock believe that as a profession, we must move beyond the folk wisdom that governs discussions about teaching and learning and reach out to the knowledge bases to constantly expand our repertoires.

This area of the map interacts dynamically with the other elements. In specific disciplines there are content specific repertoires. The nature of the learners involved also has a major influence on choices and options in this area. How bright, affluent secondary students learn mathematical constructs is very different to how primary, underprivileged, limited English speaking primary students learn mathematical constructs.

**Reflection:** How clear was I and how clear were my students about the purposes of this learning activity? As I reflect on the rich task with which I challenged my students, how appropriate were the level of difficulty and my expectations of rigor? How engaged and energised were my students with this task? What did I do to provide a safe and challenging environment? How did my management strategies provide seamless transitions and smooth organisation? How do these learnings help students become the kind of people we’d like them to become? Why are these considered essential, enduring, lifespan learnings? How do they enhance our vision of classrooms, schools, communities and a world that are more thoughtful places?

Students bring their own unique characteristics to the learning process and to the culture of the school and classroom. Who they are to us as individuals and who we are to them matters first and foremost at the human level.

In any group of learners we face a variety of learning style differences, requiring multiple approaches to both content and process. Within a typical classroom we also encounter a remarkable range in developmental levels, often spanning a four to six year spread in cognitive age within a grade level cohort. Added to this are the significant variations in cultural beliefs, values and approaches to learning embedded in our changing student population and their families.

**Reflection:** What have I learned about each student’s unique gifts and qualities? How can I learn more about their differences and their similarities? How might I show greater appreciation for their contributions to the class as a whole and to me individually? How might I experiment with various teaching styles so that I can expand my repertoire to better meet their unique learning needs? How might I organise my students so as to unite and not divide them?

The School as a Community of Continuous Learners

Knowledge is socially constructed. Exploration and dialogue with other adults is as much our work as is our time in the classroom. It is not what is keeping us from our work. How we talk together matters as much as that we talk together about important matters. The mutually constructed learning environment is a resource for learning, not the byproduct of learning. Our prior knowledge, complete with misinformation and misconceptions is the starting point for learning.

Trust, listening with understanding and empathy and valuing (not just ‘tolerating’) individual differences is essential here. Through dialogue and collegial coaching, teachers reveal and build their knowledge base. Such an environment needs to be safe to not know.

Knowing what we don’t know and being able to describe our ignorance is a precious and personal learning gift.