

The Role of Questioning in a Learning process: A Typology of Inquiry Methods and Results

Mahfouz, the Egyptian Nobel Laureate said, “you can tell whether a man is clever by his answers. You can tell whether a man is wise by his questions.” And Albert Einstein said, “the important thing is not to stop questioning.” Questioning is a critical part of learning. But in recent years, questioning in a learning forum has been turned, in some settings, into a process that may distract from learning rather than foster learning. It has become a tool frequently associated with “something done by one group *to* another group” as a way to test their acceptability for progression along a pre-defined path that is to be the benchmark against which everyone is judged. This form of questioning comes from a particular learning theory or philosophy which grew out of educators’ need to grade students relative to one another and to set standards that allowed rating and ranking. It has been challenged by many educators, such as Holt, Montessori, Waldorf to name a few. This paper is to articulate a typology of inquiry along with the methods and impact of each on learning and to provide a basis for evaluating the use of each in a given situation.

I postulate that there are four modes of inquiry and that each has a different method, a distinctive outcome, and a differentiated implication for the development of human excellence. Each is based on different underlying philosophies and belief about truth, and the acquiring and acquirability of truth.

MODE OF IN-QUIRY	NATURE OF PROCESS	PURPOSE OR OUTCOME	BEING REQUIREMENT
Ironic/maieutic	evolve paradigms	develop thinking and being	character, self-mastery, purposefulness, and courage
Debate/extrapolate/interrrogate	formulate , present, and defend reasoning	create, engage and align thinking	receptivity and flexibility,
Clarify/extend	shared experience	build shared awareness	better understanding and knowledge
Teach/test/compare	“right” answers	transfer thoughts	self-esteem

Each method is in pursuit of truth, with the method and acceptable outcome varying. With the teach and test method, there is one right answer and when it is known, it must be transferred to the next generation. With the mode associated with an attempt to *clarify or extend understanding*, the truth comes about through listening to others and adopting or rejecting arguments and ideas. And, with the mode of inquiry associated with a debate and extrapolate method, truth is discovered through articulating and perfecting reasoning and being able to defend one’s arguments under examination. Finally with the mode associated with ironic and maieutic method, the truth emerges through an interactive but yet very individual process and is determined through self-reflection and self-examination.

Looking at these modes in some depth may offer a way to more effectively engage ourselves and others in a process of inquiry. There is a hierarchy not of rightness, but of complexity and ordering. The lower ones provide less opportunity to transform capability and provide complex learning and may be appropriate to more limited situations. Complexity here is in terms of the depth of learning and change sought or demanded. In other words,

the more we can be in pursuit of the methods in a upward direction on the above chart, the more depth of human excellence we can enable, by building a more differentiated human being expressing their uniqueness.

Four Modes of Inquiry

Teach/Test/Compare: This mode has been popularized by school systems as a part of the industrial revolution. The mode presupposes that absolute truth in factual terms can be known and should be transferred from one generation to another. Assumed also is that by acquiring the *right knowledge* a person becomes knowledgeable and truly intelligent. It requires that certain foundational skills be learned in order to acquire the knowledge particularly reading and writing, but to some extent also computation. The skills are taught separate from one another and prior to being taught the validated set of facts. At specific intervals, the student is tested, with questions, to see if they can accurately report the facts and to some degree can manipulate them in use.

The expected outcome is to be able to acquire *age or stage appropriate knowledge* that is commonly accepted to be true and to later be able to use that knowledge in one's career or professional roles, and as a citizen. For example, it makes possible some societal order around who can safely drive a car and who cannot. It leaves little room for inquiry initiated by the student until they move into advanced educational processes. It also assumes a linear approach to the acquisition of knowledge which lead to the belief that all older persons know more than all younger persons and the more schooling one has had, the more intelligent one is.

Clarify/Extend: A shift in philosophy occurs as we move to this level. It comes from an accepted belief that at least some part of the learning process requires curiosity and a desire to deepen one's knowing through interaction. When we hear something, which we don't understand from another, or something we would like to test for the implications or potential impact, we may inquire in a way that we invite the other person to take their thoughts fur-

ther. This can be done as a technique also to attempt to show the person that their ideas might have repercussions they had not intended or expecting. Here, it may be a ploy or a genuine attempt to help. In either case there is an assumption that a person can come to have a better sense of truth through some interaction compared to the more passive mode of teach/test. It, at least, leaves open the option of accepting or rejecting the opinion of another and is highly dependent on the art of persuasion and value for sharing our thoughts with one another. In addition to the skills of the previous mode, it requires a higher degree of self-confidence and ability to manage ourselves in an interaction, so communication and self directing skills become important as well as there is some building of such skills in this mode of inquiry. It enables learning communities to build shared awareness in the midst of diverse thinking.

Debate/Justify/Contesting: This mode of inquiry rests on the philosophy that truth is uncovered through a process of inquiry that requires people to be able to defend their ideas publicly or among peers and create and pursue a logical or metaphoric appreciation. It assumes that two or more inquiring people want and/or need to come to an agreed-upon truth or at least, a set of agreements or parameters for finding truth. This is common in scientific communities and some courtroom processes. It is based on the *will*, with differing opinions or perspectives presenting the dialogue, to engage one another and to be open to “moving off” of their initiating position as new understanding, logic, or experiences are presented and tested collaboratively. Truth is assumed to be iteratively discovered through highly disciplined inquiry based on agreed-upon frameworks or methods of study, presentation, and evolution. The overall intention is to advance the collective knowledge, understanding, and capability of the whole learning community to be effective and to a lesser degree build individual capability.

In addition to the skills and personal-state-management capabilities of the previous two modes, it calls for and builds the ability to develop a line of reasoning, an experiential base for testing and/or a metaphoric process for assessing validity for each of the participants to the inquiry. It calls for and builds further personal skills also including the ability to manage our own defensiveness, to open ourselves up to a more receptive impulse, to question ourselves and our cherished and invisibly-held thoughts, and to integrate new ideas and processes into our way of finding truth. It tends to foster more self-accountability in our personal interactions, and require us to increase our authenticity and pursuit of integrity in our ways of knowing. All of this assumes the inquiry process is not usurped and used in the service of the teach/test model therefore of being graded by others, or used causally as a way merely to gain shared awareness of all the ideas as in the clarify/extend mode. There must be a genuine desire to interactively test and discipline ourselves in thinking as well as to advance the cause of increased understanding for others.

Other skills include the need to utilize inductive and deductive reasoning, starting with broad concepts or with details and then be able to build clear logic back to the other possible point of departure. It also calls on digital and analog ways of conceptualizing reality and presenting ideas—both visual- and language-based conceptualization. The debate/ extrapolate mode of inquiry is difficult to provide in today's culture since self-awareness and self-confidence are not well developed and it is so highly associated with the win/lose mode of the courtroom. Therefore, we have tended, in our societal and educational structures, to fall back on teach/test and to bring in some clarify/ extend modes of inquiry.

Ironic/Maieutic/Negating: This mode of inquiry calls for a significant shift in philosophy and intent. The belief here is that one of the most important pursuits in a learning community is to create human excellence. This includes creating individuals who have the value for and capability to be self-reflective, self-critical, and self-governing. For this to be achieved a

person must repeatedly discover that they do not “know all” or maybe do not “know enough”. This opens a door to critical self-inquiry and to critical thinking about subjects, events, and patterns. The aspiration for human excellence also causes us to seek to know fully who we are and can be, how we are unique and distinctive in our viewing of the world and our way of engaging persons and ideas, and what meaning and contribution we can and must bring.

It requires a “teacher” in the sense of a midwife. The term “*maieutic*” in Greek means obstetrics which in the time of Early Greece was a supportive enablement of a woman delivering her own child with the assumption that she had been learning how to do that in her early years, had learned to read and trust her body, and to work as an integrated mind/body/spirit experience in “bringing forth new life”. So the teacher from a *maieutic* perspective, sees their role as an aid to directing a student toward her/his own innate self-understanding in the face of a new and difficult situation. In Greece it was also seen as a support to the building of character that emerges from such “trials by fire”. The only “right answers” were those that were unfolded in the inquiry of one’s own life experience.

The most famous practitioner and really the popularizer and codifier of the method was Socrates. He used the upper two levels of our model extensively. He broke away from the Sophists who advocated the development of human excellence as well, but believed it was created through the rhetorical process of persuasion and eloquence. This difference in philosophy led to differences in method for developing the potential of human beings—i.e. ability to be all that they could be as a person. The Sophist’s method was one of lecturing to large and small groups on the virtues and the importance of pursuing them rigorously, seeking to gain commitment to the ideas and their innate value. As great orators they were exceptionally inspirational and caused people to feel a aspiration to be more virtuous. By

such influence, a student could not help but to be swayed to the side of “right” and pursue a desire to follow on that path.

Socrates believed that excellence has to be “built” as a capability, not sold and that it was an inner process of reflection as much as an outer process of inspiration that mattered. Socrates held that the Sophists’ way of attempting to transfer knowledge, was really only a transfer of opinions. He believed that knowledge, developed through internal processing, was needed for one to become a virtuous person and to have the chance of achieving excellence. He argued repeatedly that unless one could evolve one’s own *well developed reasoning* regarding the meaning and working of ideas and virtues, could defend one’s idea in a debate, and could test for understanding in one’s life—it was not possible to really acquire virtues and therefore not possible to become a person who reflected excellence. Only through deep understanding, which was an inner process, could one gain such knowledge. He believed that only through the nature of examination it took to develop critical thinking skills and to face one’s own personal limitations in trying to develop critical thinking, could one develop the inner experience of virtues. As long as one held an opinion that had been adopted from others, it was not possible to actually understand virtue nor was it possible to actually be virtuous.

Socrates believed that people could only gain this inner experience of the virtues and have the ability to present rational argument about one’s opinions though developing one’s own thinking, rather than adopting the thinking of others, through reflecting on ideas and struggling to ascertain the truth of the argument or thinking. We could not really be said to understand something if we depend on another’s authority, instead of our own critically-tested ideas. To turn opinion to knowledge, reflection is needed. Without this we can be easily swayed and brainwashed by the next idea, and have no real center in our understanding to which we can return. Further, Socrates believed that the continual re-stimulation of the aspi-

ration to be more excellent, without the resulting change in character required, led to an inevitable disillusionment with such possibilities.

In this most complex of inquiry processes, the “midwife/teacher” (a person of wisdom in a culture versus a person of knowledge about facts) played the role of helping the person to remember that they “did not know” and/ or that knowing was a process of searching as a life-long process. The “teacher” did this through providing a timely inquiry processes, just as a student was sure they had the “right” answer, a set of questions that helped the student put into doubt about what was, at that moment, certain. It was targeted to ensuring the reopening of the space to renew and deepen the learning process, to struggle for a new level of truth. It is actually intended and carried out in a good faith relationship with a person of wisdom. It is a *will* building exercise aimed at creating a mind and mindset focused on the value of continuous inquiry, continuous learning, and continuous development.

Method: In this fourth mode of inquiry, to work from the Socratic method required exceptional skill and higher purpose. The person of wisdom must have, in addition to a maieutic view of learning, a highly developed value for what the Greeks called being “ironic”. This word connoted something slightly different that it does today. In its early meaning it was “pretending ignorance” so as to leave space for the ideas of others to evolve. Or as connected to the more modern meaning of mockery of an idea, it was “mockery of one’s self as though one could not know enough to pass as an expert or authority.” In a Socratic process there is an underplaying of one’s own ideas and role in terms of their importance when ideas are presented, to present one’s self as somewhat inferior as a model of truth finding, and to “feign” the lack of ability to convince others of the truth.

At another level this is true, given the desire for continuous discovery by all participants. In our expert model of today, with the desire for motivational speakers, this is difficult to pull

off. The wise person must be sufficiently negating toward themselves to discourage adopting untested ideas directly from the teacher, but still convey the groundedness that engenders confidence in the student. This is also a part of the process on the part of the “teacher” to keep themselves in a maieutic and negating process of continuous self-discovery and universal truth discovery. In this mode it is important for the teacher to always have their own answer to the question they pose, but not in the same way as the teach/test method which is less difficult than it may seem, since the nature of questions are different anyway as we shall see. It would be disrespectful to not do the same work on self-discovery that is ask of the student and would not be placing the same demand for self-development onto themselves as a teacher. But the teacher has no motive to transfer their answer as “the truth” to the student. Therefore whenever the teacher’s answers are offered, they follow the process of the debate/justify mode, to ensure those skills are mutual built but without the need for a answer. This role is an “earned right” for a teacher from a student. It is also a contract between the student and the teacher to work in this way, and that contract is frequently formed implicitly by entering the school or relationship.

Self-reflection on the internal working of one’s own mind and emotional experience is designed into the process and considered preeminent over any discovery of universal truths to be validated by one’s peers or external examiners of justice and truth. Aims of increased ableness as a human being are held as a reference point by all involved—the wise person, the student, and all collaborators— and made explicit to the dialogue at critical points.

The ironic/maieutic process also utilizes the methods of the clarify and extend mode, so one learns to extend one’s inner and outer thinking and to increasingly be able to visualize the ramifications not only of one’s thinking and one’s way of thinking but also one’s *models and paradigms* for thinking. The outcome of those who use the clarify and extend method without the philosophy of the debate or the maieutic modes—to build shared awareness and

valuing for other's thinking and thinking processes—are present, but have minimum significance when education is the objective. The objective of using clarification of ideas and extension of thinking under the maieutic umbrella becomes more targeted toward clarify for one's self what one really believes based on one's own experience and what the implications are to one's own ability to express one's essence qualities or the implications of a way of being or behaving.

The ironic/maieutic method draws strongly on the original Latin meaning of the term education. It's root word is *ēducarē*, which connotes to draw out. It is also found in the terms “conduct” which is drawing out of the music from the orchestra, and ductile, to be able to draw into a shape or carry some current. So the idea of education assumes the presence of understanding and knowledge within each person, even though it may not be apparent, or the owner may not even be aware of the existence of it. The process assumes it can be discovered and called forth, with effort on the part of the student.

Questions: This mandates a different nature of questioning as well as a different process of inquiry. The question offered are “to the best of the ability “ of the wise person, questions that can not be answered with the thoughts already held by the person being asked and in fact may generate discomfort that one does not “know” immediately. The questions would evoke a need to visualize a “living, dynamic world “ at work and to apprehend or conceptualize a positive way of conceiving of it and evolving it. It would call on a different mind than the one for which the student who is “tested for what they have been taught uses.” It asks the student to test themselves and teach themselves how to continuously observe and create a way of viewing or to be “re-viewing”—to view anew, rather than reviewing (to recall as viewed before) one's ideas. David Bohm, the renowned physicist and student of Krishnamurti called the reviewing, “*thoughting*” instead of *thinking*, since no new thinking was generated. He felt the past tense of the verb more accurately represented this mode of mental

activity. He claimed we are only truly thinking when we are looking at something anew and creating our thinking in the moment.

If personal discomfort arises from the difficulty of facing such mentally challenging questions, it is just “grist for the mill” of development and is processed in the same way as the content of the question—reflectively and for personal understanding. Development occurs when the student, or the teacher, within themselves, can notice their “discomforts” as a source of presenting their information on what they are *attached to* and what is being confronted in their self-image or expectation of themselves. It is never judged by the other person but facilitated as a self-reflective process.

All the processes suggested here, are explicit and shared between the “wise person” and the student and are most often in the form of a framework that fosters a more systemic view of the working of a situation or event. And the “wise person” as well as the student is using the moment to evolve their personal capability to be involved in extrinsic and intrinsic inquiry or dialogue.

Summary:

To be in a mode of developmental learning, where we are learning how to learn, learning how to be and become as people, and learning how to be self-directing regarding renewing our learning process, we must utilize all the modes of inquiry. We need to be skilled in determining the appropriateness of each one to any situation, and have “access on demand” to the skills needed to carry them out. None is better than any other, just appropriate or inappropriate to the task or outcome sought. When the objective is development of human excellence, for each person to be whole in managing their own functional self, the being or energy state they have at any moment and to guide our own will and motivation, we need to increase our use of the upper models of debate and maieutic methods and to engage others with consciousness and from a developmental philosophy.