## Understanding Intuitive Thinking in the classroom of 21st century learner

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**Abstract:** The ushering in of 21st century has on one hand increased the challenges for the learners and on the other hand enhanced awareness of competencies & skills. With the emergent need to acquire optimum employability skills, outcomebased education is much in demand. Teachers and parents can give an eminent gift to their children by letting them adopt some supportive behaviors to enhance intuition. It is believed that intuition can pre-dominantly serve decision-making, problemsolving and creativity (Dane & Pratt,2009) as intuition can spontaneously generate ideas, alternatives or solutions (Sadler-Smith, 2004). Therefore, intuition seems indispensable to be used in teaching learning pedagogy. The extent to which one is able to access and utilize the non-conscious mind (Strick &Dijksterhuis, 2011), decides the effectiveness of intuition, and some experts argue that this can be enhanced (e.g., Tomasino, 2011). Thispaper explores intuitive behavior of learner and teacher and an attempt to integrate strategies to enhance learning capacities. An attempt is made to view Intuition help teachers to sense pupils' needs, engage more easily and effortlessly with them, and prevent conflicts.

Keywords: Intuition, 21st century learner, education, decision making, pedagogical process

## 1. Introduction

Einstein is widely quoted as saying, "The intuitive mind is a sacred gift and the rational mind is a faithful servant", and he cautioned, "but our society honors the servant and has forgotten the gift." In a 2005 Stanford speech, Steve Jobs credited his intuitive mind as having a significant impact on his work. "You have to trust in something," he said. "Your gut, destiny, life, karma, whatever." "Often you just have to rely on your intuition.", as quoted by Bill Gates. As proven by researchers, the human being is an incredibly spirited creation on this planet that can think, using brain's navigation system and feel, through the five senses namely taste, smell, vision, hearing and touch. Added to these five, there is a sixth sense too, that is awareness of one's body in space and a new study suggests that the last one, called proprioception (means, how your brain understands where your body is in space), may have a genetic basis. Scholars have been supporting the notion that intuition is a crucial form of acquisition of knowledge that supports teaching. Teachers do heavily depend on their intuition to deal with complex classroom situations, especially those that require on-the spot problem solving, decision-making, and creativity (e.g., Anthony 2006). The time has come to revisit our faith and interest in educational intuition. As per our observation and supporting research, the best jobs in the global economy today, are going to the so-called "knowledge workers" who are able to address ill-structured problems in unpredictable ways by associating real time information flows with available knowledge to engender rapid new intuitive insight. Perhaps the result is the renewed interest in present era, towards intuition, as the hot topic of discussion in psychology.

## 2. Defining Intuition

While trying to understand intuition, one realizes that it is quite challenging as it involves "learned responses that are not the outcomes of deliberate processes" (Hogarth, 2010). It can be said that Intuition is not logical, as it is not an outcome of a set of steps that can be easily deciphered. Instead, as it is based on deep-seated knowledge, the process is quite natural and instinctual. While intuition is quick and usually beneficial, yet, it is not always entirely accurate. The subconscious brain attempts to process, recognize, and use patterns of thinking, which is based on prior experience and a best guess. Healthcare researchers found that experienced dentists often rely on intuition to make complex, time-bound decisions. It is observed that, many of the most influential businessmen across the world, admit to making decisions based on intuition rather than deliberate or logical thinking. In a study done, out of a random group of 36 CEOs, 85% affirmed that intuition was central to their decision-making process (Maidique, 2014).

**2.1** Intuitive learners like to take in information that is original, abstract and oriented towards theory. Such learners look at the bigger picture and try to grasp the complete patterns. They like to discover various possibilities, relationships and like to work with ideas.

In an article named- Why Supporting Children's Intuition Is Important to Their Success as Adults by Catherine Crawford, a child's intuition or the sixth sense, has been proven to be much more important in the life of a child than many readers realize. Intuition helps alert us to danger, provides guidance in decision making, and in problem solving by being able to jump quickly to the solution–while ignoring the rational, linear steps. For all these reasons, it is important to help keep intuition alive in children. Children who are highly intuitive, are

unusually aware of the needs and feelings of parents, siblings, friends and pets. If the intuitive children are raised with respect for their insights and are trained to manage the stressors that can emerge with this attribute grow up to be well balanced intuitive adults.

**2.2** According to scientists, intuitive thinking happens in a region of our brain, that is close to the pineal gland. It is known to show up in moments of inspiration, and people who possess this skill, are known for having "a clinical eye" and such people are better known as visionaries. The 4 types of Intuitive Thinking are:

•Emotional intuitive thinking has to do with having ability to understand other's traits and emotional state of mind. Without them having to say much, one can identify them and get to know them.

•Mental intuitive thinking involves getting an immediate answer to a problem, without doing its analysis. It's very significant and useful in tasks that require quick decisions like firefighters or bomb technicians.

•Psychic intuitive thinking means having the innate potential to choose the best path to tame a personal issue, without putting much cognitive input into it. It also boils down to working on one's personal and social work dynamics.

•Spiritual intuitive thinking has to do with states of attainable heights of insights or disclosures. It can be termed as more of an experience than a fact. Buddhists are known to have dealt with this kind of intuition, which has given it a mystical quality.

**2.3**The human beings, are known to possess two amazing gifts – the ability to think rationally and also the ability to think intuitively. It is observed that rational thinking is most appropriate when all the facts regarding a matter are clear and the consequences of an action are well understood and known. Whereas, when the consequences of our words and actions are unknown, results of actions performed are not known and the rational mind does not have much to grasp hold of. One has to rely on feelings, when consequences of a decision are unknown, but the feelings can be confusing or misleading too. As the rational mind is known to collect facts and then arrive at a sound decision, the intuitive mind needs to trust its insights based on gut feelings.

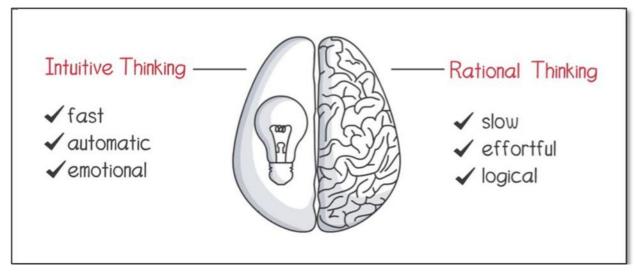


Fig 1-Intuitive Thinking versus Rational Thinking

It is my belief that teaching our children and ourselves how to develop a sense of inner trust is important for a balanced thinking approach

**2.4**One often wonders what is it that intuitive people do differently, that keeps them in touch with their intuitions... Some of the traits are: Intuitive people:

- listen to their inner voice
- take out time for solitude, as it gives rise to creative thinking
- connect to their inner wisdom through solitude
- are keen observers
- even listen to their own bodies by tuning into it.
- can heed their gut feelings
- pay attention to their dreams
- enjoy plenty of rest and freedom

- mindfully let go off negative emotions
- connect deeply with others

Most of the successful people, rely on their intuition as much as their logic. When they have to take a crucial decision, they follow their gut feelings, to take the call on whether to drop a project or proceed with it., knowing that they are facing unbeatable odds. As a professional, at times, one's goal to create a desired outcome could take any rational mind in the wrong direction. In that situation, intuition is the only thing one can depend on to steer a person in the right direction.

**2.5** The objectives of this paper are:

- To understand and recognize Intuitive minds
- To strategize to create a balance between Logical and Intuitive thinking
- To explore how Intuitiveness can enhance learning capacity and provide desired results
- To incorporate Intuitiveness in educational practices to make them richer

## 3. Literature Review- Some interesting reviews are given for reference.

## 3.1 Intuitions are a form of knowledge based on previous experience-

Michael Paul Downton, cited in his research paper titled, The Learner's Intuition; Harnessing the Power of Intuition during Creative and Collaborative Activities, that, intuitions are not merely a set of skills that are unconscious, but that intuitions are a form of knowledge based on previous experience (Bruner 1977; diSessa, 1993; Fischbein, 1982). Some of the themes that exist in the literature in regard to the importance of intuitions are that it is important to allow learners to express their thoughts (e.g., intuitions) through the active exploration of the domain (Chi, Bassok, Lewis, Reimann, and Glaser, 1989; diSessa). And that the curricular design approaches should be implemented in order to encourage an active engagement with the domain. The findings in this research paper suggests that when students explain their thinking while engaged in making something, they are creating and articulating new ideas while listening, and reflecting too. Each of these is essential for students to be engaged in if they wish to succeed in the 21st century.

## 3.2Intuition plays the role of a catalyst -

According to Chandralekha Singh, in the paper named 'When physical intuition fails', cognitive theory suggests that those with good intuition can efficiently search the information stored in memory to pattern-match or map a given problem onto situations with which they have experience. It is observed that over the course of their training, professional physicists develop a high degree of physical intuition that enables them to analyze and solve problems quickly and efficiently. Intuition plays the role of a catalyst, greatly speeding up the process by letting shortcuts to be taken during problem solving.

## 3.3 About decision-making in life

The Reimagining Life Skills and Citizenship Education in the Middle East and North Africa, a 2017 UNICEF MENA Regional Office publication, speaks about decision-making skills, or the ability to choose between two or more courses of action. It relates to "one of the basic cognitive processes of human behavior by which a preferred option, or a course of action, is chosen from among a set of alternatives based on certain criteria" (Wang, 2007). Decisions can be made through either intuitively, on the basis of gut feelings, or they can be made through a reasoned process, using thinking about facts and figures, or a combination of the two (Gigerenzer, 2007). In case there are complicated decisions, they tend to require a more formal, structured approach, usually involving both intuition and reasoning.

## 3.4 The decisions taken spontaneously are often as good as carefully planned ones.

In his book named, Blink: The Power of Thinking Without Thinking, Malcolm Gladwell, suggests Key Lessons from "Blink"-

- Don't rely on logic
- Stay true to what you believe in
- At the end of the day, all you have is your attitude towards life.

The author describes the main subject of his book as "thin-slicing", which means that we come to a conclusion based on limited information gathered during very narrow period of experience. This idea suggests that spontaneous decisions are often as good as—or even better than—carefully planned and considered ones.

## 3.5 Teaching must include the modeling of intuitive insights

In a dissertation named -The role of intuition in the teaching/learning process, Donna Harlan concludes that teaching must facilitate this growth and development with the acknowledgment that children must be prepared for lifelong learning. Thus, teaching must include the modeling of intuitive insights, self-acceptance, openmindedness, excitement for learning, curiosity, and perseverance. Learning must be free from the anxiety of failure. Interestingly, the survey of contemporary models of teaching includes references to intuition but there seems to be no direct application of it to the acts of teaching and learning. This in and of itself implies that learning theorists recognize the validity of intuitive insight but seem hard-pressed to know what to do about it. It seems that intuition does indeed play a role in teaching and learning. The future of education might well benefit from additional focus on intuitive insight.

## 3.6 Intuition is important to help teachers in tackling today's problems in education,

It was concluded in a research paper named-Exploring teacher awareness of intuition and how it affects classroom practices by Gerbert Sipman, Rob Martens, Juerg Thoelke Juerg and Susan Mckenney that teachers rely heavily on their intuition to deal with complex classroom situations, most importantly those that require on-the spot problem solving, decision-making, and creativity (e.g., Anthony 2006). Their study revealed that teacher awareness of intuitions seems to consist of three sequential stages: (1) preparing by being in the moment, withholding judgement and feeling relaxed; (2) sensing intuitions, thoughts, and emotions; and (3) considering by distinguishing between these signals, and attending to emergent insights. Finally, the data also suggest that, although it takes time to learn to become aware of intuitions, teachers' use of intuition can be enhanced through professional development. Meditative exercises appear to prepare participants to become aware of intuitions by being in the moment and feeling relaxed. Such work is important to help teachers in tackling today's problems in education, such as the diversity of expectations of students to which teachers must attend (Flores 2017). The call for intuitive approaches is growing, because of an increasing complexity in society and education (Sipman et al. 2019)

#### 3.7 A healthy balance between intuitive and rational pedagogical processes

In a research paper named, The role of intuition in pedagogical tact: Educator views, the authors GerbertSipman, J. Thölke, Rob Martens and S. McKenney have written about a healthy balance. Taking evidence of the last 15 years, teachers have been basing their daily classroom practices upon both scientific evidences and practical wisdom. This study showed that educators wholeheartedly agree to what the literature suggests that both rational and intuitive processes are needed (e.g., Kennedy, 2002; Johansson & Kroksmark, 2004). Specifically, this study found that educational practitioners do consider intuition as crucial for teachers' pedagogical tact. They are concerned that rational processes overshadow intuitive ones in unproductive ways, and are eager to pursue a healthy balance. This requires deliberate support for developing the use of intuition, which is currently not common in education. It is high time to take a closer look at the use of intuition in education so that both our teachers and pupils may gain from the same.

	Emerging themes (# discussions in which mentioned)	Example quote
Value of intuition in education	Intangible/intuitive processes are part of the educational process (10)	This has become more crucial because we want to do justice to differences in the classroom.
	Intangible/intuitive processes are the essence of teaching (4)	I think we've agreed, in different words, that these intangible processes are the heart of our job.
	Many pedagogical actions occur intuitively, as there is no time to consider consciously what to do (3)	You often have to act so quickly that you just act from yourself, from your gut.
	Both educational professionals and pupils feel whether a teacher uses intangible/ intuitive processes or not (2)	In those classes you sense a relaxed, safe atmosphere in which pupils feel that they are heard.
	Without the ability to use intangible/ intuitive processes, teachers cannot succeed (2)	(A) You say everybody has 'it'? (B) I think otherwise you would have been sifted out, somewhere in the process.

Figure 2-Value of Intuition in Education

Referring to the Figure 2, given here it is apparent that teachers do consider intuition considerably important in the pedagogical processes.

**3.8** In a research paper named Intuitive vs Data Driven Decisions for School Leaders: A Case Study on Capacity vs Capability, by Dr Pete Stebbins with Alistair Kerr, Gut instinct should never be the only decisive factor. Schools are complex and rapidly evolving organizations. School leaders are often faced with an overwhelming number of decisions in an impossibly short time frame. IN this overloaded, time pressured environment many school leaders rely on their 'gut instinct' or 'intuition' (which is usually based on their many years of accumulated experience) in order to rapidly respond to a range of situations around teacher capability, parent engagement, student learning and positive and negative behavior in the classroom .The most frequently occurring and most damaging failure of 'gut instinct' among school leaders is when they misdiagnose behavior and/or teaching and learning problems in classrooms as problems of 'lowered teacher capability' when, more often than not, they are actually caused by 'lowered teacher capacity'.. This misdiagnosis of lower capability instead of lower capacity is an all-too-common mistake made by school leaders who rely heavily on their intuitive leadership skills. Thus, the school leaders gut instinct should serve as an 'entrée' fast-tracking them into the 'main course' of inquiry into available data to drive decision making.

## 4. Methodology-

As intuition can spontaneously generate ideas, alternatives or solutions (Sadler-Smith, 2004), it pre-dominantly serves decision-making, problem-solving and creativity (Dane & Pratt,2009). Therefore, teachers must include intuition in the teaching learning pedagogy. Further, intuition was viewed through surveys and case studies to help teachers, sense pupils' needs, engage more easily with them and prevent conflicts within pupils.

## 4.1 Survey on Pedagogical Processes

Based on the belief that the harmonious incorporation of Intuitive Pedagogical processes in our teaching domain would enhance the personal development of our pupils, a survey was conducted on 44 teachers of a school, teaching students of grade VI to XII, and the following results were concluded:

• 95% of the teachers confirmed to have implemented solutions, easily and effortlessly, in the classroom, to both academic and non-academic problems that present themselves on the spot.

• 80% of them confirmed to have used intuition when a rational analysis needed to be checked.

• 93% of them said to have integrated, Intuitive thinking, which is fast, automatic and emotional along with Rational thinking, which is slow, effortless and logical most of the time, depending upon the need of the context

• Open-mindedness and Excitement for learning were used as pedagogical processes by highest number of teachers in their pedagogical processes, followed only by curiosity and modeling of intuitive insights, and self-acceptance and perseverance too were used by some teachers.

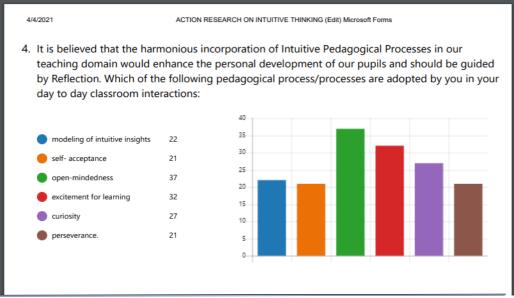


Figure 3- Action Research on Intuitive Thinking

# **4.2 CASE STUDIES** Some case studies given here throw light on real classroom interactions and highlight the usage of Intuitive thinking.

## 4.2.1 CASE STUDY 1-INTUITIVE DECISION MAKING

Simran, a 12-year-old girl studying in Grade VII of a Private School in Gurgaon was sit-ting and eagerly waiting for her teacher to walk in to class. She knew that it was going to be a Life skills Session on Decision Making.

The teacher walked in and announced that the class was going to do an activity today. This activity involved trying to cross two obstacles made with water bottles to reach the end line. Simran was excited and felt confident as her father was a football coach and she used to play as a Midfielder every Weekend ever since she was a little child.

The only catch was that the students had to wait outside the class whilst the teacher setup the obstacle course and they would be blindfolded before they entered the room.

Simran's best friend Shalini decided to go first. The teacher walked her out of the room and made sure that she was blindfolded before she could start the activity. Shalini was visibly nervous and tripped on the first obstacle. She was able to regain her balance and crossed the other obstacle easily. The class clapped for her loudly and congratulated her for crossing one out of the two bottles.

Pratyush, the monitor of the class decided to go next. He seemed very confident and smiled whilst standing at the starting line. Unfortunately, he was unable to cross either of the obstacles without touching the bottles.

Now it was Simran's turn. She was a little nervous but more excited to try the obstacle course. She had practiced such courses a lot with her father. The only difference here was that she was going to be blindfolded. The teacher positioned her at the starting line and told her to start. Simran was able to easily manoeuvre through both the obstacles. The class clapped and patted her back.

At the end of the class, the teacher praised Simran and asked her how she was able to cross the obstacle course without any difficulty. Simran revealed to the rest of the class how she used to train with her father every weekend and was used to such courses. Simran was proud of herself. She decided to practice intuitive decision making and test her-self whenever possible.

**REFLECTION-** Simran's extensive football practice as a Midfielder, allowed her to judge and perceive the obstacles in front of her without actually being able to see them. The intricate skills of maneuvering the ball and moving on her toes, helped her avoid the obstacles with ease and reach the finish line.

## 4.2.2 CASE STUDY 2-INTUITIVE CAREER CHOICES

Nikhil, a student of grade X in a private school of Gurgaon was very nervous about the upcoming psychometric testing process at his school. He was unsure about the career path he wanted to follow. He was sure that he would be able to make an informed decision based on the test result. The test results showed a high score in the areas of logical intelligence and predicted a successful career in the field of Engineering. He was somehow disappointed as his gut told him that he would be unhappy as an engineer. While those around him suggested that he trust the results of the test, he made an intuitive decision to choose journalism instead. Nikhil had always been fascinated by the idea of investigative journalism and was confident that he wanted to trust his gut. Years later, the Principal of his school was elated to see him as one of the panelists for a career symposium on national television. He fondly spoke to the students about his journey and importance of giving due consideration to one's instincts as well. He shared how taking a decision based on his intuition was the best thing that he did. His teachers, family and friends were happy to see him thriving in the field of Journalism.

**REFLECTION-** It shows that career choices don't depend on the result of one's psychometric testing solely. A person's instinct and experience also play a part in it.

## 4.2.3 CASE STUDY 3-INTUITIVE DECISION MAKING

The Student Council of Anand School had gathered to meet their Principal. All were inquisitive to know what new is she going to come up with that may require their attention. In the previous meeting apart from noise during recess, identity card defaulters and late coming post-school recess, etc. were discussed. Raman was sure, she would give her reflection on how he as Head boy had allocated duty list amongst Council members and prefectorial body. He also thought that Anjali, the Head girl's list still had room for improvement. Since this was their second meeting only, ever since the new council got appointed, the excitement was evident on everyone's faces. The principal put forth a grave issue of traffic congestion at the time of arrival of students, caused by the School Buses, cars and pedestrians, all juggling to reach the school on time. She drew the external structure and lanes used for incoming and outgoing traffic. Ritvik, the House Captain, raised his hand and shared that different time slots could be allotted to all three types of commuters, which seemed to be a less likely solution. The Head girl, Anjali suggested if big board signs could be put up displaying the signages of movement of traffic, it would lead to some success, even though partially. Raman came up with an idea that student prefectorial body could be trained and guided to stand at crucial points next to the school's external wall, they could help in directing the traffic in the right direction. The plan required, students on duty, to come earlier than the normal timings by 10-15 minutes at least. Raman added that the days on which students had term-end examinations, their teachers could come out and extend support. Ronnie, the sports captain, who was patiently listening so far, said it from his gut instinct, that the prefects would not turn up ten minutes before the school timings and the plan mentioned won't be able to take its wings. Instead, he said the school admin Supervisors who were already present in school, an hour before the student arrival time, could pitch in to resolve the issue. The Principal agreed to what Ronnie said.

**REFLECTION-** Ronnie was able to anticipate a potential problem in the implementation of the plan by thinking intuitively and was thus able to give a more viable and feasible solution.

## 4.3 Intuitive Learning Model for Schools

It is strongly advocated to have a harmonious incorporation of Intuitive Pedagogical Processes in our teaching domain that would aim to enhance personal development, while being guided by Reflection. Understanding two to three minutes of Meditation or Mindfulness activity is also essential. Whether one is able to immediately understand other person's personality trait, find an immediate solution to a problem, choose the best path to overcome a personal difficulty or certain revelations, they all have to do with developing intuitive mind.

A simple model explaining the types of Intuitive Thinking and the pedagogical strategies that could be incorporated in 21<sup>st</sup> century classroom, is presented here. The model vividly depicts, that schools aiming for personal development of students, need to help students through guided reflection and mindfulness techniques to adopt any four types of Intuitive thinking, namely emotional, mental, psychic or spiritual. It also defines the pedagogical strategies that can be incorporated in the teaching learning process.

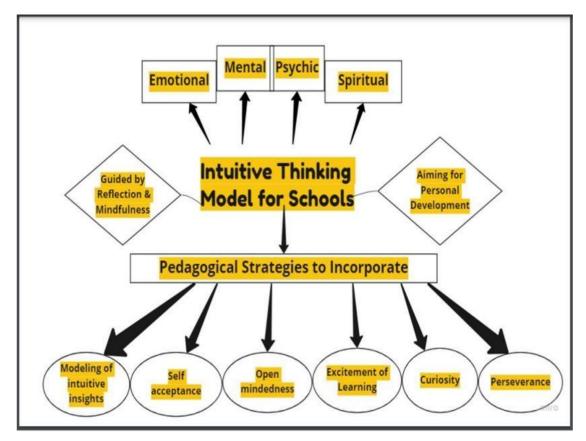


Figure 4- Intuitive Thinking Model for Schools

Teachers do understand that learning must be free from the anxiety of failure and they could use the following strategies to enhance learning capacity and aim for desired results:

• modeling of intuitive insights or non-analytical functioning

• self-acceptance or feelings of satisfaction with one's self despite deficiencies and regardless of past behaviors and choices.

- open-mindedness relates to the way in which peers approach the views and knowledge of others
- excitement for learning is a feeling of eager enthusiasm and interest
- curiosity means inquisitive interest in others' concerns or interest leading to inquiry
- perseverance is continued effort to do or achieve something despite difficulties, failure, or opposition

## 5. Conclusion-

A very perceptive child is not only highly intuitive but highly empathic as well and with attentive parenting, and insightful teaching, one can help a highly intuitive child thrive.

Teaching must facilitate this growth and development with the acknowledgment that children must be prepared for lifelong learning. Teaching is a rich, but multifaceted and complex practice, which relies heavily on the use of intuition. Classroom situations are only partly predictable and controllable (Wolff 2015); hence teachers have to act in split-seconds on complex and contingent classroom situations continuously (Eaude 2014). Whatever is being taught in class, the teachers must continuously ask themselves about the intuitions and insights essential to their mode of knowledge and thought and the ways to most effectively foster them with their students.

In addition, the rationale finds support from the survey, case studies and study of literature. The emerging reflection is that Intuitive learning that otherwise gets ignored, needs to be recognized and efforts made to enhance it through pedagogical measures, so that a child may be prepared to face the challenges of this century. As teachers, we engage students in discussion, as coaches, we consciously model practical maxims and rules of thumb and it is seen that through steady repetition and guidance, habits are formed. It is observed that student, do not remain novices forever and in fact they make intuitive conjectures, or spontaneous artistic or athletic moves, by processes they cannot, even with coaxing, explain. For these reasons, and so many more, it is crucial to help keep intuition alive in the classroom of  $21^{st}$  century learners. As Einstein put it, "education is that which remains when one has forgotten everything learned in school.".

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