



English 100T

Critical Thinking in the Educational Environment

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We were driving down the road on the way to school one morning and my son Jacob says, “Mom, I don’t know why I have to go to school.” I had no idea where that statement came from especially considering that Jacob is a five year old that is only in Junior Kindergarten—isn’t that supposed to be a fun place to be? So then I started asking him questions, and what I quickly realized is that he believes that he knows everything they are trying to teach him. His observation and questioning skills are used on a regular basis, and I love to see his mind turning as he works out the “why” and “how” in his head. Do you know how to think? I felt secure in my ability to think until Jacob became old enough to have a conversation with me. He has reopened my eyes to the world around us. He continually questions everything I tell him while becoming more aware of his environment and the different people that are within it. As a parent I am a firm believer that children need to be presented with many opportunities to practice the critical thinking skills that are within us all. Furthermore, I feel that they should be presented with those opportunities on a regular basis in their daily educational setting. By implementing critical thinking in the early stages of learning, we build self-esteem, lay a foundation for formal education, and develop a life-long love of learning.

Arriving at a clear definition for critical thinking has been a bit difficult. The Merriam-Webster dictionary describes it as: “the mental process of actively and skillfully

conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion.”

According to Manu Aluli Meyer Ed.D in Philosophy of Education from Harvard University, critical thinking is:

The ability to be aware of context in time through your own bias and through your own capacity. It is taking the makawalu (multiple) approach without judgment. Being quick on your feet, not closed minded, to know that you don’t know and be ok with that, to understand something in a new way every time because you are open to it.

Paige Brown, a 3rd grade teacher for over fifteen years in both public and private sectors of education believes that critical thinking is:

Your own thinking about things, the questions in your mind that you are curious about – then you use your knowledge that you have to understand the particular topic and apply strategies that you have learned to come to some type of conclusion.

With all those descriptions there seems to be a commonality amongst them that touches on cognitive skills and with further research I found that, The American Philosophical Association reported:

At the core of critical thinking are the following cognitive skills:

- Interpretation: categorization, decoding significance, clarifying meaning;
- Analysis: examining ideas, identifying and analyzing arguments;
- Evaluation: assessing claims and arguments;

- Inference: querying evidence, conjecturing alternatives, drawing conclusions;
- Explanation: stating results, justifying procedures, presenting arguments; and
- Self-regulation: self-examination, self-correction.

As I continue to analyze my information collected I now believe those cognitive skills are a great beginning but are only a small part of being an effective critical thinker and feel, regardless of the meaning, the phrase “critical thinking skills” seems to be the newest fad or buzz word in the world of education. One can only hope it will last longer than a fad since this new awareness and attention is allowing many children the opportunity to experience critical thinking as teachers respond to the newest thing in education. These skills are affording our technology savvy children the ability to examine and report on the world and their surroundings in greater context, using the World Wide Web as an enhancement and research tool instead of a crutch.

“Our world is collapsing with an ignorance taught and learned in all sanctioned institutions.” This strong statement was issued by Dr. Manu Aluli Meyer, an Associate Professor of Education at the University of Hawai‘i at Hilo. Unfortunately Hawai‘i is not escaping that detriment; unique because it is the only statewide education district in the country, it is also Hawai‘i’s only state educational agency and local education agency for federal funding purposes. This structure directly affects the status of education being offered in most Department of Education (DOE) schools. This archaic system has pushed parents to explore alternative educational opportunities for their children like private and charter school options. These sectors of education in Hawai‘i exhibit the same resiliency, creativity, and commitment that characterize the best education nation-wide.

Private and charter schools are still

the minority in Hawai‘i, and while they serve a large population of students there are still many children being taught by an unbending curriculum --being expected to accept what the teachers are telling them and not to question. Dr. Meyer goes on to say that, “We are truly dumbing-down ourselves and our children with an over-emphasis on uniformity, fear, competition, measurement, comparisons, and an over-reliance on literacy.” Many DOE teachers find it easier to slap on facts for students to memorize, and then assess them with multiple choice tests. Often times slapping on the facts is the easy route because lessons that emphasize thinking require application and analysis. Such application and analysis are being executed with witnessed successes at many private and public charter schools throughout the State of Hawai‘i.

Parker School is a private K-12 education institution located in Waimea on Hawai‘i Island. Established in 1976, they provide a college –preparatory experience in a small school setting. Headmaster Carl Struges, Ph.D, says “The Parker School faculty is one I’m particularly proud to work with: committed, dedicated, and motivated...You can feel good about entrusting your children to this fine group of role models.”

Inspired by the words of Headmaster Struges, I took a visit to the 3rd grade room at Parker Elementary School to see what was being offered to the students in the way of critical thinking opportunities. Not being governed by the rules of public education, this private school has more freedom in how it chooses to reach the standards established for each grade level. I got to bear witness to critical thinking at its best while sitting in on the introduction of the collaborative social studies project for the 3rd and 4th graders. Instead of just assigning the assignment, they had the students come up with the rubric that will be the assessment of their work. The students quickly came up with things like: “Did our team work well together and stay on task?”; “Did everyone participate?” and “Did we use our time wisely?” All clear examples of

the student's abilities to employ the cognitive skills needed to be an effective critical thinker. After having the rubric somewhat designed, clearly stating what their expectations of themselves and their work would be, they were assigned to teams with a mixture of 3rd and 4th graders and then given one of the 50 States to research. Following these instructions they were given time to work as a group to start their research. During this time I heard things from the students such as: "I will look for the information for this part and you look for this stuff." and "What is geography?" (Not a question to the teacher, but to a peer). I heard Paige Brown, their 3rd grade teacher, saying things like "Wow, look what you found out." giving the students an opportunity to self-regulate and be proud of their accomplishments. Even when redirection was needed it was done in a way that provided thinking opportunities: "This is learning time now, I expect you to know what to do," Brown said.

As the day was coming to a close I was amazed at how well the groups worked together and stayed on task. Even during clean-up time, Paige provides yet another opportunity for a student to practice critical thinking: a student asked where to put something and Mrs. Brown responded, "I already gave a direction for that. Take a look at what others are doing with it." She could have given the simple answer, "On the art table," but Paige feels strongly about providing as many opportunities as possible for her students to use their critical thinking skills throughout the day. That single opportunity allowed the student to examine, evaluate, infer, and then self regulate.

Kanu o Ka 'Āina New Century Public Charter School (KANU) is a Hawaiian focused charter school located in Waimea on Hawai'i Island currently serving just over 250 students from JK – 12th grades. Under the leadership of Dr. Kū Kahakalau, KANU educates in a pedagogy of "Education with Aloha" through project, placed-based learning. At each educational level thinking

must be practiced in each content field and this means hard work for the teachers. Many of the kumu (teacher) of KANU have been putting in this hard work since the inception of KANU in 2000 and the results are clearly represented with the school's annual hula drama hō'ike that the entire student body participates in. KANU has also been able to achieve a "met" status in certain years under the Adequate Yearly Progress standard. Adequate Yearly Progress (AYP) is part of the Federal No Child Left Behind Act and makes districts and schools accountable to students, parents and educators. To meet AYP, schools must meet achievement targets in reading and math, as well as graduation, attendance and test participation targets. In addition to striving for a met standard under AYP, KANU is demonstrating the schools motto of Kūlia i Ka Nu'u (strive for your highest) with the completion of a self study as a portion for the accreditation process. If approved through the process KANU will become the first Hawaiian Focused Charter School to be accredited under recognition of the Western Association of Schools and Colleges (WASC) and The Hawai'i Association of Independent Schools (HAIS).

The day at the 6-12 campus of KANU begins with a mass traditional protocol consisting of various chants and mele. Protocol allows the students and faculty alike to get centered and prepared for the day. They ask for guidance and protection as they prepare to engage themselves in what the day has to offer--bringing openness to their minds and spirits allowing active engagement in new experiences. Once protocol is completed the students go to their learning areas based on the project group they are in. At the high school level the kumu of the Studio Kauhale Project have not given up on the critical thinking skills of the teenagers within their project and consistently provide critical thinking opportunities through a well thought out plan of experiences. Throughout the year all practices done in this group have been centered on the essential question of Pehea

lā e pono ai? How can we create a sustainable future while balancing ancient and modern practices? From this one essential question they have had opportunities for science fair projects centered around the basic concept of sustainability; a debate on global warming, and even some opportunities to witness how the practices of our ancestors and those that came before us impacts what we do and who we are today with the reading of Kamehameha and his Warrior Kekūhaupi'o.

In addition to being held accountable by the Western measurement tools, KANU has found a way to infuse the basics into real world practical learning in and out of the classroom while consistently engaging their students. One 10th grade student reported that he is really unaware of his critical thinking skills, yet is able to take what he has learned and give a very informative tour of their new "Leadership in Energy and Environmental Design (LEED) Platinum Certified - green building" - Kauhale 'Ōiwi 'O Pu'ukapu on one day, and be an active participant in a global warming debate on another -- both of which require usage of those cognitive skills. All aspects of this learning that they are taking part in are being presented in a project-place based environment, requiring if not demanding students to not only be critical thinkers but to be critically aware as well. All of those practices combined will be witnessed in the traditional hō'ike at the end of the year through a depiction of lessons in the annual hula drama.

At the 3rd grade level the young students of KANU also begin their day with protocol. I was lucky enough to participate and bear witness one Wednesday morning. After protocol they proceed to their areas to begin instruction; I catch a small group and pose the question "Why do you do protocol?" I get shy smiles followed by surprising answers that consist of: "So we ask to enter school"; "To ask the gods for help to learn"; "It is fun and I like that I get help from the gods and kūpuna (elders) while learning everything for the day." The project that this group is focusing on this

year is Ko'u Pilina Kai - My connection to the Ocean and this theme is infused across the curriculum at every opportunity, including language arts writing pieces, art work, and science.

Amidst all the great things KANU has been able to implement under their pedagogy there is still the unfortunate aspect of being part of the statewide public school system. Which means they fall under the No Child Left Behind Act and will be measured on the successes of the student's knowledge based on the taking of the standardized test. During my visit this left the 3rd graders practicing things they will be tested on the coming week during the standardized testing, including the memorization of flash cards.

The outpour of answers as the flashcards are turned amazes me, and although memorization can be a positive tool in certain circumstances I felt powerless and sad for the students under the control of the standardized testing that was forthcoming. The focus then takes a shift and there is excitement in the room as they review their homework from the night before. Critical thinking is happening as they try to explain how they came to the answer of each problem. This process allows them to go through the cognitive skills without even realizing it. They interpret the words into an equation, do an analysis on what needs to be done, and evaluate what they came up with. During this process I heard the students saying things such as; "I think it should be this way because"; "I did this because of this part right here"; and "Yeah! I got it right." They were then prepared to draw conclusions, state their results, and finally make self-corrections if needed.

A 1998 study completed by Gerald Lieberman and Linda Hoody, Closing the achievement gap: using the environment as an integrating context for learning, suggests "that students learn more effectively within an environment-based context than within a traditional education framework" (2). Many charter school leaders share the ideas of those findings and have structured their pedagogy

around that. This is an ancient is modern practice that native people instinctively know. Ancient is modern is a way of practicing what the kūpuna of the 'āina (land) have taught us while being able to work with what the 21st century has given us. Dr. Meyer states that:

This is the kind of stuff I really appreciate about critical thinking -- the ability to retain what has worked and to critically engage in this modern society and take what works and leave what doesn't and you have to be critically aware for that.

For many of us being critically aware is a skill that we have trouble practicing on a regular basis. Sometimes the lack of those skills comes from us being distracted. Maggie Jackson is an award-winning author and journalist who writes the popular "Balancing Acts" column in the Boston Globe. In her book *Distracted* she says, "As we cultivate lives of distraction, we are losing our capacity to create and preserve wisdom and slipping toward a time of ignorance that is paradoxically born amid an abundance of information and connectivity"(30). There are growing questions about how technology is changing critical thinking and how society is benefiting in an age of computers, video games, and the Internet.

As we assess the outcomes from all the inputs in our lives and engage in ways to move forward in a process to determine proper assessments of experiences guided by critical thinking we have to be critically aware of what progress measurement should look like in such an abstract environment. Are the standardized tests the best way to measure our collective evidence of knowledge? We also have to question how we choose to fill our daily schedule for maximum results and ensure that our educators have the opportunity to bring forth their critical thinking skills to enable them to instill those same skills in their students. With more than fifteen years of teaching experience Paige Brown stands firm with her belief that, "If I am not able to be a

critical thinker, then I cannot teach critical thinking skills." Brown also talks about the need and desire of continuous professional development for educators being a must.

This belief led me to examine the tools centered on critical thinking being provided to future teachers to be critically aware and engage their own skills. I was lucky enough to sit through two sessions of Dr. Meyer's class Introduction to Education as a process for additional research, and wish all future educators could be so fortunate. After a quick introduction of myself and the project that brought me to their class I received a very quick lesson in engagement skills. Dr. Meyer called it busting yourself. After my introduction she asked her class what I was doing there and no one was prepared to offer an answer. Dr. Meyer said in a very loud tone, "We do not listen enough!" She then went on to describe the process of busting yourself and told her class they all had been, "officially busted." Dr. Meyer also boomed, "We have enough school teachers! What education needs are educators!" I found that to be a profound statement that stayed true to the necessary tools needed to infuse critical thinking skills into education. Dr. Meyer says that your job as an educator is "to bring forth; not slap on; curriculum is actually a verb." The second session consisted of an introduction to juggling and demonstrations on how to become an entry level juggler. Dr. Meyer promised everyone they would leave there being able to do the simple "outside x" pattern of juggling. I had my doubts about myself, but low and behold once I got three released I was well on my way. Talk about being critically aware! Juggling requires continuous awareness and forward thinking for what is coming next. For me this was one of those "ah-ha" moments you tend to get in life. One: make sure you have the right tools -- you are not going to juggle with knives right out of the gate. Two: be prepared to fail -- you will at some point drop your tools. And three: know what you have in the air so you are prepared to catch it. That awareness that

Dr. Meyer provided through experience -- not words -- was a great tool for future educators to have in their tool boxes and because it was an experience they had they will have greater reflection on what they got out of it. My observations were experiences in active education and a chance to evoke some critical thinking skills of my own. My knowledge of critical thinking skills continues to evolve as I analyze what I have heard and read.

Bryce B. Hudgins and Sybil Edelman from Washington University wrote *Teaching Critical Thinking Skills to Fourth and Fifth Graders Through Teacher-Led Small-Group Discussions*. In this article published in the *Journal of Educational Research* they discuss the common method of instruction used in many classrooms. "Direct instruction, which is the current label usually applied to didactic, whole-group teaching, remains the dominant mode of instruction in classrooms" (334). The article labels this method as "effective in achieving basic educational objectives such as the transmission of knowledge and information" (334). This direct instruction method paired with the unbending curriculum has been the cause of the stagnation in our public educational system for decades. What I am coming to realize is that there is a large gap in the skills needed to be a critical thinker, and those that are accessible to our children which is not being filled with results from the No Child Left Behind Act of 2001 and the mandate of standardized testing. Unfortunately there are not enough available spaces in the alternative choices of education like the private and charter schools who more widely offer situations to learn and practice those skills. Therefore it is time to come together as a people, as a community, as a movement. It is time to reclaim our minds and the minds of our children. It is time to say that we will no longer be subjected to standardized test results as the primary evidence of our intelligence or progress. The very irregularities and variations that the word "standardized" removes are the characteristics that make up who we are as individuals. We

need to come together and unite in a way that will embrace our differences. In my interview with Dr. Meyer she spoke of Jiddu Krishnamurti and cited this quote by him "It is no measure of health to be well adjusted to a profoundly sick society." I found that statement to be extremely meaningful with regard to education and standardized testing.

Although critical thinking may be hard to define with a single definition, what stays true throughout the different interpretations is that critical thinking involves allowing your mind to be open and active to new things as you think. That is not always an easy task. The article *Taking Critical Thinking Outdoors*, written by Mary S. Rivkin, Ph.D, who is an associate professor of early childhood education at the University of Maryland, Baltimore County, reminds us that, "When you remember to see the world through the child's eyes, you become a first-rate guide" (2). In order to invoke our "child's eyes" we must rely on sources deep within ourselves. To ensure that our children and the minds yet to come get to experience critical thinking in the "classroom" we must rely on the charter schools that are bringing change to public education and the private institutions that continue to stand strong as an alternative to that system. Furthermore the educators in the classrooms must unite and insist on a permanent spot in educational institutions across the board for critical thinking.

We were driving on the way to school one day and I said, "Jacob have you thought more about why you should be going to school?" Jacob replied with a laugh and then said, "Because maybe they might teach me something I don't already know." I could not end this work any better than how Theodor Seuss Geisel, better known as Dr. Seuss ends one of his best-selling children's books "Think left and think right and think low and think high. Oh, the THINKS you can think up if only you try!"(38)

Author's note:

This paper was written in April 2010 and KANU has since received a multiple year accreditation status from both WASC and HAIS.

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