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## Mining the Gap! Fostering Creativity And Innovative Thinking

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### Abstract

Current educational strategies limit us to teaching from a sterile model without the nurturing of creativity beyond creative necessity. This we believe is due to the un-enlightened understanding and use of 'creativity' as a tool within teaching practice. We all think we know what creativity is but if we were to challenge the convention and deconstruct the process of what we think and understand creativity to be we would realise that creativity is so much more. The boundaries of its definition are and always have been subjective and in being so become blurred. We need to 'pull-focus' on creativity to enhance the value of such a precious commodity. We have the unique opportunity to develop and inspire beyond functional learning and help create a more purposeful, innovative synthesis for both teacher and student. Creativity is a way to expand the learning opportunities through the lens of something that inspires us. With an original approach to fostering creativity our conclusion will address how creativity can direct education to allow fulfilment of the needs of an ever expanding world but more importantly give individuals the stimulation to ignite their imaginations and foster their confidence to actually conceive what they can perceive.

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## 1. What exactly is Creativity?

Project your world to 30 years from now, imagine the new thinkers coming to the table of design, full of inspired creative passion, ambitious aspirations and positive emotions on how they imagine the next 30 years could evolve to maintain flourishing futures. Perhaps you have a sense of who is there? How the conversations could flow and the fragrance of the creative energy igniting the air around that table. A great vision, and who are the best people to unlock and develop the creative minds of that future?

The British Secretary of State for Education recently made a speech at the launch of an education campaign that wanted to promote the subjects of science, technology, engineering and mathematics (STEM). In her speech, she implied that the choice by students to study ‘creative’ subjects such as humanities and the arts, would “*hold them back for the rest of their life!*” [1] Something she had to readdress 10 days later in similar speech to the American Enterprise Institute on closing the skills gap. The Secretary of State’s comments are the most recent in a long line of confusing statements made by politicians and some prominent educationalists regarding the nature and value of creativity and the significant part it has to play within the progress of our global society.

We do all know what creativity is, don’t we? Creativity, creative and creation are all words that are common place within everyday conversation. Used loosely to denote the act of producing something new or of a passionate individual who has an artistic/eccentric bent in breaking new ground in an otherwise conventional society. However, if we were to challenge the assumed convention and de-construct the process of what we think and understand creativity to be, into its micro constituents, we would understand that creativity is about the mind crafting sense from chaos than being seen as an uninspired metaphor or a presumed physical act or object.

Creativity is something that can be valued highly or not valued at all as there is no common objective consent as to its meaning, even though it has a wide designation. We can agree that its understanding is totally subjective, dependent on individual experience, shared knowledge, as well as relevance within its demographic context. It could be said that creativity is the most valuable asset that we possess for our continued evolution. It is how cultures and societies can positively progress. However the boundaries of definition have become increasingly blurred. We need to ‘*pull-focus*’, to use a filmic term, and enhance the remarkable features of such a precious resource, to inspire a more intuitive and enlightened existence. If we can achieve this it would offer a more meaningful and stimulating educational experience for all.

### 1.1 Inside the Box

It seems that educational systems throughout the world have journeyed down the road that favours factual knowledge acquisition over creative exploration. Factual knowledge is often equated with intelligence. The more facts a student can acquire, recall and reapply the more they are seen as intelligent. Conversely, a creative perspective requires the departure from learnt facts and introduces an emotional and intuitive element to finding new ways of applying knowledge and understanding. This process presents the opportunity of making new connections and in turn augmenting meaning, establishing a new language as well as value, but the greatest part is the discovery of the unexpected possibilities within. This in essence should be the primary objective of teaching and learning and ‘*creative ability*’ should be recognised as a formative pathway to intelligence rather than that of only pure knowledge.

### 1.2 Conformity

We are witnessing an age where conformity and compliance are flourishing. Objectivity is the guiding principle that is supported by the proliferation of statistical studies, tick boxes and where students are perceived as numerical data and not as individuals with a creative imagination. Subjectivity is viewed with suspicion and distrust when it should be championed as a creative tool that inspires innovative growth and development. In some societies to go against the received wisdom, in whatever context, often means isolation and demoralization, creating a negative rather than

a positive meme and in turn suppresses the individuals' urge for creative expression. It is in the interest of most social systems to promulgate conformist thinking, a clever tool to further an objective, but this would be cynical and it is probably more as a consequence for maintaining a viable economic equilibrium. Creative suppression can be detrimental to a society's functionality and cultivate a culture of resistance. Initially you may think that this is a negative but it can equally provide a stimulus for escape through creative means.

It is more economically efficient, to streamline the skills of the teacher to deliver a curriculum by a measured process than allow creative interpretation on content and delivery. They are imposing restrictions that prevent us from delivering a more emotionally stimulating and inspiring programme specifically tailored to those we teach. Political and economic hegemonic agendas drive educational thought rather than allowing teachers to use their insight and aptitude for their subject specialties. We are not all the same! It is often the road less travelled, which in the long term will bare better fruit. We need to use our creative impulses to break out of the box and introduce the students to what is on the outside! Educating using an open source resource could be a key.

## 2. Breaking the box!

David Bohm proposes that we are conditioned to '*mediocrity*' and '*mechanicalness*' but his bigger question is '*how do we break out of this conditioning?*' [2] Is conditioning a fault of human nature or a creative means to maintain the equilibrium? This is probably a question for the sociologist, mathematicians with a full explanation of the laws of probability for which we do not have the space within this paper to expand upon.

Creative thinking requires individuals to question assumptions and query the validity of accepted beliefs. A creative mind-set is an inquiring mind-set and one that looks beyond a received wisdom. It is fair to say that creative thinkers are difficult to manage within an illiberal society, as they will not accept the given agenda and are always looking for fresh alternatives.

Weisberg (1999:226) suggests that there is a tension between Knowledge and Creativity.

*'Knowledge may provide the basic elements, the building blocks out of which are constructed new ideas, but in order for these building blocks to be available, the mortar holding the old ideas together must not be too strong'* [3]

Using 'tension and frustration' as a trigger and the creative catalyst, to break the '*mortar*', we can make an analogy, based on Gustav Le Bon's work on '*Frustration-aggression Syndrome*', as described by Richard Stennet's book '*The Craftsman*' [4], to help explain how creativity transpires. Gustav Le Bon highlighted from his observations that pent up frustration in crowds would increase numbers and if unable to release the frustration by normal political means, violence would ensue. Stennet likens this to the energy in a battery poised to discharge. The discharge, in creativity terms, is the point where a connection is made and convention is broken and a new pathway is formed. Frustration is the key trigger in this change, as tension can be with creativity; it is how this is directed, if at all, that will dictate how well it takes its effect.

The principles of meme it could be said, become the '*director*' and give an indication as to the success of the outcome. Perhaps this is why one society/culture can be more successful compared to another. The discharge needs inspired leadership to guide the direction of the creative output. Like an electrical discharge, if there is no specific path, then it will take the path of least resistance and be lost. Harvesting sustainable change from creativity requires awareness by leaders in education to recognise and cultivate the creative impulse.

### 2.1. The Creative Higgs?

This is fine looking holistically but it also works at the micro level as DNA in cells adapt and evolve to maintain survival. If the conditions are right the connection will be made and a new direction forged, if the conditions are unfavorable they will never come to fruition (ref. Darwin's belief in '*the survival of the fittest*' [5] and Richard

Dawkins notion of the ‘Selfish Gene’ [6]). It is a chain reaction that will evolve, like DNA there are infinite possibilities and the outcomes will always be unique. This is what makes creativity unique to the individual and gives variety to a cultured society. It is why creativity so valuable and exciting.

Society and Cultures change as does the environment. This could mean that creativity has a cyclic course and that Bohn’s ‘conditioning’ is naturally part of the creative process. One may not be able to survive without the other. Conditioning is the conformer allowing for saturation and incubation of knowledge and understanding before the ‘creative breakout’ occurs into a new dimension. So rather than thinking of this as being cyclical, it is more like the path of ‘time’ and follow a spiral path. But this does not explain the presence of the connections that trigger the creative process.

As said frustration will force a change to convention, directed by application of new knowledge and understanding. It could be said this is an external force for change which ‘pressures’ a need for an internal shift. The effectiveness of the internal shift is based upon our ability to recognise the signs through our senses which fuel the creative spark and initiate our creative capacity and desire for exploration to take the road less travelled. A teacher must be able to identify the students’ impulse, the creative spark, to be able to explore and nurture their abilities. If the road has been well travelled then there is little opportunity to explore and discover. If we can acknowledge that there might be new opportunities through less conformity to a set curriculum and give greater access to an open sourced directive. With a developed sense-intuition as our inner guide we could seek a new path and fully enhance the creative skills found within us. This way we can collaborate more effectively and bring the true value and power of creativity to the fore.

Some of us naturally excel at this challenge yet others will fade at the crossroads. To quote the Wachowskis brothers’ ‘Matrix’ ‘*you take the blue pill – the story ends, you wake up in your bed and believe whatever you want to believe. You take the red pill- you stay in Wonderland and I show you how deep the rabbit-hole goes*’. [7]

If we are inquisitive the creative mind would take the red pill but conformity has lured us into a sense of familiarity and if satisfied we are more than happy to take the blue pill. With conformity there will always come a point, fuelled by tension, which will dictate the new direction. Can we take a leap of faith into the unknown, like the discharged battery, or do we stay with the directed path because we fear failure and the unknown?

### 3. Joining the Dots

Our senses, what we see, hear touch, smell and taste help us construct maps of the direct relationship of things and it is our intuition that creates connections and maps of the indirect relationships and new possibilities. The forming of these connections and applying within context is to us the true essence of creativity.

We need to teach teachers to recognise and work with intuition and build confidence to trust in their own perceptions. Only then will they be able to connect the context of the signs and signifiers around them and allow a true signification of meaning to form. When teachers have further developed their inner-tuition they will be better placed to communicate and to catalyse the creative traits within others. There is a need to re-direct learning to incorporate meaning and passion as well as understanding.

Creatives tend to have more finely tuned senses and heightened intuition. This, however, may come about from our infantile exposure and tentative adaptation to new experiences and how we have been conditioned to accept and respond to individual stimuli. In a western civilization, we are brought up in a society that limits our responsibility to survive and fully experience the consequences of our actions. We have become ‘Parentalised’ and reliant on something or someone else to take over responsibility for our thinking having forgotten the capacity for emotions to be an informed creative propulsion which enable intelligent participation and the nurturing of both ourselves and the next generation. Our thinking has become restricted and our emotions redundant and devalued rather than engaging. We are not saying that this is a bad thing in its self but as with parenting we can over protect to the

detriment of the next generation. We need to fuel confidence in ourselves, as well as others, if we are to believe in who we are before nurturing the intuitive journey of the next generation.

#### 4. PLAY for life!

At the beginning of life it is PLAY that stimulates this process and helps us to fill our creative tool box. Play is how we learn best, yet in our pre-school years our education restrains the learning potential by conforming to measurable learning styles and outcomes by restricting play in favour of 'work'. Play is seen throughout the animal kingdom as essential in learning to survive into adulthood, so is nature not telling us something?

Reggio Emilia [8] is a terrific example of how good creative educational practice can be achieved and it is probably why Italy continues to produce some of the most creative and diverse designers in the world and in its self-become one of the most culturally and creatively diverse societies. The school base their educational philosophy on the child and not the broad aspect of the institution. The teaching style actively focuses on not only developing the expressiveness and creativity of the child through working with their hands, minds and emotions but also collectively in groups. Here when kids are taken on a field trip they are told 'DO NOT TOUCH! In Italy they are encouraged to not only touch but caress, smell, taste and listen enabling the child to evolve a wider and more detailed memory map of their emotional, intuitive, sensory experience.

We need to break the education convention if we are to hold back a creative apocalypse. Let us give back to our teachers their self-awareness and confidence so that they can feel what it is like to be fully human. It will take just one break in convention to recognise the error of our ways and set a new path.

*'The curriculum is "sterile." Topics of great human interest "on the way to the classroom are apparently transformed and homogenized into something of limited appeal." Students "scarcely ever speculate on meanings" or discuss "alternative interpretations." Teachers "teach as they were taught" years ago in their own schooling. All the messages received by them "conspire to reinforce the status quo. The cards are stacked against innovation.'* [9]

Even though this observation was written in 1983 we are still in this position today.

#### 5. Creative Creativity

A meme can focus a change in thinking and like everything else the meme is interpreted depending on context and as to how it is perceived. We can control and filter this using methods such as 'brainstorming'. A recent slide video via Harvard Business Review by Dr Tony McCaffrey [10] questioned the value and effectiveness of 'brainstorming' stating that it has been shown 'not to work'. A statement probably borne out through frustration of never achieving the creative, emotional balanced desired outcome. Brainstorming has been the mainstay of filtering/collecting ideas towards a conclusion since Alex Osborne introduced the method in 1956. McCaffrey believes we should be using his method of 'Brainswarming' and no that is not a spelling mistake! Where brainstorming has always been seen as a collective exercise he has given greater emphasis on individual exploration prior to creative collaboration. This widens the perspective of credible solutions and concentrates the emphasis on identifying the connecting relationships between key concepts. This method triggers increases the productive basis to evolve to a more plausible solution from the results. In essence creating a defined order out of chaos. This goes part way to breaking from Bohm's idea of 'conditioning' as the perspective is far more holistic and unrestrained once the creative collaboration begins. It is not design by committee!

#### 6. Creating the Space

Our central theme throughout this paper has been the reevaluation of creative meaning and the reintroduction of enhance creative participation into all stages of education. 'PLAY', from Nursery to the end stage of the educational process. 'PLAY' and 'work' should not be seen as mutually exclusive. Play is mostly seen as

children's 'work'. Teachers should be encouraged to open the doors to creative space to reflect, to observe, to mine the gaps and use questioning at its highest levels, not only recall and remembering. This will develop all levels of learning within the educational domains and reinforce those valuable creative connections we are losing.

We need to develop ways of seeing and understanding in education where we are participant observers. Where we are both, within the process of education and able to take a check as to the position we are viewing from, we become both subjective and objective and move between these two positions with fluidity. If we stand on the perimeter of a circle always looking to the centre our point of view will never change.

Tomorrow's world is an unknown. What we will be doing in 30 years' time will depend on our ability to use sensing and intuitiveness to nurture creativeness by observing and taking the '*road less traveled*' more often and without the fear of failure. The journey has value even without a conclusive outcome. We need to leave sufficient blank space for the future creatives to evolve their own ideas and direction. The design table in 30 years will have far less seats with an air of staleness, unless we change direction and look out of the circle and have the freedom of our own inspirations!

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