

Many Faces of Creativity

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Do you know why we human beings are sometimes called the lord of creation? The simple answer is because we create civilization. While God created the World, human beings create the future. I am glad that "Creativity, a window to the future" was devised as the theme of the 3rd Asia-Pacific Conference on Giftedness. The purpose we come here today is to create together a promising future. Can you imagine what the world would become in 10, 20, 50, or 100 years? It is certainly not easy. What one can be certain, however, is the efforts we made today will have an impact on shaping the world of the future. Now, I would like to share with you my ideas about creativity.

What is Creativity?

There are many faces of creativity. One can view it from different angles with different explorations just like one views the gestalt figures of faces and wonder how many faces there are in the figure or what kind of face it is.

The common visions of creativity to me are as follows:

- Creativity requires thinking, but thinking does not necessarily make creativity.
- Creativity does not mean "making something out of nothing" like components of association and improvement in the brainstorming.
- Creativity is a right-brain thinking rather than a left-brain thinking.
- Creativity is innate ; however, it is nurtured and developed in an enriched environment.

Creativity was once thought of as a process or activity that was unique to production and performance in art, music, and drama. Creative production and performance exist, however, in all areas of human endeavor. These include not only the visual and performing arts, but also in academic disciplines, professions, government and politics, and so on.

Creativity requires individuality and independence of thought, including spontaneity, originality, flexibility, and fluency. Furthermore, in addition to original thinking, creativity calls for

dedication to a purposeful action. The creative act has a result -- a product, material, service, or mental structure.

What Kills a Child's Creativity?

All human beings possess the ability to create or to be creative. Unfortunately, because of cultural-social emphasis upon conformity, acceptance, doing the "right" thing, and finding the "correct" answer, for many persons this innate creative ability is squelched before one even enters school, or, then shortly thereafter. Some creative ability can be recaptured later on, even in adulthood, but chances are slim for later development to a full potential.

Impediments of creativity may include (but are not limited to) the following: indifferent environment, strict discipline, consistent demand, and habitual thinking.

Of all the conditions that appear to have hindered the creative thinking, Amabile (1989) indicate four methods that are the most: evaluation, reward, competition, and restricting choice. Children's motivation and creativity can be destroyed if evaluation, reward, and competition are misused, or if choices are too restricted.

In school, a teacher's orientation

toward control can have a significant negative impact on children's intrinsic motivation of creativity. Rules that control, rather than inform, can kill creativity (Amabile, 1989). Rote learning, or memorizing facts without any sense of how they connect to each will also hinder children's creative work. For example, a child who merely memorize the multiplication table will be much less likely to think creatively about numbers than who understand that multiplication is really a shortcut for addition.

On the other hand, at home, if parents push their children into areas where the children have little real interest, the end result may be that the children perform quite well by all the standard measures, getting the best grades, winning the rewards, gaining admission to the best higher level of schools, etc., but they will probably not be happy in that field or produce anything truly creative.

How to Keep Creativity Alive?

Albert Einstein said, "I have no special gift - I am only passionately curious." It is the curiosity that nourished creativity. Parents and teachers, however, have the power to undermine

children's natural curiosity, destroy their motivation, and stifle their creativity. As Carl Sagan said, "The visions that we present to our children shape the future. They become self-fulfilling prophecies." Therefore, we, as teachers or parents, must allow creativity, nurture it, and stimulate its growth. In school, the most significant way in which teachers can encourage creativity is to support intrinsic motivation. The following elements would encourage children's creativity:

1. Learning is very important and very much fun.
2. Children deserve our respect and love as unique individuals.
3. Children should be active learners.
4. Children should feel both comfortable and stimulated in their classroom.
5. Children should have a sense of ownership and achievement in their classroom.
6. Teachers are resources, not policemen, drill sergeants, or gods. Children should be respectful of teachers, but they should be comfortable with teachers, too.
7. Teachers may be smart, but are not perfect.
8. Children should feel free to

discuss problems with both teachers and their peers.

9. Cooperation is always preferable to competition.

10. Learning experiences should be as close to children's real-world as possible.

At home, according to numerous studies, parents can positively influence their children's creativity through the following ways:

1. Parent who believe in giving their children a great deal of freedom tend to have creative children.
2. Creative children tend to have parents who respect them as individuals, have confidence in their abilities, and believe in their uniqueness.
3. Children should not be overly dependent on their parents, but they should know that they are loved and accepted.
4. Parents of creative children do not make a lot of rules.
5. Parents of creative children have a high regard for achievement. They encourage their kids to do their best, though not be perfect. Always the emphasis should be on learning or

trying, and not on testing or grading.

6. Parents of creative children always pay appreciation to their children's creativity.

7. Parental attitude of humor is important - research indicates that humor abounds in the families of creative children.

8. The creativity intersection is the area where a child's skills (both domain skills and working skills) and interests meet. Therefore, parent should help their children discover their own deepest interests by encouraging them to try out a variety of activities.

9. In a creative family, parents become intellectually engaged with their children - they discuss things, question assumptions, investigate, explore, etc.

Intelligence and Creativity

Although a highly creative person does not necessarily show high I.Q. scores, mental capabilities are prerequisite for creativity to result in "good" products. In fact, creativity cannot occur in a vacuum; the creative mind must have data, ideas, and concepts from which to draw. When reference is

made to "highly intelligent, highly creative" persons, the reference is to individuals who are highly creative and who have actual an I.Q. of 140 to 150 or even more. Experience shows that creativity and intelligence can function with good balance or in an integrated way. On the other hand, a majority of unusually creative persons tend to score between 120 and 139 on standardized intelligence tests. Whether such persons are more creative than intelligent or whether they score lower on convergent types of intelligence tests because they are divergent types of thinkers is a question that is hard to answer.

However, it is quite clear that creativity and the creative process cannot be rushed. It is the persistence that represents the significant difference between the productively creative individual and the simple original thinker or idea generator. A true creative person will persist toward a goal not only with great flexibility but also with commitment.

Ethics of Creativity

To address the ethics involved with creativity, I would like to tell you a famous story of Quey Gutze, a magical wiseman in the period of Warring States

(403-222 B.C.). One day, Quey Gutze gave a test to Sun Bin and Pang Chuan, two of his best students, to know who is smarter so as to instruct his most valued military tactics. He asked them a simple question, "Who can make me walk out of the house?" He then sat down and let his students think it over. Pang Chuan came to him. He pleaded, bribed, and even coerced him; but whatever he did, his master remained unmoved. In the end, Pang Chuan Yelled, "If you do not go out, I will set the house on fire." The master sighed deeply and walked out of the house. Now Quey Gutze went back into the house for Sun Bin's turn. Surprisingly, Sun Bin just talked to him politely, "Master, I don't think I can let you go from indoors to outdoors, but I am sure I can make you go from outdoors to indoors." Quey Gutze in puzzlement said, "That is impossible." Sun Bin asked, "Why don't you give it a try?" Quey Gutze then walked out of the house, and said, "Now show me how." Sun Bin knelt down and said, "I am sorry, master, but I just made it." Quey Gutze then came to realize what is all about and was delighted. While both students achieved the same goal, they used different approaches. Obviously,

Pang Chuan was tricky and ill-minded, whereas Sun Bin was smart and kind-hearted, Now you must know what Quey Gutze's choice is. This story illustrates the creative way of problem solving could be based on different moralities.

Let me tell you another story happened in Taiwan many years ago. A young man had long dreamed of making a fortune and finally developed a project that enabled him to make cooking oil out of rotten food. This project indeed brought him a great fortune. But it was not long before he was put behind the bars because consumers soon were reported to be chemically poisoned by his product. This young man was high in creativity, but low in morality.

Many new technologies help us open our view and help inventors bring about fame and fortune. But, more important, do we really need these technologies? Or, more specifically, do we really need tube babies, sex screening, or even the future brain transplantation? I think most, if not all, of you agree we should reassess the impact these technologies may have on our society. Invention of weapons, in particular, should undergo this assessment. As you know, Alfred B. Nobel was well-known as the inventor of

dynamite and consequently made a big fortune. He was deeply regretted, however, as he learned careerists used his invention for murder, war, and crimes. The Swedish inventor, therefore, founded by his will the Noble Prizes awarding annually in the fields of physics, chemistry, biology, medicine, literature, and the promotion of world peace. What a kind-hearted inventor he is! Nobel's story suggests that the real inventor our society needs is the one with a sharp head and a warm heart. While invention deserves award and reward, the ethics of invention calls for urgent establishment and strict abidance. After all, we have to think of others and of tomorrow, too. I firmly believe invention can make tomorrow a better day if we bear these thoughts.

A brand new medical product should be tested and retested. It is not only after its all possible negative side effects have been ruled out or at least under control can it be put available to consumers. This does not mean that the process of creativity requires criticism. What creativity needs is (1) far sight (visioning the future outcome), and (2) wise choice (decision-making). It is important to realize that the outcome of creativity can be constructive or

destructive. The ethics of creativity should be emphasized -- there is something to create, and something not to create.