

Creativity the Organization, Part 1

An IBM survey of 1,500 CEOs found that more than rigor, management, discipline, integrity or vision, successfully navigating an increasingly complex world will require creativity. “CEOs are confronted with massive shifts — new government regulations, changes in global economic power centers, accelerated industry transformation, growing volumes of data, rapidly evolving customer preferences — that, according to the study can be overcome by instilling creativity throughout an organization.”

Just what is the creative process?

Most people misunderstand the creative process that leads to good ideas (such as NASA’s invention of Velcro) as a “flash of insight” where the image of the answer bursts into one’s brain. This is a false view because there is definitely much more to the whole process than just insights. Most psychologists believe that creative thinking that leads to new ideas is a two-step process — divergence and convergence.

Divergent thinking is the first step in the creative process that generates many ideas that could be the solution to the problem. Divergent thinking isn’t logical; it is a matter of inviting all thoughts and ideas, regardless of how unrelated they may appear. It is a right brain process of generating as many ideas and solutions as you can conceive, no matter how logical, illogical or ridiculous the notions. In divergence, you are not looking for good ideas — any idea will do. Most studies agree that thinking in images, the metaphor, the analogy, the simile, and the symbol are all at the heart of the creative process, because the cross associations lead to insights.

The second step is convergence. Once you have a list of ideas, you use convergence to examine every possibility. This is where the left brain is very helpful because you need the analytical and logical processes to dissect the ideas. According to John Houtz, a professor of Educational Psychology, convergence is, a way “to evaluate the ideas, sift through them, embellish them, repair them, revise them and get them tested, which means that the creative process is actually quite complex.”

Identifying creative people

If creative people are viewed as the answer to solving the massive problems confronting large and small manufacturing companies, how will we identify them? There was a test invented by the J.P. Guilford Group in 1967 that used word associations to measure creativity. Another popular test is the Torrance Test of Creative Thinking which is a test of divergent thinking and one called The Creativity Achievement Questionnaire that measures creative achievement across 10

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Published on Chem.Info (<http://www.chem.info>)

domains. But before you tell the HR department to add these tests to their interview procedures, I will warn you that all of these tests have as many critics as supporters. As far as I know there are no tests that absolutely determine whether a person is creative.

There is also the problem of personality. Many creative right brained people are not conformers but are performers. Many don't fit the human resource profiles in hiring good loyal workers. They will always have strong opinions and can cause conflicts. They are often not "yes men" and it takes a strong confident leader (with empathy) to understand them well enough to get all that they are willing to give. On the other hand, they are creative, intense, self-directed and good people to have around during a crisis.

The problem for manufactures is that creative people must also have a very good understanding of their products, so just hiring a very creative person is not the answer. Rock stars and water color artists may simply not have the basic skills to develop new and unique products for production line machines. So the cognitive processes involved in finding a creative machine designer are more complex and harder to find.

Instead of trying to hire creative people why not consider fostering creativity in the people who are already employees? Many people have the view of a creative person who is the lone genius who was born with unique talents to make art. But the counter argument is spearheaded by Ken Robinson who thinks we are all born with some creativity and the educations system sucks it out of us by the time we are only a few years into school.

There are some people who are very good right brain thinkers and were born with a pre-disposition to creativity. But I believe that most people use both right and left sides of their brain and can become more creative in an organization that supports creativity and training. So you may not have to hire creative people because you may already have them.

What are some of the key factors in creativity?

A Harris Interactive online survey in 2005 asked 2,688 adults what factors are most important.

1. 91% of the sample said that people who come up with original ideas are more likely to be creative.
2. 80 to 88% of the various age groups felt that the ability to solve problems is a very important part of creativity. This is very important in the manufacturing environment because the creative person must understand and solve technology problems related to the company's products and processes.
3. Being able to see unusual connection was also seen as an important factor in creativity by more than 80%of the respondents. This ability is explained as a fundamental idea of divergence by using metaphors, similes and other techniques.

4. The specific type of personality is also seen as very closely connected to creativity. I agree that many very creative people do have unique personality traits that identify them but may also get them into trouble in a corporation. For instance, they occasionally break the rules, push things through without permission, and take risks. They are performers not conformers with good intentions. They are also usually confident, independent, persistent, intuitive, and attracted to challenges

5. Another factor is that creative people are empathetic. They are good at seeing things through the eyes of the customer or through the eyes of other employees. This is a real plus for engineers that work in new product development

6. Creative people also ask a lot of questions and often question the status quo. They tend to evaluate processes in terms of how can we do it better and ask a lot of questions in meetings. Management has to set the tone of the culture so that this is acceptable behavior.

Control vs. flexibility — you must find the balance

Why is it that small start-up companies often have more than their fair share of creative people compared to a large manufacturer? Could it be that as the company grows and adds employees that the organization automatically changes to include more rules, controls, and management tools to manage more people?

This growth in management systems and controls is often codified in the bible of rigid organizations- the employee handbook. Handbooks began as a tool that informed employees about vacations, holidays and steel-toe shoes, but eventually, the tool morphed into a bureaucratic tool to control employee behavior, which eventually takes away the autonomy of the supervisor and the worker. The handbook was eventually expanded to include personal standards of conduct, ethics, customer relations, personal responsibility and a host of other issues.

I believe that expansion of control; leads to reduced flexibility and freedom for the employees and it stifles innovation, creativity and motivation. Once the organization attains a level of control over all levels, flexibility and innovation get crushed and the hiring of new employees will turn to safe employees who fit the conformer profile.

This contradiction between control and creativity creates a real dilemma for corporations and big organizations in general. If it is true that creativity is the answer to helping corporations deal with all of the changes in the economy, then having a rigid organization based on controls is a contradiction. They are going to be really challenged to increase productivity unless they can re-invent themselves and their organizations. .

How to change the organization to improve creativity?

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Published on Chem.Info (<http://www.chem.info>)

In a survey called TEAM CREATIVITY AND WORK II, Edward Glassman PHD in answer to his question on what changes are necessary to improve creativity, he found that people in corporations wanted:

More time

More freedom

Less red tape

More respect

More recognition

Better communication

Fewer meetings

Better teamwork

Fewer penalties

Most of these requests are just common sense but they fly in the face of the rigid organization that emphasizes formalization and control. At a minimum there must be a new balance between control and creativity and it actually may take a totally new approach to the organization and complete change of culture. I can't imagine this happening in the Fortune 500 companies no matter how much they need creativity because they are by design focused on the short term, profit, efficiency and control as the primary drivers. They may have to create separate divisions or to buy smaller companies with a creative culture.

Sources:

1. *IBM 2010 GLOBAL CEO STUDY: Creativity Selected as Most Crucial Factor for Future Success, IBM press room, Armonk NY May 2010*
2. *The Creativity Survey, Harris Interactive, Quick Query SM Online Service, 2005*

Please tune into the Chemical Equipment Daily for part two of this two-part piece.

Source URL (retrieved on 12/26/2014 - 1:57am):

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