Insights into the creativity

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How individuals decide how to use what they know

Sternberg, (1999c, 2000) attributes creativity not to what one knows in terms of domain knowledge, but how individuals decide how to use what they know. His model of creativity is that you are more likely to get creative outcomes when individuals decide how to use what they know in particular ways.

This view differs from the traditional notion of creativity as a fixed ability (Guilford, 1968; Sternberg, 1999a). It is consistent with a notion of creativity as a modifiable ability.

They are not creative because of their innate ability, but because of an innate set of abilities that map into decisions for using what they know. He identifies ten decisions people can make to decide for creativity.

- redefining problems, by framing them up or looking at them from perspectives that are unusual or novel.

- being prepared to reflect on , critique and analyze repeatedly one's ideas and update or modify them to ensure that they are the best of which they are capable at that time.

- communicating their creative ideas to others and convincing others of them and of their potential advantages and value. This includes skills in persuading others of the value of the ideas, being aware that people often will not recognize of these ideas and the need to devise ways to demonstrate such value to others.

- being prepared to work with and overcome opposition to their ideas from others who may not understand them.

- ensuring that one's knowledge of a topic, that may be well developed, does not impede or restrict the ability to think about it creatively. They may need to decide to think flexibibly about what they know. They may decide to discuss their understanding of a topic with others to ensure they see the ideas from several perspectives.

- being prepared to take sensible risks about the ideas and to fail some of the time in order to succeed other times.

- being prepared to grow creative idea by constantly look for new problems and new solutions to challenge their thinking and in their creative production.

- having confidence in their ability to do creative work.

- being prepared to tolerate ambiguity, uncertainty and unanswered questions, tolerate ideas that do not quite fall into place so that they can develop, refine, and present the ideas.

- deciding what individuals are interested in and enjoy learning and thinking about, and pursuing this.

These decision-making skills allow individuals to generate ideas that are unusual, that defy the crowd and often are viewed as bizarre by their colleagues. Sternberg believes that can be developed or taught. Students can learn how to be creative by observing creativity at work in any field of endeavor. This view suggests that creativity as a modifiable ability rather than as a fixed ability (Guilford, 1968; Sternberg, 1999a).

Sternberg suggests a teaching example and a teaching activity for each skill. These are summarised in the table below. You should note that the teaching activity doesn't necessarily match the decision making skill.

	Teaching example	***Teaching Activity***
Redefine Problems	Creative people who challenged and redefined traditional views such as Manet and Monet, Beethoven and Einstein.	help students see an aspect of the world from unfamiliar Take a phenomenon well-known to your students and have them look at it from unfamiliar perspectives..
Analyze Your Own Ideas.	Scientists, discoverers, who changed their minds about possible interpretations.	Have students analyse their ideas in activities they have completed. What are the strengths and weaknesses of their alternative interpretation ? Can they improve their idea ?
Sell Your Ideas	Provide examples of creators who recognized the need to sell/ persuade others of their ideas. How did they do it ?	***Students*** explain, defend and trying to promote an idea in which they believe write an essay or an oral report. They need to "sell" their ideas to peers by showing its strengths and by trying to defend it against possible critiques.
Knowledge is a Double-Edged Sword	Give examples of where creative people have learn from others	Provide activities that help students see that theories apply only to limited ranges of behavior, for example, in the area of moral development.
Surmount Obstacles	Examples of creative people who had to fight for their beliefs, for example, Galileo was tried for heresy as a result of his scientific claims.	Activity to help students realize that good ideas are not necessarily accepted immediately. They brainstorm strategies they could use to get ideas that may seem peculiar to be accepted, such as presenting the ideas so that they relate to what people already know.
Take Sensible Risks.	Examples of creative people who took high level risks when they introduced new ideas.	Activity to help students realize that being creative work requires taking a degree of risk. Have students critique an explanation given by their teacher. They need to support their belief in constructive ways. Help them see how to respond constructively and non-defensively to their critique.

Willingness to Grow	Examples of creative people who changed the direction of their creative work.	Activity in which students learn by challenging their own beliefs. Have them write down a belief they have re human nature (or anything else) of which they are convinced, eg., why people become angry, why abortion is acceptable (or unacceptable) and then write a brief essay arguing persuasively for the opposite point of view. At the end of the essay, they say whether writing this essay has helped them better understand the point of view of people who disagree with them.
Believe in Yourself	Examples of people who had confidence in their creative work in the face of criticism from peers.	Activity in which students learn they can do tasks that they may have thought too difficult but that with directed practice they can acquire the skill.
Tolerance of Ambiguity	Examples of instances where during creative developments in which the expected outcomes were not attained, and the creative person dealt with negative events before achieving the positive outcome.	Activity in which students learn to recognize and value ambiguity in learning. They study a description of an event or issue that is written in a highly persuasive way, for example, an editorial or a letter to editor. They then read a second description, also highly persuasive, from the opposite perspective. They discuss how needing to think about opposing views or ones that don't agree help them understand the topic better.
Find What You Love to Do and Do It	Examples of instances in which the parents of creative people encouraged them to pursue more secure careers, for example, musicians, artists actors.	Activity in which students learn that a specific topic or subject can be studied from a range of interests. Students select an area of interest that is outside the areas studied at school and show how it relates to school learning. They could link sports training with science, art or music interests with history or geography, etc.

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