Creativity is the process of generating solutions and products that are both original and useful.\textsuperscript{1} There are specific thought and feeling processes involved in creativity. Divergent thinking—a thought process that is an essential component of creativity—involves the ability to generate a variety of solutions to a problem. Research indicates that divergent thinking is a mental skill that is relatively separate from intelligence.\textsuperscript{1,2} Emotional components of creativity include access to feeling thoughts and openness to feeling states.\textsuperscript{3}

Although creativity is often associated with artistic endeavors, it is a key component of all sorts of problem solving behaviors. It is both reactive, in that it tackles existing problems and obstacles, and proactive, in that it moves culture forward by generating new ideas and problems to tackle. The creative process requires the integration of processes from both the right and left hemispheres of the brain to create work that is both intuitive and logical.\textsuperscript{4}
HOW CREATIVITY RELATES TO COPING AND PROBLEM SOLVING

Flexibility in thinking is an important facet of creativity. Some research has shown that higher scores on measures of divergent thinking are associated with the use of a wider range of coping behaviors when it comes to addressing everyday problems and stressful situations. Encouraging children to use divergent thinking and creative problem solving techniques may be an important step in building resiliency and coping skills.

FOSTERING CREATIVITY IN CHILDREN

Creativity is a skill that, like other skills, is strengthened through repeated practice. For children, opportunities to practice creative thinking abound in daily life. Engaging in pretend play, tinkering, and daydreaming are all avenues for boosting creativity. Not surprisingly, creativity and children's pretend play are highly correlated. Play is a method for children to practice and develop divergent thinking skills, in that pretend play encourages a free flow of ideas, facilitates the expression and regulation of feelings, and involves new combinations of thoughts and ideas. Tinkering with building materials or mechanical objects is another way for children to try out new ideas and change their thinking as obstacles arise.

Historically, research has suggested that students experience a “fourth-grade slump” in their creative and divergent thinking. Newer research tells a more complicated story: while some children do indeed experience a decrease in divergent thinking, others may actually improve their creative thinking as they develop their abilities to critically judge new ideas. As children age they spend more time engaged in structured educational activities and less time pursuing open-ended play, exploration, and problem-solving. The emphasis on more conventional thinking during middle childhood may result in decreases in the on-going development of divergent thinking. Based on these findings, researchers suggest that open-ended exploration and inventive pursuits need to extend past early childhood in order to continue to grow and strengthen children’s creative abilities.

Research indicates that the educational environment can have a positive or negative effect on children's creativity. Classrooms that encourage
- independent work
- create a balance between stimulation and distraction, and
- provide easy access to resources for children to use in the work of problem solving can maximize creativity.

Research shows that, to foster creativity, children need ample time and resources to create and that both sexes benefit from having opportunities to create without having their work evaluated or judged.

GENDER DIFFERENCES IN CREATIVITY

Research findings on creativity and gender have been somewhat equivocal, although generally, few significant differences have been found between boys' and girls' creative abilities. One area where gender does appear to play a role is in the way that children are affected by evaluation of their creative products. In early adolescence, girls appear more negatively affected when they know their creative work will be evaluated. Specifically, girls appear to lose motivation and become less creative when they expect to be judged by an "expert." It is not altogether clear why girls are more affected than boys by outside evaluation of their creative work, but it may be that girls at this age are more attuned to interpersonal communication and the expectations of others. Some research suggests that girls in single-sex schools outperform girls in co-educational schools on creative tasks, perhaps because girls in single-sex schools enjoy more opportunities and support for creative thinking.
Creative problem solving and divergent thinking can be applied to solving real-life problems. Similar to divergent thinking, good coping allows people to consider many possible solutions to a problem.3

CITATIONS


14 http://www.centerforchildhoodcreativity.org


This volume, edited by Ronald A. Beghetto and James C. Kaufman, contains essays by leading scholars in the fields of creativity and education. The essays address the importance of cultivating creativity in the classroom and provide realistic suggestions for how to do so within the constraints of a standard curriculum.

This book by Mark Runco, a clinical psychologist and leader in the field of creativity and divergent thinking, reviews the research on educational implications for creativity, and provides ways for teachers to enhance creativity in the classroom.

Researchers from Case Western Reserve University collaborated with the Center for Research on Girls at Laurel School to study the relationship between creativity in children’s play and adaptive skills, such as coping, emotion regulation, and adjustment.

Leaders in the field of childhood imagination and creativity, Dorothy and Jerome Singer provide background on the importance of creativity and imagination in young children. The book includes over 100 activities for parents, teachers, and caregivers to engage in with young children.

Child psychologist Susan Linn describes the science and importance of children’s pretend play, and addresses threats to protected time for pretend play in a commercialized society.