Creative Problem Solving Strategies

For the past five decades, researchers and supporters of gifted and talented education have emphasized the importance of problem solving techniques and problem solving strategies for the gifted child. Alex Osborn and Sidney Parnes are two of the most renowned educators and researchers in this field of study. After extensive research in the late 1960’s, Osborn and Parnes developed the Creative Problem Solving Process. Since that time, many other methods and variations of their six-step process have been developed, refined and utilized to increase creative and critical thinking amongst children. Osborn is often credited with the “Rules of Brainstorming” that are used not only to teach gifted children but are also utilized in many think tanks and creative thinking strategy sessions in businesses. In addition, some believe that following the steps to problem solve is not as important in the developmental stages of the process, but rather the brainstorming and stretching of ideas that is the most impactful.

### Osborn-Parnes’s Creative Problem Solving Process

The process flows logically through the six steps of:

1. **Objective (Mess) Finding** - identifying the goal, challenge and future direction
2. **Fact Finding** - collecting data about the problem, observing the problem as objectively as possible
3. **Problem Solving** - examining the various parts of the problem to isolate the major part, stating the problem in an open-ended way.
4. **Idea Finding** - generating as many ideas as possible regarding the problem, brainstorming
5. **Solution Finding** - choosing the solution that would be most appropriate, developing appropriate, developing and selecting criteria to evaluate the alternative solutions
6. **Acceptance Finding** - creating a plan of action

### Future Problem Solving Six Step Process

The FPS six-step model serves as the foundation to building dynamic, creative thinking processes and includes:

1. **Identify Challenges Related to the Topic or Future Scene**
2. **Select an Underlying Problem**
3. **Produce Solution Ideas to the Underlying Problem**
4. **Generate and Select Criteria to Evaluate Solution Ideas**
5. **Evaluate Solution Ideas to Determine the Best Solution**
6. **Develop the Action Plan for Implementing the Best Solution**

In 1974, Dr. E. Paul Torrance developed the Future Problem Solving Process while conducting a research study at the University of Georgia. Torrance worked directly with Osborn and Parnes to develop this method which is still used today in the Future Problem Solving Program International academic competitions. The Texas affiliate program of the Future Problem Solving Program International was started in Austin ISD in 1980 and has been housed within AISD since its inception.
Brainstorming

Knowing the rules for brainstorming can help anyone to think in a more creative, innovative and prolific way. When brainstorming, students should strive for four areas of capacity:

- Fluency: producing a large quantity of ideas
- Flexibility: producing a variety of ideas in different categories
- Originality: producing creative and original ideas
- Elaboration: producing ideas that can be expanded

Brainstorming Rules for Individuals and Groups
1. Strive for F, F, O, E!
2. Always have a scribe to record your ideas!
3. Accept all ideas, do not criticize or praise one another’s ideas during the brainstorming session!
4. Piggybacking is okay—it is perfectly acceptable to get ideas from one another and expand upon each other’s ideas!
5. The more far-out, wild, crazy ideas the better! You can always evaluate the best ideas or the most feasible later!

Gifted children in particular need encouragement and the freedom to think creatively, and to not always seek an exact or correct answer. Too often we demand the right answer before allowing our children to discover many possibilities. Encouraging children to look at situations from a variety of perspectives helps to encourage them to think creatively and to produce more ideas.

In today’s ever-changing society, the future job market will require our children to be able to problem solve and think creatively in order to be successful. In a recent study, it was found that Fortune 500 companies seek the following attributes in their new hires as opposed to only good grades or a high Grade Point Average:

- Problem Solving Strategies/Abilities
- Teamwork and Collaboration
- Flexibility and Adaptability
- The ability to analyze a situation from a variety of perspectives
- Wide variety of experiences in many fields

There are several Academic Competitions and Programs that are available to help develop these key creative problem solving skills in your child. For more information visit any of these websites:

Texas Future Problem Solving Program: www.txfssp.org
Destination ImagiNation: www.texasdi.org
Texas State Robotics Competition: www.tcea.org/robotics