Over the past few years, education has experienced a rapid growth in the development of “active learning” strategies and techniques. This set of learning tools draws heavily on research illustrating and supporting the principle that students learn more effectively, and retain information more efficiently, when they are provided with opportunities to discuss, debate, sort out, examine, evaluate, and apply the content knowledge they are gaining through classroom lectures and assigned reading.

Spencer Kagan, author of Cooperative Learning (1994) and a key force in the development of the cooperative learning paradigm, suggests there are several key components that must be considered in the design and implementation of this type of instructional experience: QUERY

- The creation of working teams,
- An environment that promotes cooperation among participating students,
- The faculty member’s ability to manage multiple groups as they separately work on common tasks,
- The facilitation of appropriate social skills (e.g., communication, conflict resolution, listening),
- Positive interdependence among individual group members,
- Individual accountability for involvement in the process,
- Equal participation,
- Simultaneous interaction, and
- Maximized efforts to create positive and productive outcomes.

In this issue of The ToolBox, we will be examining two very powerful and effective tools for the facilitation of cooperative learning: Jigsaw and Graffiti. Readers are encouraged to think about ways that these techniques can

A jigsaw puzzle is a collection of many separate yet connected pieces of information. When assembled in the correct order and orientation, these pieces create a larger picture that is more complete than any of the component parts are able to depict on their own. This is a wonderful example of how cooperative learning capitalizes on the collective brain power of team members with a resulting product that is better than any one of the team members could have imagined.

“Does this magical, wonderful, collaborative product always emerge from cooperative learning?” you may ask. Not always. But as team members begin to learn and practice the skills necessary to be part of a team with a common goal, the odds of this occurring increase exponentially.

In the “Jigsaw” strategy, individual group members become experts in one aspect of the problem that the group is charged to address or resolve. Here is an example of how this might work in your classroom:

**How Can We Meet All of Their Needs?: A Class-Wide Project**

Imagine that you are teaching a class that is considering the various options to resolve a pressing societal problem—reducing the prevalence of teen pregnancy. You divide the class into five groups of five members each.

You then advise the class that there are several different subgroups in the community that have expressed varied perspectives on the causes of teen pregnancy and the interventions that would be most appropriate to reduce the prevalence of this problem. These groups are parents, school personnel, clergy, reproductive rights groups, and teens.

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Giving Students a Voice in Their Own Learning

Jigsaw...Continued

Eric, Heather, Todd, Antonio, and Shandra are assigned to work together as a group. They are designated as Team #1. Each member is then assigned (at the discretion of the group) to investigate the interests, concerns, and recommendations of one of the identified special interest groups (e.g., parents, teens). To do this, each group member will join with students from other subgroups (i.e., Team #2, #3, #4, #5) who are likewise investigating similar interests. So, for example, Eric is assigned to explore the concerns of parents. In that capacity, he meets with members of the other four class groups who also have an interest in the perspectives and opinions of parents.

After the subgroups connected with each of the specialty topics meet and discuss their area of interest, team members then return to their home group (i.e., Team #1, #2, #3, #4, #5) and share the information they have gained. The group then discusses the problem from these varied perspectives and construct their own course of action through the process of consensus building. The jigsaw comes together as the pieces of information are shared, analyzed, and assembled.

From the "Jigsaw Classroom" website (www.jigsaw.org), we learn of the advantages that can accrue in regard to student learning:

What is the benefit of the jigsaw classroom? First and foremost, it is a remarkably efficient way to learn the material. But even more important, the jigsaw process encourages listening, engagement, and empathy by giving each member of the group an essential part to play in the academic activity. Group members must work together as a team to accomplish a common goal; each person depends on all the others. No one student can succeed completely unless everyone works well together as a team. This ‘cooperation by design’ facilitates interaction among all students in the class, leading them to value each other as contributors to their common task.

Graffiti is a strategy for encouraging groups of students to share their ideas in response to a problem or scenario and also respond to the ideas generated by other student groups within the class.

This technique is easily implemented in the college classroom. As an example, a class is considering several different interpersonal challenges that may occur in the workplace and how they might respond. To facilitate discussion on this topic, the class is divided into groups, each with five students. Around the classroom, the faculty member has posted sheets of newsprint, creating four separate learning stations (i.e., one on each wall). At each of these stations, an interpersonal relationship scenario has also been posted for student review, consideration, and response.

Each group of students is provided with a marker. Each group has a different color. Group #1 begins at Station #1. Members of the group review the scenario at their station and provide a written response/solution on the newsprint paper. After a 5-10 minute period, the groups are directed to rotate in a clockwise fashion. Group #1 rotates to Station #2, etc. They read the presented scenario, read the previously posted responses, and provide additional suggestions or a modification of previously posted comments.

After each group has been given the opportunity to review and respond to each scenario, the groups return to their home stations to reflect on the suggested responses to their assigned dilemma. They then process these suggestions and formulate a composite response that they share with the entire group.