15. What do I typically do to organize students to practice and deepen knowledge?

The teacher uses grouping in ways that facilitate practicing and deepening knowledge.

Teacher Evidence
- Teacher organizes students into groups with the expressed idea of deepening their knowledge of informational content.
- Teacher organizes students into groups with the expressed idea of practicing a skill, strategy, or process.

Student Evidence
- When asked, students explain how the group work supports their learning.
- While in groups, students interact in explicit ways to deepen their knowledge of informational content or practice a skill, strategy, or process such as the following:
  - Asking each other questions
  - Obtaining feedback from their peers

How Am I Doing?

<table>
<thead>
<tr>
<th>4 Innovating</th>
<th>3 Applying</th>
<th>2 Developing</th>
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<th>0 Not Using</th>
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<tbody>
<tr>
<td>Organizing students to practice and deepen knowledge</td>
<td>I adapt and create new strategies for unique student needs and situations.</td>
<td>I organize students into groups to practice and deepen their knowledge, and I monitor the extent to which the group work extends their learning.</td>
<td>I organize students into groups to practice and deepen their knowledge, but I do so in a somewhat mechanistic way.</td>
<td>I use the strategy incorrectly or with parts missing.</td>
</tr>
</tbody>
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Element 15: What do I typically do to organize students to practice and deepen knowledge?

Strategies

**Perspective analysis (Marzano, 1992)**

The teacher helps students practice and deepen their knowledge of a topic using perspective analysis. This strategy involves five steps, each with a corresponding question:

1. Identify your position on a controversial topic—What do I believe about this?
2. Determine the reasoning behind your position—Why do I believe that?
3. Identify an opposing position—What is another way of looking at this?
4. Describe the reasoning behind the opposing position—Why might someone else hold a different opinion?
5. When you are finished, summarize what you have learned—What have I learned?

**Thinking hats (de Bono, 1999)**

The teacher asks students to deepen their knowledge of a topic by imagining themselves wearing any one of six different-colored thinking hats. Depending on the hat they wear, students look at new knowledge in a slightly different way, as follows:

- **White hat** (neutral and objective perspectives)—When wearing the white hat, students examine facts and figures related to the new information without drawing conclusions or interpreting them.
- **Red hat** (emotional perspectives)—When wearing the red hat, students express how they feel about the new information, but should still refrain from judging either the topic or their feelings.
- **Black hat** (cautious or careful perspectives)—When wearing the black hat, students look for weaknesses or risks that stem from new information.
- **Yellow hat** (optimistic perspectives)—When wearing the yellow hat, students look for positive and valuable aspects of new information.
- **Green hat** (creative perspectives)—When wearing the green hat, students use the new knowledge to generate new ideas or create novel solutions to problems using the new information.
- **Blue hat** (organizational perspectives)—When wearing the blue hat, students reflect on their thinking processes and decide what perspectives they would like to take (in other words, what hats they would like to put on) as they interact with new information.

**Cooperative learning**

Students complete practice activities or answer questions independently and then meet in small groups to check their answers with their peers’ answers. This gives students a second opportunity to describe how they approached problems and hear alternative approaches that other students used.
Cooperative comparisons

Students work in groups to answer comparison questions such as the following:

- How does our current performance compare to our performance when we started learning the strategy or process?
- How could we classify different techniques for improving our performance with this strategy or process?
- If we were going to coach others to learn this strategy or process, what metaphors or analogies might be helpful to them?

Pair-check (Kagan & Kagan, 2009)

In groups of four, students form pairs (two pairs per group) and designate who will be partner A and who will be partner B. Using a set of exercises, problems, or questions, partner A works on the first exercise, problem, or question while partner B coaches when necessary and praises partner A’s work when complete. For the second exercise, problem, or question, the partners reverse roles. Then, the pair checks their answers with the other pair in their group. The goal is for all four group members to reach consensus about each solution. If solutions do not match, group members discuss and coach each other until they reach a common solution. They repeat the process, with consensus achieved after every two exercises, problems, or questions.

Think-pair-share and think-pair-square (Kagan & Kagan, 2009)

After grouping students in pairs, the teacher presents a problem. Students think about the problem individually for a predetermined amount of time. Then students each share their thoughts, ideas, and possible solutions with their partner. Partners discuss and come to a consensus about their solution. The teacher then asks pairs to share what they decided with the class. In a variation (think-pair-square), pairs confer with another pair (making a group of four) and come to a consensus in that group as well before sharing with the whole class.

Student tournaments

The teacher organizes students into teams that then compete in various academic games. The teacher might keep track of each team’s points over the course of a unit and provide a tangible reward or recognition to the top one or two teams. Team members should be remixed after each unit to ensure that students have the opportunity to work with a variety of other students.

Error analysis and peer feedback

In pairs, one partner watches the other complete a process or perform a task. Using evaluation criteria the teacher provides, one partner analyzes the other’s performance and offers feedback about successes, errors, or missteps.
Performances and peer critiques

The teacher asks students to complete culminating performances when learning procedural knowledge. These performances might conclude with peer review activities in which other students offer praise, ask questions, and give suggestions for improvement.

Inside-outside circle (Kagan & Kagan, 2009)

Students form two concentric circles with an equal number of students in each circle. Students forming the inner circle stand facing outward, and students forming the outward circle stand facing inward (so that each person in the inner circle faces a person in the outer circle). The teacher asks a question or presents a problem, and students discuss their thoughts, answers, and solutions with the person facing them. On a signal from the teacher, each person in the inner circle takes one step to the left, so that everyone now faces a new partner. Partners again compare answers and solutions, after which the teacher asks individuals to share answers or solutions with the group. The teacher might also ask students to share what they discussed with their partners and how it changed (or didn’t change) their thinking.

Technology Links

- Introduce students to websites that facilitate collaboration. Some websites are designed to facilitate online conversations, while others allow students to collect information and work together to produce papers and presentations (for example, www.wikispaces.com or https://docs.google.com).

- Have students create video or audio recordings describing how they worked together to practice or deepen their knowledge. Archive these and use them to give subsequent classes ideas about how to work together.