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**Techniques for
Active Learning
*Considerations Packet***

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Techniques for Active Learning

This packet focuses on techniques that teachers can easily implement to increase time on task for all learners. The techniques require few materials and little extra planning, but they have a huge impact on the amount of time students are engaged in learning. Finally, they not only increase achievement but also assist students in building relationships.

Techniques within the following categories are presented:

Motivation and Focus Activities

- Anticipation Guide
- Knowledge Rating Scale
- Immediate Work Assignment
- Processing Cards

Techniques Used During Instruction

- Whip Around/Pass Option
- Question: All Write
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- Voting Techniques
- Speak-Write
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- Paired Reading
- Think, Pair, Share and Variations
- Jigsaw or Task Group, Share Group
- Classwide Peer Tutoring

- Peer Tutoring
- Networking Session

Evaluation

- Outcome Sentences
- One-Word Summary
- The Biggest *Aha*

Motivation and Focus Activities

Anticipation Guide (Adams, Case, & Pegg, 2015)

These easy-to-prepare guides are designed to capture students' attention.

- Prepare a list of up to five true/false or agree/disagree questions on the lesson topic.

Post the list on the chalkboard or overhead.

Sample true/false questions include:

- Is "red" an adjective?
- Will the wolf get a pig dinner?
- Are there rigid walls in animal cells?
- Did the Emancipation Proclamation free the slaves?

Sample agree/disagree questions include:

- Long division is easy.
- The most difficult part of experimental design is the dependent variable.
- The decimal point in the answer for a division problem is placed directly above where it appears in the problem.
- The theme of *Charlotte's Web* is that pigs are better than spiders.

- At the start of class, after the class has had time to consider the questions, ask the students to answer the questions using a signal (thumbs up/down, arms raised all the way or half way, fist or fingers on hands, etc.).
- Reasons for choices may be shared before or after the lesson.

Knowledge Rating Scale (Fontichiaro, 2010)

A knowledge rating scale helps quickly assess students' prior knowledge.

Prepare a list of topics for the lesson or the next unit and write them on the white board, overhead, or chart.

For example: How familiar are you with:

- Active learning strategies?
 - Numbered heads?
 - Whip around/pass?
 - One-sentence summary
- Have students indicate their knowledge regarding each topic on a scale from 1 to 5, with 1 being "Never heard of it" and 5 being "I know this stuff cold."
 - Plan review and instruction based on students' ratings.

Immediate Work Assignment (Harmin & Toth, 2006)

- Have students begin an assignment or task within their capability as soon as they enter class without having to wait for the teacher to explain it. The idea is to engage students immediately so they waste no time and lose no energy waiting for activities to get underway. These activities provide valuable student practice and allow the teacher to take attendance, consult with individual students, catch up with a student who has been absent, or prepare lesson materials.
- Typical assignments, also known as "sponges," "bell activities," and "Do Nows" for the beginning of class include:

- writing in journals
- working on problems written on the whiteboard and screen
- sitting in pairs and checking each other's homework (perhaps with the aid of an answer key)
- starting work on individual tasks, worksheets, or learning center activities.

Processing Cards (Himmele & Himmele, 2017)

Processing cards consist of paper folded to create signs that stand up on students' desks. One side of the sign reads, "Still Thinking" (highlighted in yellow); the opposite side reads, "Ready to Share" (highlighted in green). Students' use of these cards allows the teacher to know where students are in the process of completing a given task.

1. To start, ask the students to place the card at the edge of their desks with the "Still Thinking" side facing out.
2. When students complete their task, they flip the card so that the "Ready to Share" side is showing.

Techniques Used During Instruction

Whip Around/Pass Option (Harmin & Toth, 2006)

The purpose of this technique is to increase the number of opportunities for students to respond, encourage more students to speak up, and give students practice in responsible self-management. The technique may be used with the entire or part of a class.

1. Ask each student in turn to quickly speak, read, or share an answer.
2. Allow students who are not ready or who are unsure of an answer to say, "I pass."

Question: All Write (Nagro, Hooks, Fraser, & Kyena, 2016)

1. Pose a question to the class that will make students think and ask them write a

response.

2. When three or four students have finished writing, announce to the rest of the class, "Just finish the thought you are now writing." Don't wait until most students are finished. Keep up the pace.
3. Follow with one of the Think, Pair, Share, and variations techniques described in the section on cooperative group work.

Everybody Show (Nagro et al., 2016)

This technique is used for a quick comprehension check of factual information or opinions, as a way to find out which students need more instruction.

1. Ask questions that can be answered with yes or no, or a first, second, third response. The technique requires yes/no cards, cards numbered 1-3, and/or agree/disagree cards. A "thumbs up, thumbs down" signal or a showing of fingers may be substituted for the cards. Students answer together when given the "everybody show" signal.
2. For more detailed, higher-order thinking questions, provide dry-erase boards, space at the chalkboard, or flashcards. Students may work individually or in dyads. Ask a question, allow wait time, and then give the respond signal. The students answer by writing on their dry-erase boards and share only after they are told, "Everybody show."

Voting Techniques (Harmin & Toth, 2006)

Using this type of technique, teachers sample student thinking without slowing the pace of the class.

1. Phrase questions to elicit nonverbal or voting answers rather than individual verbal answers. Ask questions such as, "How many have questions they would still like to clear up?" rather than "Does anyone have any questions?" Ask, "How many are ready to move on?" instead of "Are we ready to move on?" Ask, "How many agree with Bill? How many disagree?" rather than "Do you agree with Bill?"

2. A more complex nonverbal response would be, "If you agree, raise your hand all the way. If you partially agree, raise it halfway. If you disagree, point thumbs down."
3. To test students' readiness to respond, give the following directions: "Hold up one finger if you have an idea but don't want me to call on you. Hold up two fingers if you are willing to respond aloud but are not all that sure. Hold up three fingers if you are fairly sure and are willing to respond. Otherwise, hold up a fist, so I'll know how many have no idea. I'll call on only those holding up two or three fingers."

Speak-Write (Harmin & Toth, 2006)

This technique increases student learning during lecture formats by providing structured time for teacher talk and student reflection.

1. Tell the students that there will be breaks during the lecture where they can write one of four options: a summary, questions, reactions, or another response. This pause allows students to construct personal meaning. Students are not to write during the teacher talk.
2. Pause for student reflection at appropriate content breaks after three to four minutes of lecture.
3. Students can share their reflections through sharing pairs and then a whole-class discussion. Lectures may be augmented with visuals such as screens, white board notes, handouts, outlines, etc. However, the additional visual support is not to lengthen the time for lecture chunks.

Choral Work (Harmin & Toth, 2006)

This technique is helpful for students who learn by repeating information rhythmically and aloud.

Use this technique for 4-6 minutes with the whole class.

1. Make large cards containing facts, chemical symbols, spelling words, phrases—any material to be memorized and internalized.
2. Teach students to feel the rhythm of words and syllables and chant in rhythm.

3. Show cards, one at a time.
4. Lead students in chanting each card in rhythm.
5. Use a phrase like, "A little more power, please!" to increase participation.

Inside-Outside Circles (Himmele & Himmele, 2017)

This activity may be used with the whole class. Students work in groups of 6, 8, or 10.

1. Divide the class into groups. Each group forms an outer and an inner circle. The students in the outside circle face in, and the inside circle group faces them. Each of the inside students is given a list of vocabulary words and their definitions or a list of questions and answers. They quiz their outside partner as directed by the teacher (give the word, expect the definition, or ask the question). Other students may offer assistance as needed.
2. After each dyad has completed its assigned words or questions, cue the outside students to “pinwheel” or move one position to the right. Now, each student has a new partner and the outside students have new vocabulary words or questions to review. This process continues until each outside student has worked with each inside student.
3. Call “inside out and outside in,” prompting students to switch roles and repeat the process.

Line-Ups (Himmele & Himmele, 2017)

This fun activity allows students to move up and out of their seats to share responses to prompts. Prepare questions that foster discussion. Questions about which students may have differing views work especially well.

1. Ask a question or give a prompt and have students line up according to their responses; that is, according to how strongly they feel about their response. For example, ask students to line up according to how strongly they agree with a school policy or new legislation.
2. Next, fold the line in half so that students are paired with others who think differently.
3. Ask students to discuss their positions and ideas with their partner.

Rippling Questions and Prompts (Himmele & Himmele, 2017)

A “ripple” is a way of posing questions that maximize student engagement. Instead of the teacher asking “Who knows?” or “Who can tell me?,” questions are phrased to allow every student to reflect and respond to the prompt. Teachers give prompts such as,

- “Take two minutes to jot down your thoughts and be ready to share with a partner.”
- “Everyone draw an image that sums up what we’ve been learning.”

Prompts like these act like a pebble thrown in the water; they “ripple” through the room increasing student engagement and the learning effectiveness of the prompts. Students are engaged individually with reflection time, then share in pairs, then pairs share in quads, rippling responses throughout the classroom.

Cooperative Group Work

Paired Reading (Harmin & Toth, 2006)

1. Introduce the vocabulary and key ideas for the reading selection (fiction or nonfiction).
2. Provide directions for what to do upon completion of the reading. Directions may include:
 - Talk over the reading and share what you think about it.
 - Answer comprehension questions about the reading.
 - Write some outcome sentences in your journal based on the reading.
 - Talk about some things you liked or found interesting.
 - Begin the next reading or shift to some of your individual work when finished.
3. Pair students (mixed-ability) and have them seated side-by-side. Provide minimal directions to allow for maximum self-direction. Encourage the pairs to assist each other when they encounter unknown words and to read for the amount of time that is comfortable for them, not necessarily the same amount.

Think, Pair, Share and Variations (Harmin & Toth, 2006)

Using this technique, students are asked to think about and share answers to teacher-posed questions.

1. Students reflect individually on the material presented to this point in the lesson.
Sometimes, teachers request a written response.
2. Students pair up with a partner seated nearby or as designated by the teacher. Pairs share and compare their answers.
3. The step of “square” may be added to allow two sets of pairs (or four students) to share answers. This is advisable when there is more than one correct response or way to arrive at an answer.
4. If students are already in cooperative groups of four, the teacher stipulates the pairing partners. For instance, the directions might be “What are the three most important items the early settlers needed? Pair up 1 with 4 and 2 with 3 for sharing.”

Jigsaw or Task Group, Share Group (Harmin & Toth, 2006)

1. Divide the class into groups and provide different reading materials (e.g., three chapter sections or three different sources on the same topic) distributing selections to each group. Pair students to read the assigned materials. Place students who struggle with reading with students who read on or above grade level. Allow a specific amount of time for the reading to take place (about 2-4 minutes). Students might also read the selection as homework prior to the activity and then reread their assigned section during class.
2. After the allotted time, have all the students who read the same section come together to discuss the information. Within a specified amount of time (about 5-7 minutes), they summarize what they read, clarify words and concepts that they did not understand, and ask questions of each other about the content. (The students need to know this information so well that they can teach it to others, because that is the next step.) Before dismissing these groups, have all three groups count off: 1-2-3. Regroup the class into 1's, 2's, and 3's.

3. Now each new group contains students who have read the first, second, and third parts of the material. The students who read the first section share information they learned with the rest of the group. All of the 1's should have a chance to give input. Students may ask questions to clarify information presented. Then, the 2's explain the second part and, finally, the 3's share the third. Subdividing the group works well at this step. Groups of six—two 1's, two 2's, and two 3's—are ideal. Allow about 7-10 minutes for the students to teach each other the information.

Classwide Peer Tutoring (Harmin & Toth, 2006)

This technique replaces independent seatwork. It is recommended for use at the high school level for approximately 30 minutes 2-3 times per week and, in elementary schools, for 15 minutes 3-4 times per week.

1. Introduce the new material to be learned.
2. Explain *classwide peer tutoring* and divide the class into two teams. Assign tutoring pairs within each team. Prepare tutors for their roles as outlined in the *peer tutoring* strategy below.
3. Prepare flashcards with questions, vocabulary terms, or problems on one side and the answers, definitions, or examples on the opposite side for practice. Instead of flashcards, the students may use class notes taken in two-column form, with words on the left side and definitions on the right side of the page. Another option is to prepare a study guide with a series of questions in the first section followed by the answers in the second section.
4. Have students take turns being the tutor and the tutee during tutoring time. Supervise the interactions, making note of difficult vocabulary, concepts, etc.
5. Tutees earn points by giving correct answers to tutor questions and by correcting their errors when they make mistakes (but receive fewer points than if they had answered correctly the first time). Award bonus points for on-task tutoring and responding behavior.

6. Factor points earned during tutoring sessions into student grades in various ways (quiz grade, classwork grade, etc.).
7. Post team scores for recognition and motivation.

Peer Tutoring (Harmin & Toth, 2006)

Peer tutoring is a structured and ongoing technique for practice after initial instruction has been provided. Tutoring is arranged across age, economic, language, achievement, and ethnic groups. Students need the opportunity to be both tutor and tutee.

- Prepare tutors for their roles. Teach tutors to
 - give clear directions,
 - give feedback to tutees for both correct and incorrect answers,
 - provide the right amount of assistance,
 - manage materials,
 - and record progress.
- Schedule tutoring sessions regularly, daily or several times during the week, for a specified length of time.
- Specify the content to be taught, conditions for mastery, and rewards.
- Rotate tutors.
- Regularly provide feedback to tutors on how well the sessions are going.

Networking Session (Himmele & Himmele, 2017)

This strategy allows students to collaborate with a variety of students.

1. Prepare a few questions/prompts and ask students to reflect on them .
2. Direct students to partner with a student they haven't talked with that day and discuss their reflections.
3. After a set amount of time, ask students to find a partner they haven't talked with that day and have him or her respond to a different question/prompt.

Evaluation

Outcome Sentences (Harmin & Toth, 2006)

1. Have students write sentences after reflecting on a lesson or experience, prompting them by phrases such as,
 - I learned . . .
 - I'm beginning to wonder . . .
 - I was surprised . . .
2. As appropriate, display the phrases on a chart. Say, "Please reflect on the discussion and identify some things you have learned from it."
3. After the students have written down their thoughts, ask if anyone is willing to read one of their outcome sentences. Another way to share thoughts is to use the whip-around/pass technique or have students share in pairs. Written student reflections may also be used as exit slips for informal assessment.

One-Word Summary (Himmele & Himmele, 2017)

Use this technique at the close of the lesson.

1. Ask students to write one word that best describes what they learned that day.
2. Pair students to explain their rationale for selecting their one word.
3. End by having students call out their one-word summary to share with the entire class.

The Biggest *Aha* (Himmele & Himmele, 2017)

1. At the end of the lesson, ask students to write down their biggest learning insight, *aha*, from the lesson.

2. Ask students to share their biggest *aha* with someone they haven't spoken with that day.
3. Ask volunteers to share their *ahas* with the class.
4. Collect the *ahas* and review.

The varied strategies offered in this *Considerations Packet* allow teachers flexibility to design lessons that incorporate active learning for multiple purposes and, thereby, increase learning.

Additional Resources

Visit our website at <http://education.wm.edu/centers/ttac/index.php> for a complete listing of resource materials and our lending library.

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