

Emily Trumble

InTASC 8 Reflection

Abstract: Instructional strategies are an important backbone to teaching. Having a few efficient strategies to turn to frequently during lesson planning is a great idea, especially if those strategies are student centered and student friendly. Strategies that aid instruction in fun ways that engage students include Competition, Manipulatives, Notice and Wonder, Stations, and Turn and Talk or Think Pair Share. All these strategies can be adapted or differentiated for the classroom in fun and exciting ways to help students comprehend and practice math content.

There are many instructional strategies that I have found during my time teaching to be highly effective in the classroom. These strategies include Turn and Talk/Think Pair Share, Competition, Manipulatives, Notice and Wonder, and Stations. During my time teaching in middle and high school, I have found these strategies to help with student learning and comprehension of content, and make the classroom a more welcoming environment.

Adding competition to a classroom as an instructional strategy is wonderful. Many students can get incredibly competitive and energetic, so bringing that into learning math is a great way to engage learners. Having a competition during a lesson takes immense planning, but it allows students to have fun while they are simultaneously practicing their skills. Competitions I have witnessed or done as a teacher or a student in the classroom are a Tournament, Bingo, Dog Race, and Jeopardy. Differentiation wise, all these games are easily adaptable so students can have a whole class game or small group work if there are students who prefer small groups or individual work. Students can get up and move around to expel energy or stay seated at their desks if there is a physically disabled child in the classroom. It is easy for these games to get a little chaotic but with classroom management strategies such as flickering the lights or other attention seeking things, the students can also easily settle down. I have used the tournament in a 6<sup>th</sup> grade class for Decimal Review, and the students absolutely loved it. They were all having fun and also practicing operating on decimals. I have also seen the Dog Race in a 6<sup>th</sup> grade class, reviewing a unit on rational numbers, greatest common factor, and least common multiple. The students were competitive and engaged the entire class which a wonderful environment for them, and they had fun reviewing the content for their summative assessment. These strategies are completely student centered and engaging, and they are great for practicing or reviewing content.

Using manipulatives during a lesson is fantastic for students to get a hands-on look at content. Manipulatives are engaging and interesting, and lets students play around or explore a math concept so they can figure it out for themselves. This strategy is great for students that are visual or hands-on learners. It allows students to get an up close view of concepts and explore the reasoning behind them. It also gives relatability to the lesson, so they remember the concepts behind the material much better than if they were just lectured at. The activity is totally student centered, as it allows them to use their individual skills to explore mathematics. It can be differentiated through chunking, time limitations, checkpoints, or a worksheet with the manipulative, and it can be worked on in small groups or individually. In a 9<sup>th</sup> grade geometry class, I used manipulatives to help students prove and explore the Pythagorean Theorem. Using manipulatives allows students to play around and explore their own thinking, and advances their problem solving skills. This engages them and leads to productivity in the classroom. In regard to classroom management, manipulatives may be a little chaotic, but with a set of expectations that students will use their tools for educational purposes and a teacher that enforces those rules, using manipulatives is a wonderful way to add to instruction.

Using the Notice and Wonder strategy to aid instruction actively includes students in the creation of content. It allows students to voice their thoughts, related to math or no, without judgement. Notice and Wonder also makes students think deeper, so that they pique their own curiosity and sharpen their observational skills. It is student centered and goes well with Think Pair Share as students can have small group discussions or a large group discussion. I love the Notice and Wonder Strategy, and used it in a 9<sup>th</sup> grade geometry class to introduce an activity involving ratios and proportional relationships. I projected a picture of a map, and asked the students as a group to tell me what they Noticed and Wondered, and then wrote all those things

down on the white board. The classroom management for this strategy is similar to a student-centered discussion, where the teacher must be ready to guide and facilitate when necessary, as well as use management strategies to keep students on task. Notice and Wonder is easy to do, and does not take long in the classroom, while also promoting inquisitive thinking and student production.

Stations are another great way to have students move around the classroom while also getting instruction. Seek and Solve or other types of station activities allow students to expel energy, work in groups, and engage in their work. For differentiation, students can work in small groups or individually, depending on the learner. Stations are also chunked by themselves, but can be chunked even further by timing or a handout. Students may have the opportunity to go at their own pace around the stations and the time period for this activity can be both long and shorter. During this time for classroom management, the teacher can move around to different stations to sequence answers and gauge student understanding. The engagement of such an activity leads to students wanted to be productive in the classroom. I used this strategy as a practice lesson and the students all loved how fun and active it was. Also at the end of certain stations, the teacher can stop the students for new instructions or to correct any misconceptions. Using stations to aid instruction is a great way to practice content or have students explore new material, since it is student centered. It is useful in any situation.

Finally the strategy pair that is my favorite, Turn and Talk/Think Pair Share. Both of these strategies promote small group discussion, but are informal enough that students are comfortable with sharing their answers with the class afterward. Using these two techniques prepares students to share in front of the class but since they already have their answer talked out, the whole group discussion is more relaxed. Students can bounce ideas off each other, and

have healthy debate or relaxed critique as well. Turn and Talk and Think Pair Share promote collaborative learning and listening skills, and they can apply to many different learning types. Talking thoughts through is a wonderful way to articulate and reason through concepts, which is why these strategies are great for engaging learners and letting them explore. Turn and Talk and Think Pair Share also give ELL or Speech therapy students the opportunity to practice talking through ideas and vocabulary in a relaxed setting instead of being Cold Called on during a classroom discussion. The strategies can both be done repeatedly throughout the lesson because they take a short amount of time, which also allows the material to be chunked using these methods leading to individualized differentiation. Students can quickly talk to a neighbor and the teacher can listen in on conversations to sequence answers and gauge student understanding and interest as well as manage the classroom and use proximity to keep students focused. Turn and Talk and Think Pair Share are both fabulous ways to aid instruction in the classroom, because both are completely student centered and allow the advancement of real life skills. I have used Turn and Talk during multiple lessons, and every time it helps students feel more relaxed in a discussion setting. If used in the classroom, Turn and Talk can build a productive learning environment where students are unafraid to participate in a discussion and grow their public speaking skills.

All these strategies are fantastic ways to aid instruction during a lesson. Whether it is review or new content, all these strategies can be adapted, differentiated, and then used to assist material. It is important to have instructional strategies that are used frequently in the classroom so students do not get scared or anxious, but all of the strategies above are student centered and student friendly while also creating an environment of productivity. That is why they are great to help students learn through instruction.