

## **PEER TUTORING**

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Obtain equity, access, and empowerment through peer tutoring. Peer tutoring creates student agency for the tutor and for the tutee. This article describes the need for peer tutoring and strategies for implementing peer tutoring in and out of the classroom, virtually and in-person.

### **The Challenge**

When I was asked to teach Algebra and Algebra Support, I thought, "No problem! I've taught this before." But when I was told, "I want you to make sure every single student successfully learns Algebra," I became less sure of myself; I knew I needed help. Since I wasn't given any adult support for the class, my help had to come from the students themselves. We have a program that encouraged volunteerism among the students. This usually consisted of the students making copies, organizing papers, or helping the teacher decorate the classroom. That year I had one student who had been particularly capable, and I wondered if they could possibly help me with my Algebra students. So, I asked my principal if I could have my student help me by working as a peer tutor for my Algebra Support class that next year - he loved the idea. We tried it, and the students were all successful in learning their algebra that year. Not only that, but we all had a wonderfully positive experience with the Algebra and the Algebra Support classes. I became a fan of peer tutoring. Now, ten years later, I have learned a lot, especially during this pandemic. The success of peer tutoring has been dramatic, and teachers from other subjects are now implementing peer tutoring as well - also with great success. Perhaps it can help you as dramatically as it has helped us.

NCTM's position on access and equity in mathematics education includes "that all students routinely have opportunities to experience high-quality mathematics instruction, learn challenging mathematics content, and receive the support necessary to be successful" (NCTM Position Statements). Peer tutoring is a method to ensure that all students have access and equity, while empowering tutors and tutees.

### **WHY? The need for peer tutoring (TEACHER'S PERSPECTIVE)**

The secret to the success of peer tutoring is that it helps three groups of people. First, it helps us teachers. We have a wide range of students in our classrooms, including various motivation levels and current math aptitude levels. At times, it is very helpful for all students to be heterogeneously grouped in the classroom. And, at other times, it is helpful for students to be able to work at their own pace and have opportunities to have individualized help. Peer tutoring in the classroom can allow students to get the help that they need to be successful. Peer tutors especially help students who have attention problems, as a peer tutor who sits right next to the student can help the student stay focused and engaged. Classroom peer tutoring helps with classroom management so that learning is more efficient, more effective, and more fun.

### **WHY? The need for peer tutoring (TUTOR'S PERSPECTIVE)**

Second, it helps the tutors themselves. The tutors learn so much when they teach. People can learn most effectively when they have to explain the concept to another person (Paul 2011). I've had so many tutors let me know that they are tutoring because it is the best

way for them to review math topics, which helps them in their more advanced math classes and as a study method for standardized math tests.

Beyond just math skills, tutors are also helped in building up their emotional intelligence. Tutors need to be respectful, kind, patient, encouraging, and communicate well. They feel empowered when they know that they can help a student learn math and see them become motivated to learn. Many of our tutored students have emotional issues that are preventing them from learning, some even have a hard time showing up for class. It is such a joy to see tutors smile when they know that they have been able to positively impact another person.

Tutoring is also a resume builder. Tutors can earn volunteer hours, which can be used for NHS (National Honors Society) requirements, for a school's community service program, or for a school's elective program.

### **WHY? The need for peer tutoring (TUTEE'S PERSPECTIVE)**

Third, the tutee benefits greatly from the peer tutoring! Powerful learning takes place one-on-one. When a tutee learns, they are able to perform better in class and their grade goes up. They feel empowered because they now have control over their academics and can see their success - this is very motivating! One student was missing a myriad of assignments and I required that he meet for 30 minutes daily with a peer tutor until he finished all his missing work. After he finished his missing assignments, he wrote to me in the Google Chat, "Is there any possibility for me to continue doing peer tutoring after this? It's helping a lot." Many students request a peer tutor because they realize the benefits of the one-on-one help.

Peer tutoring and virtual peer tutoring can be a place of hope. Many students were feeling isolated during the pandemic and a tutor helps the tutee academically as well as emotionally. In peer tutoring sessions, the students often start socializing. During a virtual peer tutoring session, I saw a peer tutor showing the tutee (who struggles with anxiety and depression) a LEGO Grogu. He brought the toy close to the camera and both students had huge smiles on their faces. See **Figure 1**.



**Figure 1.**

### **HOW? Peer tutoring during class**

So how does peer tutoring work? In class, peer tutoring can work in a number of different ways. Tutors can lead class competitions for reviews, be stationed at a desk during review time where students can approach the tutor for help, walk around the room and help students, or work with just one student during class. Having more than one peer tutor in a classroom can be beneficial, depending on the needs of the students and on the activities going on in the classroom.

In a full-inclusion classroom, peer tutoring can be especially beneficial. Students who are learning math concepts at a lower academic level work one-on-one with a peer tutor, either in a collaboration room or in an area off to the side in the classroom for about 20 minutes at a time. Each student enjoys the individualized time with the peer tutor, who becomes a classroom friend and helper. The tutor makes the math fun and finds ways to engage the student, like writing on a whiteboard or on paper attached to a clipboard. Peer tutors in this type of setting can be extremely effective in teaching the student and in engaging the student in positive peer interactions. The peer tutor is guided by the special education teacher as to what topics to teach and review with the student. The students make more progress in their mathematical journeys with peer tutors; they are more confident in their understanding of mathematics, and they are more excited to be in the classroom.

Peer tutoring has also been very effective for student learning during work time or during problem solving time in a classroom. As students work and get help from each other or from the teacher, a peer tutor can be designated to work with one particular student. It is necessary to create a classroom culture (and even better, a school culture), where peer tutoring is normalized and welcome. Some ways that this has been done is having all types of students, Algebra students through Calculus students, getting peer tutored. In the case where a student is embarrassed to get tutored, it can be helpful to have a conversation with the parents and to explain to them how helpful peer tutoring can be. It is important to have parents' support and their buy-in. One student who was extremely negative about working with a peer tutor during class agreed to try working with an older peer tutor, as long as it was outside of the classroom. The peer tutor was very patient, kind, and explained math concepts slowly to the student in the

breakout room. After the first-time meeting with the peer tutor, the student agreed to meet with the peer tutor during the next class. This continued throughout the school year. The student learned the material very well because she was able to talk through her problem solving and have gentle correcting when needed. Surprisingly, during second semester, the student wanted to work with the peer tutor in the classroom. Peer tutoring became normal and acceptable and not embarrassing because the student realized how much she was learning and she also enjoyed having a senior, who admitted having peer tutors herself while learning Calculus, work with her.

There is a myriad of success stories of peer tutoring in classrooms. Many teachers incorrectly think that the best student makes the best peer tutor. This is not always the case. Here's an example of a peer tutoring situation that clearly shows how peer tutoring is a win-win-win, for the tutee, for the tutor, and for the teacher. A student was placed in my Honors Geometry class because his schedule would not allow him to be in the Accelerated Geometry class. He also admitted to not having a good Algebra background and was particularly concerned with how he was going to learn at the honors level when he did not even know Algebra well. I told him that he could learn Algebra best by being a peer tutor in an Algebra Accelerated classroom. Even though he did not believe me and was very insecure about being a peer tutor for Algebra, the subject that he really did not know, he agreed to sit in an Algebra Accelerated classroom during his study hall and be a classroom peer tutor. Fortunately, the Algebra Accelerated teacher agreed to have the student come into his classroom to "try out this experiment" since the teacher had never had a peer tutor before in a classroom. During the semester, I came to the classroom to observe the teaching, and I ended up observing my

student who was the classroom peer tutor. He was taking notes during the instructional time and during the times when the teacher stopped instruction and posed a question to the students to problem solve, the peer tutor solved it and then walked around to other students and helped them with the problem. There were many times during the class where students would shout out to the peer tutor to have him come over and help them work through the problem. Not only was my student the respected and helpful peer tutor, but my student ended up being my top Geometry Honors student that school year. Peer tutoring helps tutees learn material better, while they are also gaining mathematical confidence and understanding math better. Instead of my student being my weakest Geometry Honors student that year, as his previous records pointed towards, he became my strongest student.

### **HOW? Peer tutoring outside of class (IN-PERSON)**

Before school, after school, during a study hall, or during a Resource Period are all ideal times for students to get extra help. A teacher cannot offer one-on-one help to all students during these times. So, it is very helpful for peer tutors to be available. Sometimes, a peer tutor is assigned to a tutee. Other times, peer tutors are available during those periods so that students who need help can get help on a needs-basis.

A student who was struggling in an Honors Geometry class because she had missed a few classes agreed to meet with a peer tutor who had taken Honors Geometry the year before and who had done much peer tutoring, virtually and in-person. Because the tutor and the student did not know each other, they met in a teacher's classroom after school. After meeting, they walked to the cafeteria to have their peer tutoring session. After working for an hour to review for a retake test, the student felt so much more confident in her understanding of the

chapter. She took the retake test and was successful. She continued to meet with the peer tutor after school once a week in the cafeteria and she is performing well in the class again.

### **HOW? Peer tutoring outside of class (VIRTUALLY)**

Sometimes, tutors or tutees are not both be available in person, so meeting virtually works best. These virtual meetings can occur during the school day, as well as after school or even on weekends or during extended breaks. One way to do this is by having the teacher set up a Google Meet. I have the tutor create a Google Jamboard or another interactive virtual whiteboard (like mathwhiteboard.com) that is shared with the tutee and with the teacher, and the teacher can enter the meet if there are questions. See [Video](#) for an example of a virtual peer tutoring session (DeltaMath 2021). The tutor and the tutee are both encouraged to send an email to the teacher if they have any questions. DeltaMath is an excellent math program to use during virtual peer tutoring because the tutor can take a screenshot of the problem and once it has been solved, there is immediate feedback, as DeltaMath shows the solution. This can be helpful if the tutor and tutee are confused.

### **HOW? Peer tutoring TIPS**

When students are meeting virtually, it is helpful for students and the teacher to have touchscreen devices. Writing on a virtual interactive whiteboard is more accessible and easier with touchscreens. It is important to have the support of your school administration. You need permission to have tutors in your classroom. It is also advantageous to have a predetermined school consequence when a tutee does not show up for a tutoring session outside of the class period. I have found that it is a good idea to send email reminders to tutors and to tutees about tutoring sessions. I also encourage tutors to email me during a meet if they are struggling. It is

helpful to have parent support. Parents are usually excited about peer tutoring, as it is free, helpful for learning, and provides extra social interactions.

### **The Challenge COMPLETED**

Peer tutoring helps teachers, tutors, and tutees. It is a win-win-win. It is helpful to include other teachers in the peer tutoring process so that it becomes a school-wide program. Teachers who may be hesitant to use peer tutors can easily be convinced of the positive impact of peer tutoring when they experience it themselves. For instance, the Algebra Accelerated teacher who had my student become his classroom peer tutor was 100% supportive of peer tutoring as he saw the huge benefits for his students. It is also important to keep administrators and guidance counselors informed with how peer tutoring is progressing. When we included our administrators and guidance counselors it led to them sending us emails asking for a peer tutor for a particular student. It is helpful to create a Google Sheet to keep track of tutors and tutees and when they are available and need help. At the beginning of a semester, teachers can give students surveys asking if they would like to tutor and if they would like to be tutored and when they are available. Peer tutoring can be a one-teacher program or an entire school program. Regardless of how widely used peer tutoring is at a school, if there is even a one-peer tutoring situation, it is invaluable for those involved.

## REFERENCES

DeltaMath.com. (The problem from the video was copied and pasted from DeltaMath into a Google Jamboard).

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