Why Peer Tutoring is Essential in the Classroom

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https://www.tamdistrict.org/Page/5315

What is peer tutoring?

- "A system in which tutor-tutee pairs work together on a classwide basis." (from Longitudinal Peer Tutoring)
- In small classes, 5-10 minutes of one-on-one instruction is easier to employ. For larger class sizes, this opportunity is harder to come by but peer tutoring "allow[s] peers to supervise their classmate's responding" and, consequently, "every child in a class can receive 10 minutes of direct practice time on a key instructional skill." (from "Classwide Peer Tutoring")



https://www.peertutoringresource.org/2018/02/peer-tutoring-program-spotlight-hillcrest-high-school/ https://edsource.org/2013/reading-rocks/36847



What classes can it be used in?

- Practically any type of course can employ peer tutoring in the curriculum. That's the beauty of peer tutoring!
- The articles that we have studied in preparation for this presentation included examples for classes such as mathematics, history, literature, science, languages, etc.
- Because peer tutoring is so versatile to begin with, it can be offered in almost any facet educators can think of.



What are the benefits of peer tutoring?

- Teachers are free to roam the room and observe students as they work (from Longitudinal Peer Tutoring)
- Helps orchestrate students' academic development (from Longitudinal Peer Tutoring)
- Improves self-esteem and peer relations (from Longitudinal Peer Tutoring)
- Improves testing scores(from "Classwide Peer Tutoring")
- Procedures are easy to implement, more effective then teacher directed instruction, increase social interactions. (from "Effects of Collateral Peer...")





https://blog.edmentum.com/9-district-tips-improve-test-scores https://www.wnyc.org/story/science-and-craft-teaching/

Are there any potential setbacks to peer tutoring?

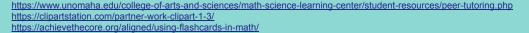


- Instruction time for the teacher is lost. However, 5-10 minutes each day or every other class period is a small price to pay for the success that studies prove follows implementation.
- Student hesitancy can occur within students who may not be comfortable being taught by their peers.
- Parents could potentially pushback against their students being taught and graded by anyone but the teacher.
- A student could tell their peer the wrong information leading that student to perform poorly in that area

What are examples of peer tutoring within the classroom?

- > Discussing story passages with peers and answered guided questions.
- Recalling mathematical formulas to students by memory.
- > Quizzing peers on the scientific method and other terms.
- > Carrying on a conversation in a foreign language.
- > Having students quiz each other or do flashcards with one another on their new vocabulary









How does Longwood employ peer tutoring?

- Content area tutors are available
 - One on one tutoring
 - Group tutoring
- Quantitative Reasoning Center is open for all mathematical help
 - Individual math tutoring
 - Help with group work assignments
- Writing Center for help with papers
 - Scheduled meetings for tutoring
- Group studying is encouraged
- Students do independent studies were they hold recitations for certain classes





What are the possible results of the peer tutoring testing?

- Debra Kamps, Patricia Barbetta, Betsy Leonard, and Joseph Delquadri decided to to utilize peer tutoring in their elementary school to see what impact peer tutoring could have on their students with autism.
 - They hoped to find increases in:
 - Social interaction
 - Reading comprehension
 - Amount of words read per minute
- Frank Kohler and Charles Greenwood implemented a spelling classwide peer tutoring system in an elementary school.
 - They hoped to see an increase in:
 - Rates of academic response
 - Students behaving with respect to tutees without training
 - Higher spelling scores



What were the dependent measures?

- > Through classwide peer tutoring, the teachers and observers were looking at:
 - Kamps, et. al
 - Rate of words read correctly and reading errors
 - Response to reading comprehension questions
 - Social Interaction
 - Kohler and Greenwood
 - Direct observation during 10 min tutoring sessions
 - Weekly spelling test scores
 - Support form tutors





https://www.merriam-webster.com/words-at-play/new-scrabble-words-2018

How was the experiment conducted?

- For Kamps, et. al study, three male students with autism, Mike, Adam, and Pete, were divided into three elementary school classes. These students were considered high functioning, but lacking in social skills.
 - All students took a baseline test
 - Each class would follow a specified schedule
- For Kohler and Greenwood, a classwide tutoring system was put in place for a split grade-level of third and fourth graders. Seven third graders, Mike, Deb, Mary, Jerry, Karen, Kim, and Susan, participated in the study.
 - Mike, Deb, Mary, and Jerry were the tutees
 - Karen, Kim, and Susan were the tutors
 - Students were have 30-min spelling periods 4 days a week
 - There would be a list of 20 words for each week

What were the results for Kamps, et.al study?

- > 16/17 students experienced an increase in reading rates
 - Specifically looking at the children with autism the increase was as follows:
 - Mike: 19 words for CWPT1, 8 words for CWPT2
 - Adam: 31 words for CWPT1, 18 words for CWPT2
 - Pete: 12 words for CWPT1, 11 words for CWPT2
- Reading errors declined overall from the baseline of 2.6 errors per minute to 2.2 per minute at the end of classwide peer tutoring.
- For reading comprehension questions, 16/17 students experienced higher mean percentage correct.
 - Specifically looking at the children with autism the increase was as follows:
 - Mike: 76% correct for CWPT1, 85% correct for CWPT2
 - Adam: 68% correct for CWPT1, 85% correct for CWPT2
 - Pete: 90% correct for CWPT1, 100% correct for CWPT2
- Social interaction times also increased with about an extra minute to two minutes increase in mean social interaction time.
- > The mean length of interaction time increased as well from classwide peer tutoring.

What were the result for Kohler and Greenwood study?

- Collateral Supportive Tutor Behavior:
 - Daily number of go-faster, praise, and help behaviors
 - Initial tutoring session
 - Average of 7.7 go faster
 - Average 4.1 help statements
 - Only Susan used praise during the initial phase with an average of 4.0 statements
 - Modified tutoring sessions
 - Average of 19.6 go faster
 - Average of 8.5 praise
 - Average of 26.3 help

- > Tutee's Academic Responding
 - Number of words written each day
 - MIke averaged 62 words in initial and 80 words during modified
 - Deb averaged 66 words with initial and 79 words with modified
 - Mary averaged 41 words with initial and 47 with modified.
 - Weekly Spelling Assignment
 - Mike, Deb, and Mary went from learning 26% of the words to an average of 80%
 - Jerry decreased in all aspects

Where to go from here?

- When interviewing students about their experience with classwide peer tutoring, most expressed desire to continue the program as they enjoyed it.
- > Despite the very positive results, there were a few limitations for the experiment.
 - The small class size of the experiment
 - Further analysis needed for contextual variables present in tutoring and social sessions
- Even though there were some limitations for the experiment, the positive results show the need for further research.
- Also, it shows how more teachers and school districts should be open to experimenting with classwide peer tutoring as they may experience the very same positive experience.



Sources

- Delquadri, J., Greenwood, C. R., Whorton, D., Carta, J. J., & Hall, R. V. (1986). Classwide Peer Tutoring. Exceptional Children, 52(6), 535–542. <u>https://doi.org/10.1177/001440298605200606</u>
- Greenwood, C. R., Delquadri, J. C., & Hall, R. V. (1989). Longitudinal Effects of Classwide Peer Tutoring. Journal of Educational Psychology, 81(3), 371–383.
- Kamps, D. M., Barbetta, P. M., Leonard, B. R., & amp; Delquadri, J. (1994). Classwide Peer Tutoring: An Integration Strategy to Improve Reading Skills and Promote Peer Interactions Among Students with Autism and General Education Peers. Journal of Applied Behavior Analysis, 27(1), 49-61.
- Kohler, F. W., & Greenwood, C. R. (1990). Effects of Collateral Peer Supportive Behaviors within the Classwide Peer Tutoring Program. Journal of Applied Behaviour Analysis, 307–322.