

Effects of peer tutoring on Metacognition

Hook: While most students focus on what they are learning, the most successful students focus on how they are learning. Peer tutoring offers a unique window into this process, metacognition.

Method: Identification: 15,913 (Scopus).

Screening: Number of records after duplicates are removed.

Eligibility: 141 Included: 9

Conclusion – Teachers can get information and gather what topics students struggle in and need further elaboration on. A few formulas have been developed to help teachers nurture academic success and learning in students who seek education. Teachers can use a strategy called self-regulated learning. Students who partake in self-regulated learning build on what they have been taught and identify how to approach learning. Teachers who nurture this will have an easier time getting students to retain knowledge and move forward in learning. Self-regulated learning allows students to participate in their own learning, be cognitively motivated, learn to approach academic challenges, and identify strategies to achieve academic goals. This makes learning a want instead of a battle. Cognitive strategies or metacognition is the ability to know how to approach academic challenges to create and achieve academic goals. Students with these strategies know how to learn and how to keep learning. (Dent & Koenka, 2016)

Peer tutoring can benefit both peers to learn and develop academically. The child can repeat the information and understand it for themselves. This is called scaffolding. Scaffolding is the action where a child internalizes learning and understands what they are learning. In this the child can have more input and have more control. The child can get further in learning and development through their own recognition. While in tutoring the child does not have to learn alone, they are able to develop with others, this is called transactive learning. Transactive learning is the ability to learn from others, collaborate, work together on events and ideas, and have conversations before and after. This allows the children to bounce ideas off each other and see things in unique ways. Peer tutoring has its flaws, if a child is working with a child at the same level neither child will be able to guide the learning. A solution taught is to ask open-ended questions and wait a short while before attempting conversation about your opinions and discussions on the subject. Being able to control peer tutoring and discuss the subjects properly allows both students involved to understand the subject further. This can allow students to learn how to learn and improve in a learning environment such as a classroom. The child is further affected by their surroundings. (King, 1998)

Purpose: This should shed light on how metacognition affects individuals and how it can help them overall.

Abstract: Metacognition is the knowledge of knowledge. (Schraw, 1995) Metacognition is necessary so individuals know how to learn and how they relate to others. While studies have been conducted exploring the benefits of peer learning, it has not been tested and repeated in scholarly real situations. It is important to learn about peer learning to find the significant effects and benefits, to learn metacognitive strategies with themselves and their peers. With this information, we can improve our lives by peer tutoring. The significance of this study is that individuals will discover the best methods to further their education and learning.

Suggestions for my future study:

While the link between peer tutoring and achievement is well-documented, there is a need for more contemporary data involving 16–19-year-olds in high schools. A single non-repeated experiment cannot reliably prove or deny important scientific discoveries.

Data could be collected through a Likert Scale and should have 30 to 40 students ages 16-19.

Participants could report:

- How often do they take part in peer tutoring? (They should be urged to not continue the survey if they do not take part in peer tutoring at all.)
- How confident they feel with peer tutoring.
- How effective peer tutoring appears to them.
- Whether they feel it is easier to learn in a group versus alone.

This should show whether peer tutoring helps people understand how they learn and study.

References

- Álvarez-Bueno, C., Pesce, C., Caverro-Redondo, I., Sánchez-López, M., Martínez-Hortelano, J. A., & Martínez-Vizcaíno, V. (2017). The Effect of Physical Activity Interventions on Children's Cognition and Metacognition: A Systematic Review and Meta-Analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 729-738. https://fsu-flvc.primo.exlibrisgroup.com/permalink/01FALSC_FSU/1pc67ru/cdi_webofscience_primary_000409161500005CitationCount
- Dent, A. L., & Koenka, A. C. (2016). The Relation Between Self-Regulated Learning and Academic Achievement Across Childhood and Adolescence: A Meta-Analysis. *Educational Psychology Review*, 28(3), 425–474. <http://www.jstor.org/stable/24761244>
- Hegarty, M. (2013). Cognition, Metacognition, and the Design of Maps. *Current Directions in Psychological Science*, 22(1), 3–9. <http://www.jstor.org/stable/44318624>
- King, A. (1998). Transactive Peer Tutoring: Distributing Cognition and Metacognition. *Educational Psychology Review*, 10(1), 57–74. <http://www.jstor.org/stable/23359437>
- Pooja K. Agarwal, H. L. (2018-2019). Lessons for learning: How cognitive psychology informs classroom practice. *The Phi Delta Kappan*, 8-12. <https://www.jstor.org/stable/26552478>
- Schraw, G., & Moshman, D. (1995). Metacognitive Theories. *Educational Psychology Review*, 7(4), 351–371. <http://www.jstor.org/stable/23359367>
- Son, L. K., & Simon, D. A. (2012). Distributed Learning: Data, Metacognition, and Educational Implications. *Educational Psychology Review*, 24(3), 379–399. <http://www.jstor.org/stable/43546798>
- Vo, V. A., Li, R., Kornell, N., Pouget, A., & Cantlon, J. F. (2014). Young Children Bet on Their Numerical Skills: Metacognition in the Numerical Domain. *Psychological Science*, 25(9), 1712–1721. <http://www.jstor.org/stable/24543906>
- Xin Ma, J. S. (2016). A Meta-Analysis of the Relationship Between Learning Outcomes and Parental Involvement During Early Childhood Education and Early Elementary Education. *Educational Psychology Review*, 771-801. <https://www.jstor.org/stable/44955364>