The use of peer tutors has been an educational tool for centuries. Students benefit by receiving immediate clarification of information they do not understand and feedback in a nonthreatening environment. Tutors reinforce their own knowledge and skills, build their self-confidence, and develop a sense of responsibility. Students of any age and at-risk students are as capable of serving as peer tutors as any other students, and the benefits to them can be significant. Peer tutoring can also help gifted students who need to be challenged. Peer tutoring can be implemented in an attempt to cross language and cultural barriers, with older students tutoring younger students in their native languages. By utilizing peer tutoring, teachers can teach more effectively. Peer tutoring enables teachers to focus on new materials as peer tutors reinforce materials already covered and give help to students in need. A structured system of one-to-one tutoring can afford the benefits of one-to-one instruction for large numbers of students. Peer-tutoring programs are typically more cost effective than computer-assisted instruction, reduced class size, or extended school days in improving academic achievement. Peer tutoring has the potential to increase academic engagement. Barriers to the implementation and maintenance of effective peer tutoring programs include incomplete implementation, lack of adherence to protocols by teachers, lack of administrative support for teachers, and heavy teacher workloads. (SM)
The Effectiveness of Peer Tutoring in the Elementary Grades

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Introduction

Before we begin to discuss the effectiveness of peer tutoring in the elementary classroom, we need to know what peer tutoring is. Additionally, are there other terms that mean the same, or about the same thing? The following definitions of peer tutoring were found:

1) A system in which learners help one another and learn by teaching (Goodlad & Hirst, 1989, in Enright & Axelrod, 1995).

2) “Peer tutoring is a cooperative undertaking in which students share not only the answers but the process used to reach the answers.” The tutor may be the same age/grade level, or be of a different age/grade level (Webb, 1988).

Different age/grade level leads us to another term, cross age tutoring, which can be defined as older pupils tutoring younger pupils in a one-to-one situation (Fitz-Gibbon, 1981, in Fitz-Gibbon, 1988). While peer tutoring and cross age tutoring are not exactly the same thing, they both share the same basic element of students helping one another.

Now that we know what peer tutoring is, we can investigate its effectiveness in the elementary classroom. Do you ever think back to your childhood and remember the games you used to play with your friends and the comfort of knowing that things would be explained to you if you didn’t know how to play the game? Peer tutoring utilizes this friendly relationship in the classroom to help explain the subject matter at a level that may be more comfortable and comprehensible to the tutee. According to Webb (1988), as children play together, they learn important lessons such as sharing,
communicating, and cooperating. While this friendly, comfortable interaction begins outside the classroom in the relaxed atmosphere of playtime, wouldn’t it make sense to move this relaxed interaction into the classroom to help explain subjects students may not be comfortable with? “Students generally identify more easily with peer helpers than with adult authority figures” (Webb, 1988). Feeling comfortable with one’s peers is nothing new, just as the use of peers as tutors is not a new strategy in the field of education.

History

The use of peers as tutors has been an educational tool for centuries. According to Wagner (1982), in Enright & Axelrod (1995), Aristotle used peer tutors to assist him in educating his many charges. The practice carried over into Roman times when master teachers employed older students to drill younger ones on basic reading and writing skills. During the Renaissance and Reformation periods, peer tutors, under the direction of master teachers, were used widely to monitor other students behaviors and scholarship. The Jesuits in particular found peer tutoring to be an economical way to educate more boys within limited school budgets.

As one can see from the above examples, the use of peers as tutors is by no means a new technique. More recently, “the passage of the Elementary and Secondary Education Act of 1965 provided the impetus for the creation of peer tutoring programs and practices...” (Webb, 1988). With such a long history of use and success, peer tutoring is obviously an effective technique, but just what are the specific benefits of peer tutoring for students and teachers?
Benefits

Students

The list of benefits that students receive from peer tutoring is quite extensive. The first of these many benefits is the fact that the tutee receives immediate clarification of information they don't understand and feedback in a non-threatening environment, free from the fear of teacher criticism or class ridicule (Webb, 1988). The tutor also receives benefits through peer tutoring. According to Webb (1988), some of the benefits for tutors are:

1) Tutors reinforce their own knowledge and skills, which in turn builds their self-confidence and self-esteem; and

2) Peer tutors develop a sense of responsibility as a result of helping students learn.

Students involved in the peer tutoring exchange benefit from the interaction in one form or another. Webb (1988) indicates that both peer tutors and students being tutored reported improved attitudes toward school as a result of their participation in peer tutoring.

Participation in peer tutoring also has a positive effect on the achievement of the tutor. But one might ask, why does peer tutoring generally improve students' achievement? Webb (1988) put it simply when he stated that "explaining the subject matter to others helps tutors better understand it themselves." With a better understanding of the subject matter, better achievement will naturally follow. Fitz-Gibbon (1988) stated that tutors have to teach, and therefore they have an immediate reason for learning, additionally, the very process of teaching causes learning. Prior to tutoring,
the tutor must know the material to be taught and the act of teaching the
material reinforces the tutor's knowledge of the subject already held. Finally,
"peer tutoring encourages cooperation among pupils, in marked contrast to
the competition which many examination-related activities encourage" (Fitz-
Gibbon, 1988).

The final area of student benefits will concentrate on at-risk, gifted, and
culturally diverse students. According to Enright & Axelrod (1995), students of
various ages, abilities, and disabilities can learn to serve as peer tutors and
tutees, and this includes model students as well as at-risk students. Fitz-
Gibbon (1988) writes that all pupils in the class, not just the most able, may be
trained to tutor, and asking remedial and/or disruptive pupils to serve as
tutors to younger pupils will hopefully improve their motivation, attitude,
cooperation, and attendance, as well as achievement. Finally, Wircenski,
Sarkees, & West (1990) in Martino (1994) showed that at-risk students involved
in well planned and supervised peer tutoring showed the following benefits:

1) Gains in grade-point averages;
2) Improvement in reading, math, writing, communication, and study
   skills; and
3) Gains in self-confidence and interpersonal skills.

As one can see, the potential of peer tutoring to help at-risk students is
phenomenal.

But, it should not be thought that only at-risk students can benefit from
peer tutoring. Gifted and talented students who need to be challenged may
also benefit from peer tutoring. According to Kerry (1983) in Fitz-Gibbon
(1988), gifted and able students need to be assigned tasks which are meaningful, challenging, and open-ended, and tutoring is such a task. "Enrichment work for gifted older and younger pupils could be provided by means of regularly scheduled tutoring sessions, allowing teachers more time to help slower learners" (Fitz-Gibbon, 1988).

Lastly, peer tutoring can be implemented in an attempt to cross language and cultural barriers. "Peer tutoring provides the opportunity to enhance the use of mother-tongue instruction. By the use of older pupils as tutors, a school can provide academic help in all languages spoken by its pupils, frequently a quite impossible task otherwise" (Fitz-Gibbon, 1988). Crossing the language barrier with the use of peer tutors can be very beneficial, especially when bilingual instructional assistants are unavailable. There are also cultural benefits of using peer tutors. As Webb (1988) writes, "cross age peer tutoring may be especially effective with those students whose cultural tradition includes an emphasis on the responsibility of older children for their younger siblings." The benefits of peer tutoring for students seems almost limitless as it encompasses students at all levels and abilities. "These positive results have been achieved regardless of the students' socioeconomic status, race, home environment, or school's location (Axelrod, 1991, in Enright & Axelrod, 1995). But, the benefits don't stop with the student, teachers also benefit from peer tutoring.

**Teachers**

By utilizing peer tutoring in the classroom, teachers will ideally be able to teach more effectively. Some may feel that peer tutoring will not teach the
students properly. "Peer tutoring is not a way to replace professional teachers with unpaid, non-professional pupils; it is a way to enable professional teachers to be more effective. Essentially it is a teaching technique" (Fitz-Gibbon, 1988). Perhaps a teacher may feel that the students in his or her classroom don't have the ability to act as peer tutors, or the teachers themselves don't have the time to implement yet another technique. "Students of virtually any age or ability level can serve as tutors for their peers and can be tutored by them too, freeing teacher time for refinement of curricular materials" (Enright & Axelrod, 1995). The use of peer tutoring enables teachers to focus on new materials as peer tutoring reinforces material already covered as well as giving help to students in need. According to Webb (1988), peer tutors, by assuming responsibility for reinforcement of what has been covered by the teacher, or for remedial instruction, can free teachers for new roles as coordinators and facilitators, instead of their functioning solely as dispensers of knowledge.

Not only does peer tutoring liberate teachers from constant reinforcement, but when compared to other methods of student assistance, it's very affordable. As mentioned earlier, peer tutoring is not a new revelation in education. "However, since the mid-1980's, more researchers have realized that, once structured, a system of one-to-one tutoring can be applied to one tutor/tutee pair or many pairs simultaneously, thus affording the benefits of one-to-one instruction for large numbers of students" (Delquadri, Greenwood, Stretton, & Hall, 1983, in Enright & Axelrod, 1995). In regards to affordability, peer tutoring programs have generally been found to be more cost effective.
than computer assisted instruction, reduced class size, or extended school days in improving student academic achievement (Levin, et al., 1987, in Enright & Axelrod, 1995). To summarize the affordability of peer tutoring, Martino (1994) states that "recent cost-effectiveness research reveals that peer tutoring provides greater achievement per dollar than other more often used educational innovations."

One final benefit of peer tutoring to be discussed is peer tutoring's potential to increase academic engagement. According to Stanley & Greenwood (1983), in Enright & Axelrod (1995), academic engagement may be defined as active participation in concrete academic behaviors. In order for classroom instruction to be successful, academic engagement, a critical factor in learning, must be present. Albers & Greer (1991) in Enright & Axelrod (1995), state that the use of three-term contingencies, in which a student is asked a question, allowed to respond, and then given feedback by the teacher, has been found to improve learning greatly. A major asset of peer tutoring programs is that they easily incorporate these aspects of successful learning environments (Enright & Axelrod, 1995). The ability for teachers to increase the question - response - feedback triangle in the classroom through the use of peer tutoring is reason enough for its implementation and usage.

**Barriers**

"Although much research has demonstrated the numerous benefits of peer tutoring, sustained, well designed programs of peer tutoring are not being used in enough schools" (Topping, 1987, in Enright & Axelrod, 1995). Whereas the benefits for both students and teachers through the utilization of peer
tutoring are numerous, barriers deterring the implementation and maintenance of an effective peer tutoring program may arise. Greenwood, Delquadri, & Bulgren (in press) summarize these barriers as incomplete implementation, lack of adherence to protocols by teachers, lack of administrative support for teachers using peer tutoring programs, and heavy teacher workloads that require the simplification and streamlining of procedures to make them usable in the classroom (Enright & Axelrod, 1995). The simple fact that teachers will be asked to try another new technique in their classroom may be enough to keep many teachers from attempting to use peer tutoring in the classroom. This unfortunate reality could keep a very successful technique out of the hands of those who would benefit the most, the students.

Conclusions and Recommendations

With the overwhelming success of peer tutoring and the benefits gained for both students and teachers through the implementation and utilization of peer tutoring programs, it is puzzling why it is not put to use more often in the classroom. The barriers listed above, particularly time and change, are major road blocks that presumably keep peer tutoring from wide spread implementation. Which is unfortunate as peer tutoring has the potential to provide a more caring climate in the school as students and teachers monitor each other's behavior and invest in each other's success (Martino, 1994). Peer tutoring programs can assist all students in achieving success but, even more promising, is the fact that its use may help students at risk of academic failure or drop out. “Peer tutoring programs have been noted to successfully reduce
drop out rates, while more traditional remediation programs for at risk students such as grade retention, ability tracking, and suspension from school seem to exacerbate the drop out problem” (Quinn, 1991, in Enright & Axelrod, 1995). As with any change to one’s teaching practices, the implementation of a peer tutoring program may be time consuming and nerve racking, but research has shown that it has the potential to be very successful for students of all ages and ability levels regardless of factors outside the school, such as, socioeconomic status, cultural background, and race. It is recommended by the author that schools give peer tutoring a chance, especially with our ever changing multicultural school populations in which many students need all the help they can get.
References


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