

PEER TUTORING

INTRODUCTION

Peer2Peer Tutors is a tutoring service that is based on one of the oldest forms of instruction — children teaching other children. Also referred to as peer teaching, peer education, and partner learning, peer tutoring has been defined as instruction that involves systematic peer-mediated teaching strategies (Rohrbeck et al). It includes both same-age peer tutoring (peer tutoring), in which students tutor same-age students in subject matter areas or study skills, and cross-age tutoring, in which adolescents work with younger children to provide help with specific subjects and/or to offer more general organizational and homework support (Scott-Little, 2003). Formal peer tutoring has been documented as early as the 1700's, and it was an important component in the monitorial system of education developed in the early 19th Century by Joseph Lancaster in England and Andrew Bell in India (Rekrut, 1994). Both educators believed that children learn most efficiently from each other, and they thus first taught older students, who in turn taught younger children. These pioneers of peer tutoring observed that making older students responsible for teaching their younger classmates improved classroom behavior and also increased the degree to which older students served as positive role models (Guetek, 1972). Peer tutoring was also used extensively (and continues to be) in one-room American schoolhouses, where teachers have reported for over a century that teaching younger children contributes to a positive school environment (Allen, 1976).

Peer tutoring is based on a number of well-supported premises, including the following:

(1) children are able to serve as effective instructors for peers and younger children; (2) peer tutoring results in numerous academic and non-academic benefits for both tutor and tutee; (3) meaningful work is an important component in adolescent development; (4) given increasing class size, decreasing school budgets, and escalating time pressure on families, children often need more academic support than can be provided in school or by family members. Moreover, with the dramatically increased homework loads (particularly for students in kindergarten and the early elementary grades) since the 1980's, homework is becoming an increasing source of stress, tension, and conflict between parents and their children (and often between two parents). Thousands of families have experienced the tremendous benefit that can be derived when parents get out of the role of "homework police" and back into the role of supporting their children's development and providing a safe, warm, and relatively stress-free home

environment. Peer tutoring is thus a wonderful example of a win-win intervention, as it has been demonstrated to be of great benefit to tutors and their tutees, as well as to families, schools, and communities.

One of the important goals of *Peer2Peer* Tutors is to offer high quality tutoring by bright, highly motivated adolescents to peers and same-aged children. We perceive the need for structured tutorial support to be equally great across the socio-economic spectrum. We are concerned about the many students who are struggling to keep up with the accelerated demands of affluent public and independent schools, and also about the students in poor and/or violence ridden schools that lack the capacity to provide individualized attention and the kind of emotional supports that can be provided by individual tutors. One of our primary goals is to eventually train the best students in inner city and poor rural schools to work with younger students as a way of providing skilled academic support and also of fostering self-esteem and academic motivation.

Peer-2-Peer Special Learning Option. *Peer2Peer Tutors* offers tutoring services directly to families, and we also partner with schools to provide training of peer tutors who can provide services both within and outside the classroom. Beginning in September 2012, *Peer2Peer* will be offering a new option to parents and families, namely the *Peer2Peer Special Learning* option, which will provide tutoring in specific skill areas to students with particular challenges or learning disabilities. The tutoring for these students will be provided by superior high school students who, in addition to the standard training provided by *Peer2Peer Tutors*, have participated in a minimum of three hours of additional training (discussed below). While high school students who have only a few hours of training will not be able to meet all of the special education needs of students with learning and/or attention disorders, they will be able to provide much needed specialized one-on-one intervention in specific skill areas (discussed below) that, to our knowledge, cannot be provided in any other way that is more efficient and cost effective.

THE RATIONALE FOR PEER TUTORING

The Need for Manpower in Regular and Special Education. The budgets of school districts around the country are being slashed, and independent schools are also experiencing budget crises that are raising the student-teacher ratio and limiting the extent to which individualized

interventions can be provided in school (during the school day or after school). In many families, a child's homework is a source of enormous stress — for the child and his parents — as has been well documented in the several recent "anti-homework" books (e.g., Cohn, 2006; Kalish et al., 2006). In the Greater Washington area, parents often refer to the period between dinner and bedtime as "a living hell" or "World War III" due to the stresses associated with trying to get kids to do their homework. *Peer2Peer Tutors* offers individualized help with homework and subject matter learning at a cost that is far below the cost of private adult tutors. It is offered by students who themselves are highly skilled in subject matter, commonly having taken the same classes or gone to the same school as the child they are tutoring.

For students with special learning needs, individualized academic support is even more crucial. Research in special education has shown that one of the most important variables in treatment effectiveness is *intensity of intervention*, meaning that instruction five days of week is generally superior to instruction two days a week and that working intensively for 45 minutes provides more benefit than working for 15 minutes. Similarly, over the last 20 years, adult tutors in my professional tutoring service have repeatedly said that, unless they are simply providing organizational and time management support to students (e.g., helping to plan work and study time), weekly tutoring tends to be of minimal benefit. This is largely because students need practice, feedback, and reinforcement to acquire new skills. Presently, under-funded school districts and independent schools are simply unable to provide the levels of intensity of intervention required by students with special learning needs, including younger students who need highly individualized and frequent intervention to develop a reasonable level of fluency and automaticity in their mastery of basic academic skills, and older students who need individual help to "access the school curriculum" and keep up with the demands for academic work and test preparation.

It is also important to note that studies over the last several years have demonstrated that intensive interventions in reading "re-wire" (change the activation patterns) the brains of dyslexic students. However, in order to achieve the goal of remodeling brain functioning, intensive intervention is imperative. For example, one of the best documented strategies for promoting fluency, speed, and ease of basic reading involves repeated oral reading of highly familiar text with someone who can monitor the student's reading errors. Experts suggest that this repeated oral reading strategy be utilized for short periods on a daily basis. However, because

this strategy must be done one-on-one, opportunities for using it in the classroom are very limited. Moreover, special education students benefit greatly from extensive practice with reading comprehension strategies, as they need more practice and individualized feedback and support than students who learn more easily. Again, because this work is most effective when done one-on-one, it is becoming increasingly difficult to provide sufficient intervention in school. *Peer2Peer Tutors* will be able to offer help in reading — and other academic skill areas — several times per week at a cost that is far below that of professional tutoring.

Kids Learn Well from Other Kids. As noted above, *Peer2Peer Tutors* is based, in part, on the premise that children are highly motivated by — and learn well from — competent peers and older children. There is considerable research to support this premise and, in fact, there is evidence that instruction provided by good student tutors can be more effective than instruction provided by classroom teachers. Peer tutors, who are closer in age to students than teachers, tend to “speak in the same language” and have a much better understanding of peer culture than adults do. As research has demonstrated, a student’s level of engagement increases his or her motivation to achieve classroom goals (Ryan & Deci), and for many children and teenagers, working with a same-aged peer or an older student leads to heightened engagement. Children look up to and emulate teenagers, and younger adolescents commonly find role models not in adults but in successful older teenagers. As Damon & Phelps put it:

“Unlike adult-child instruction [in] peer tutoring, the expert party is not very far removed from the novice party in authority or knowledge; nor has the expert party any special claims to instructional competence. Such differences affect the nature of discourse between tutor and tutee, because they place the tutee in a less passive role than does the adult/child instructional relationship. Being closer in knowledge and status, the tutee in a peer relation feels freer to express opinions, ask questions, and risk untested solutions. The interaction between instructor and pupil is more balanced and more lively. This is why conversations between peer tutors and their tutees are high in mutuality, even though the relationship is not exactly equal in status. (Damon & 1989, p.138).”

Damon & Phelps also pointed out that students tend to be less passive in their interactions with peer tutors than with adults, as peers are closer in knowledge and status. Children feel freer to ask questions and express their opinions, and research has indicated that peer tutoring

interactions tend to be balanced and involve a high degree of mutuality in conversations. Paige Kalkowski has suggested that peer tutors may simply be "good teachers", as peers are often able to demonstrate behaviors that research has found to be positively related to student learning and academic gains, including prompting and guiding, praise and encouragement, adjusting to the student's needs, managing problem behaviors, allowing autonomous performance, bonding, cooperation, prompts to "go faster" and "help". Even children who are very close in age can present material to other children better than adults. They are able to use their own mental representations which they have used to understand a skill. Peer tutoring, including the questioning that occurs in tutoring, allows students to elaborate their learning and thereby create more meaningful memories and deeper understanding of concepts. Moreover, in the vast majority of cases, *Peer2Peer* is able to provide tutors who attend or have attended the same school as their tutees and often have taken the same class or had the same teacher as the tutee. They are thus much more familiar with the curriculum and classroom demands than are even highly skilled adult tutors.

Evidence for Improved Learning and Academic Performance in Tutees.

Extensive research has found that peer tutoring produces educational and social/emotional benefits for both tutor and tutee and that these benefits occur across the social/economic spectrum (Miller & Miller, 1995). Various approaches to peer tutoring and cross-age tutoring have been shown to enhance academic performance, improve self-concept, and lower the risk for extreme academic discouragement (e.g., dropping out). This has been true both for students with specific learning disabilities and for relatively low achieving students more generally (Newcomb). Kalkowski has reported three commonly cited benefits of peer tutoring and cross-age tutoring: (1) learning of academic skills; (2) development of social behaviors and classroom discipline; (3) enhancement of peer relations. An important meta analysis of 52 studies reported in 1982 by Cohen, Kulik, & Kulak found that peer tutoring produced moderate improvement in reading and math skills in tutees and significant improvement in their attitude toward subject matter (with stronger effects for reading than for math). In the case of same-age tutoring, this was true for both tutors and tutees. Studies of math tutoring have found that tutors and tutees both benefit academically from peer and cross-age tutoring in elementary school math (Britz et al.), including instruction in ratios, proportion, and perspective taking. In addition, studies of language arts peer tutoring in elementary and middle school have also found significant benefits for language arts achievement for both tutor and tutees,

including skills involving story grammar, reading comprehension, sight-word identification, and vocabulary acquisition. Good results have been documented from both short-term and long-term interventions.

Studies of students with specific learning difficulties have also found positive results from peer tutoring. Peer tutoring helps to actively engage tutees with learning difficulties in their own education and increases their sense of self-control over academic outcomes (Kalkowski, 1995). One broad review found both cross-age and same-age tutoring to be as effective or more effective than the traditional teaching and individual adult-provided instruction to which it was compared (Greenwood et al., 1990). These studies found both academic and affective benefits, including improvements in math, time on task, and social skills. Across outcome studies, research has generally found peer tutoring to lead to increased internal sense of control and improved school attendance. Research has also shown improvements in self-esteem, and benefits have been found to include both tutor and tutee. The experience of tutoring other children seems to produce better adjusted students who have skills that eventually transfer to child-rearing. Barbette & Miller (1991) have also reported some positive social skills as an outcome from peer tutoring.

One of the most widely implemented models of peer tutoring is the Peer-Assisted Learning Strategies (PALS) program developed by Doug and Lynn Fuchs (2001). The PALS program offers specific instruction in math (kindergarten through sixth grade) and in reading (preschool through sixth grade; ninth grade through 12th grade). The PALS model involves same-aged children serving reciprocally in "player" and "coach" roles. The PALS approach to reading involves important practices and skills such as partner reading (or reciprocal oral reading), "paragraph shrinking" (stating the main idea), and prediction. The PALS math program involves coaching in and practice with basic math skills. Extensive, research has found this program to be effective in improving student outcomes, including both academic and social benefits. Studies have indicated that regular education students across the ability profile and students with learning disabilities make greater reading progress in classrooms that incorporate PALS than in typically structured classrooms (Fuchs et al., 2000; Mastropieri et al., 2001).

Peer Tutoring Is Cost Effective.

In the greater Washington area, private tutors working with students who have special learning needs charge typically between \$75 and \$100 an hour. Even in this affluent area, families are unable to afford tutoring more than once or twice a week, and thus cannot offer their children the high level of intensity of intervention that is necessary to help them "catch up" with peers and show the adaptive changes in brain activation that research suggests are possible. A study reported in 1987 found that peer tutoring is more cost effective than computer-aided instruction, reduced class size, or lengthening of the school day.

Benefits for Tutors. Research on instruction through various modalities has suggested that teaching a body of knowledge or a set of skills leads to greater improvement in understanding and higher rates of memory and retention than virtually any other form of learning. The old adage that the best way to learn something is to teach it has been bourn out by research. Tutors in subject matter areas gain deeper and clearer knowledge of subjects. They also have the opportunity to practice perspective-taking and teaching skills. There is additionally evidence that the self-esteem of the tutors improves as they see improvement in and gain respect from their tutees.

The Value of Meaningful Work. As noted above, one of the premises on which *Peer2Peer Tutors* is based is that engaging in meaningful work can play an important role in adolescent development. Research has indicated that teenagers are consistently able to rise to the challenge when they are expected to provide meaningful service to others, and there is enormous power in "teens as teachers" that has not been utilized (R. Epstein, *The Case Against Adolescence*). Meaningful work can be especially important for students from the most affluent families, who often tend to be overly self-absorbed in their own achievements and end up feeling empty or bored. As Madeline Levine has emphasized in her recent book, *The Price of Privilege*, a frighteningly high percentage of affluent adolescents suffer significant mental health problems and commonly manifest, in part, as a sense of boredom, isolation, disconnection, and emptiness. Providing service to other students provides teenagers with the experience of being able to contribute to their school and/or their community in a meaningful way, which increases their sense of connectiveness and purpose. Meaningful work is also highly beneficial for students of lower social economic status. At a recent Harvard University sponsored conference, Janine Bempechat's presentation focused on a program in the Boston area that offers low income students at a Catholic school the opportunity to engage in meaningful work, which was found to significantly improve academic motivation and self-esteem.

Improvements in Family Harmony. All too often in middle-class and upper middle-class families, students' academic performance and homework play a much more central role in family functioning than is healthy. Struggles over homework are often the source of considerable family tension, which has negative effects on parent-child relationships and even on spousal relationships. There is evidence that relatively low cost peer tutoring in the home is effective not only in improving student achievement but also in getting parents out of the "homework police" role and thereby increasing family harmony and allowing the home environment to be a "haven" from the stressful role of school achievement in the world outside the home. In my own clinical experience, decreasing homework stress has *saved* many parent-child relationships and some marriages as well.

Future topics to include in the white paper:

Peer Tutors Serve as Peer Mentors. There is much research on the benefits of peer mentoring and the academic and social modeling provided by older students.

The Value of Mixed-Age Interactions. See Po Branson's chapter on Mixed Age Peer Interactions.

PEER-2-PEER SPECIAL LEARNING OPTION – MODEL OF SERVICE DELIVERY

Intake and Assessment. Service delivery will begin at the point of the initial intake, which is conducted by a Peer-2-Peer "mom", when parents call to request tutoring. At that time, basic information about the child's learning and learning difficulties will be obtained, and parents will be asked to fill out a two-page questionnaire that lists the following:

- any relevant medical conditions and/or medications
- the child's strengths
- the nature of the child's specific learning difficulties
- information about the child's attitude toward school
- tutoring goals
- history of any assessments and results

On the basis of the information obtained from the telephone interview and the questionnaire, students will be assigned to an appropriate peer tutor. Assessment of tutoring will be evaluated through tracking of student grades and through regularly obtained evaluations completed by students and parents.

Services Provided. Peer-2-Peer Special Learning Option offers individualized and specifically targeted tutoring to students with learning disabilities, Attention Deficit Hyperactivity Disorder (ADHD), deficits in organizational and "executive functioning" skills. Tutor who have had the requisite training will provide the following services.

- **Reading Tutoring.** The reader tutoring provided by Peer-2-Peer will focus on the promotion of reading fluency and comprehension skills. Our tutors will not teach basic phonetic decoding skills, e.g., sounding out words, but they will be trained in techniques for helping students to (a) read more quickly, fluently, and effortlessly and (b) better comprehend what they read. Specifically, Peer-2-Peer tutors will provide the repeated oral reading intervention discussed above, which has been found to be the single most effective strategy for increasing reading fluency. Tutors will be trained in the quite simple instructional techniques involved (and given a manual that lays out the mechanics of reading fluency training), and then will be provided with links to websites that offer appropriate reading passages for free and also offer means of obtaining word counts (which is important for this intervention).

The Peer-2-Peer reading comprehension tutoring will focus on the use of extensively researched RAP (Read, Ask questions, Paraphrase) strategy, which was developed in the late 1970's at the University of Kansas. The RAP strategy is easy to learn, to teach, and to implement, and students will greatly benefit from frequent practice with and modeling of the strategy by a peer tutor.

- **Executive/Homework Coaching.** Peer-2-Peer Special Learning tutors will be trained to help students develop better organizational skills, including the ability to organize materials and their work space (e.g., backpack, binder, locker) and their computer files.

They will also be trained to teach planning and time management skills and effective strategies for approaching academic tasks. In addition, tutors will be trained to help students evaluate the effectiveness of their study habits, to encourage tutees to make getting enough sleep a priority, and help tutees explore what improves their task focus and productivity and what does not (e.g., listening to music). Strategies for analyzing homework problems, overcoming procrastination, developing good study skills, and minimizing multi-tasking will be emphasized. In addition, Peer-2-Peer tutors will be trained to provide encouraging feedback to students about their effort and the strategies they discover for solving problems (based on the motivational research of Carol Dweck [Mindsets, 2007]). Praising students for their effort and strategies has been found to increase their eagerness to take on difficult, challenging tasks and their willingness to increase efforts in the face of difficulty. Peer-2-Peer will be exploring a formal relationship with Dr. Dweck, with the goal of helping teens be very effective teachers of what Dr. Dweck refers to as the "growth mindset".

- Math Tutoring. Peer-2-Peer math tutoring will focus on helping students with math difficulties become more automatic in their mastery of with basic math facts and multiple-step operations and more skilled in interpreting and solving word problems. Tutors will be instructed in mnemonic strategies for helping students master basic math facts, and they will be trained to encourage elementary and middle school students to read problems and "set them up" without taking the time to actually solve them by hand. This technique has been demonstrated to significantly increase math understanding, as it simply increases the amount of practice students receive in interpreting and applying math concepts. In addition, our tutors will be trained to help students create a math manual, which is a brief manual that summarizes the steps of basic operations and provides sample problems, which can serve as a reference guide for students later in math work (and the creation of which helps students to better understand math operations).
- Written Language Tutoring. Peer-2-Peer tutoring in written language will focus primarily on strategies for helping tutees learn to recognize and write grammatically correct complex sentences. Strategies for brainstorming and organizing ideas will also be emphasized.

- Educational Technology Tutoring. Many students with special learning needs benefit greatly from the use of technological tools for facilitating their ability to gain information from print, do math, and express themselves in writing. Many students are exposed to these tools but do not gain sufficient competence to use them confidently and efficiently. Peer tutoring can provide students with supervised practice and rehearsal in the use of technology, which will enable them to work more efficiently. Peer-2-Peer tutors who take the requisite training will be able to help students gain enough experience with software programs such as *Read and Write*, *Kurzweil 3000*, *Inspiration*, and *Draft Builder* to enable students to use the programs effectively. Locally, we are exploring a possible relationship with Envision Technology, which sells educational software and provides training to students and their parents.

TRAINING OF PEER-2-PEER SPECIAL NEEDS TUTORS

Initial Basic Training. Students who become Peer-2-Peer Special Learning tutors will need to participate in the initial mandatory Peer-2-Peer tutor training and then log 30 hours of individual tutoring. They then will be eligible to take one or more of the training modules that will allow them to serve as Peer-2-Peer Special Learning tutors. All Special Learning tutors will take the Executive Homework Coaching training model, as mastery of these skills will allow tutors to work with a wide variety of students who have special learning needs (in light of the fact that most students with specific learning disabilities also have weaknesses in organizational, time management, study, and work production skills). Moreover, the training in basic "brain care" (e.g., sleep, positive attitude) that is part of this module will allow tutors to encourage all students to take good care of their brains so that they can learn at an optimal level of efficiency. This module will include a brief introduction to the functions of the brain's frontal lobe and to the various executive functions. Students who wish to do so will then be eligible to take one or more of the supplementary modules that focus on tutoring in reading, math, written expression, and educational technology.

Each training module will be three hours in length and will involve assigned reading, online instruction, and online supervision/support. Students will also have the opportunity to work with professional tutor-mentors who can help them as challenges arrive. Each module will

emphasize instruction in specific strategies, techniques for modeling the strategies, and ways of providing feedback to students as they practice and master the strategies.