Peer Tutoring and Mentoring Services for Disadvantaged Secondary School Students

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Marion Bergeson, Secretary of the Governor's Office of Child Education and Development, requested that the California Research Bureau review evaluative literature regarding mentoring and tutoring programs. This CRB note summarizes a significant national evaluation of school peer tutoring and mentoring programs.

In 1988, the Congress enacted a one year demonstration program, the Secondary Schools Basic Skills Demonstration Assistance Program, aimed at improving the academic achievement of disadvantaged children with mentoring and peer tutoring services (Pringle, et. al., 1990). The evaluation report prepared upon the completion of this demonstration offers one of the most significant studies of school-based peer tutoring and mentoring in the nation.

The demonstration program used the following definitions (p. 6):

> ***Mentor:*** An adult from the community who assists educationally deprived secondary school students (protégés) to attain grade-level proficiency in basic skills and, as appropriate, learn more advance skills.
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> ***Peer Tutor:*** A secondary school student who assists educationally disadvantaged peers (tutees) to attain grade-level proficiency in basic skills and, as appropriate, learn more advanced skills by assisting with homework assignments, providing instruction, and fostering good study habits.
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> ***Learner:*** A student who receives tutoring (tutee), mentoring (protégé), or both (tutee-protégé).

The evaluation's goal was to determine whether the academic achievement of secondary school students improved with participation, and which strategies accounted for improvements. It reviewed data collected by the 31 grantee school districts, included 10 case studies, and analyzed student outcomes from 13 grantee projects.

Evaluation Findings

The evaluation found peer tutoring and mentoring can positively affect academic achievement as evidenced by improvements in test scores, grade point averages (GPAs) and course pass rates.

In addition, students showed improved social integration as evidenced by improved attendance, reduced disciplinary referrals, and improved student attitudes toward school. The most promising results were found in programs that selected low achieving students to tutor much younger children. The researchers concluded that peer tutoring and mentoring may be particularly helpful in improving the classroom performance of learners who receive both tutoring and mentoring services that assist them with daily assignments, and help them to develop efficient organizational and study skills.

Peer tutoring and mentoring appear to produce positive effects in different ways. Tutoring was perceived by parents as having an immediate and beneficial impact on learners' attitudes toward school, both in improved academic performance and attachment to school. Mentoring appeared to have broader influence, receiving community support, and recruiting goodwill ambassadors along with mentors.

Analysis of observations, surveys, and interview data provides some insight into how and why peer tutoring and mentoring may be effective at improving the academic achievement of disadvantaged children. Peer tutoring and mentoring have the potential to alter the low achiever's self-perception as an incompetent learner. Working with a tutor or mentor affords the learner a non-threatening way by which to learn how to set and accomplish goals, reason through dilemmas, and solve problems. The evaluators report that, "In this way, peer tutoring and mentoring can break the isolation that characterizes much classroom work and demystify the learning process by making public the effort that accompanies achievement (but is so often invisible to the low achiever)" (p. 39). Interviews of learners revealed that disadvantaged students often found their peers more approachable than teachers for extra assistance, perceiving their teachers as too busy.

Peer tutoring and mentoring was also found to raise the academic achievement of both the peer tutors and peer tutor-mentors, particularly when they themselves were: (1) at-risk; (2) working with younger children in a cross-age tutoring program; and (3) receiving focused and related services, such as mentoring, intensive training or monitoring. Improved self-concept and attitudes toward school were also reported. This is consistent with prior research by Webb (1987) and Cotton (1988), who report that being selected to tutor conveys three important messages to that student: (1) you are knowledgeable about something; (2) you can help someone; and (3) you are trusted enough to be put in a responsible position. Consistent with Webb (1987), these researchers concluded that tutors achieve academic improvements because they experience increased understanding of the subject matter due the reinforcement gained from teaching the material to their tutees.

The researchers caution that peer tutoring should not be seen as a substitute for high quality instruction. The evaluation reported that when weak instruction was observed, peer tutoring made the class more palatable to students but did not increase the quality of instruction. Indeed, the evaluation revealed that program success is positively associated with teacher involvement and participation.

Peer tutoring and mentoring were found to particularly powerful ways of increasing students' feelings of belonging to the school community when:

(1) Personal compatibility was used as a factor in matching peer tutors and learners;

(2) Mentors or peer tutors were matched one-to-one with learners in large schools; and

(3) Tutoring and mentoring services included counseling or problem-solving sessions to help learners constructively address their conflicts with teachers, other school staff or fellow students.

Most projects reported difficulties recruiting enough mentors. The more successful projects had mentoring services that arranged for protégés to spend regularly scheduled blocks of time with their mentors in a local business or community agency. In one project, the mentor and school worked closely to coordinate job-site activities with academic work in order to help the students recognize the link between schoolwork and the real world. The data suggest that job shadowing may spur secondary school students to assess their own skills and plans for post-secondary education. A well-structured peer tutoring program can be similar to a job shadowing experience or an apprenticeship.

Peer tutors in some projects were observed to have internalized some of the teaching strategies they learned during training and service. Peer tutors gained valuable insights into the teaching profession. Some peer tutors subsequently reported an interest in teaching as a career path; for others, it reaffirmed a self-assessment that their interests and skills would ultimately enrich their success as a teacher.

Effects on teachers and school-community relations emerged as two additional program outcomes. Teachers' responses were generally positive, with those who were involved in design and implementation the most enthusiastic. Negative teacher responses were reported by teachers that tended to not fully understand the project goals and objectives, and who were asked to complete project-related paperwork viewed as unnecessary, burdensome or counterproductive. The evaluators concluded that while expending resources to develop mentoring relationships is a worth while endeavor, establishing effective mentoring services through a school program can be difficult.

Common Problems and How to Overcome Them

A number of problems were experienced by the projects over the course of the demonstration period; some found creative ways to overcome them. Maintaining high levels of tutee participation was a common problem. As part of its training, one project emphasized to tutor-mentors that problems can result from putting too much emphasis on a learner's inadequacies. The tutor-mentors were instead taught to develop positive and reciprocal relationships.

This approach is consistent with the work of Reisner (1990) (who was also involved in developing one of the projects in this demonstration), who suggested a new paradigm for human services to

bypass the "help paradox," so that there is an opportunity for those who are helped to also help others. One benefit of this role shift is the broadening of help-giving resources in a school (and elsewhere). As noted above, it also makes it easier for the tutees to accept help, knowing that they will become tutors themselves at some point in the future.

In-class tutoring sessions often proved to be difficult for teachers and unrewarding for tutors. Teachers reported that the tutor's presence was somewhat disruptive; tutors found they had to follow course curriculum instead of working with tutees on the skills they needed most. The researchers did not suggest that schools abandon this model, but they did draw the following conclusions:

(1) When projects call for tutors to work with tutees on material not directly related to classroom instruction, in-class tutoring will almost always result in conflict between the tutor and teacher; and

(2) When tutors are required to utilize class material first presented by the teacher, the teacher must develop meaningful and productive strategies for the tutor; and

(3) Tutors directed to serve as roving classroom assistants are not able to take full advantage of their potential to help educationally disadvantaged students.

Overview of Projects

Goals for learners (tutees and protégés) focused on academic achievement and high school graduation, and included (in order of importance):

- Improving basic skills in English and math;
- Preventing school drop-out;
- Improving study skills;
- Building self-esteem;
- Improving students' attitudes toward school subject matter;
- Increasing attendance;
- Facilitating transition from middle or junior school to high school;
- Improving advanced skills in English and math; and
- Developing employment skills.

Goals for peer tutors included building self-esteem and leadership skills while improving academic achievement and communication skills.

Projects were operated in various demographic and educational settings with diverse student populations who experienced a range of barriers to academic and personal success:

- 46 percent were located in urban areas and 35 percent in rural areas;
- An equal numbers of black, white and Hispanic students were served, and 11 percent were bilingual;

- An equal number of blacks and whites served as peer tutors (38 percent each); 16 percent were Hispanic. Half the adult mentors were white, and one-third were black.

Peer Tutors, Mentors and Learners

The 29 projects responding to the evaluation survey reported serving a total of 7,466 students, 2,207 peer tutors, and 591 mentors. The grade levels represented by learners (tutees and protégés) ranged from 1st to 12th grade, with the largest concentration in the 6th to 12th grades. Most peer tutors were in grades 8, 11, and 12.

Learners across projects were similarly disadvantaged in terms of academic standing:

- 29 percent of them were receiving Title I[1] services;
- 29 percent were receiving dropout prevention service;
- 12 percent were receiving alternative education services; and
- 11 percent were participating in bilingual/ESL programs.

The educational background of the adult mentors varied, with over three-quarters having at least one year of college. A high percentage (87 percent) had already completed one semester or one year as a mentor. Mentors were recruited by community groups, local businesses, colleges and universities, religious organizations, local media, school newspapers, and senior citizen homes.

Several factors were identified as important in selecting peer tutors:

- Academic achievement (24 percent);
- Teacher/counselor recommendation (17 percent);
- Expressed interest (17 percent);
- Leadership qualities (14 percent);
- Dependability (7 percent);
- Course activity (3 percent); and
- Availability (3 percent).

Tutoring and Mentoring Duration

Research indicates that there is no consensus on how long tutoring relationships should last, or what the optimal duration and frequency of tutoring and mentoring sessions should be. Jenkins and Jenkins (1985, as referenced in Pringle, et. al, 1990) conclude that secondary level tutors and learners should meet one class period each school day, reporting that programs that were continuous and of moderate duration were the most successful. They also concluded that the longer the program and more frequent the sessions, the greater the academic gain. However,

[1] Title I, formerly entitled Chapter I, provides federal financial assistance to school districts to meet the special education needs of educationally deprived children.

Cohen (1982) found in a meta-analysis of 65 evaluations of peer tutoring programs that the shorter the duration of services (between sixteen and twenty-six weeks), the better the results.

The average duration of 72 percent of the projects in this demonstration program was 16 or more weeks. The average number of weekly sessions ranged between 1 and 5 sessions, with hour-long sessions in 83 percent of the projects.

Scope And Complexity

The scope and complexity of operational design varied widely among the projects. The most basic design involved discrete sets of participants who were either tutors or mentors or learners. The most common design provided both peer tutoring and mentoring to a single group of learners. There were, however, several projects that also provided mentoring to peer tutors. The most complex of these "scaffolding" designs utilized adults from the community to mentor 11th and 12 graders, who tutored middle school 8th graders, who in turn tutored primary grade students.

Academic Content

Academic content varied by project, influenced by three primary considerations:

(1) Teacher recommendations;
(2) Homework assignments; and
(3) Diagnostic evaluations.

Across all projects tutors and mentors spent 20 percent of their time on basic reading skills, 10 percent to 30 percent on basic math skills, up to 20 percent on advance reading skills, and 10 percent each on composition and short writing tasks. Three-fourths of the projects also provided counseling, 69 percent offered employment-related assistance or career awareness activities, and 62 percent offered social, recreational, and cultural enrichment.

Factors Affecting The Longevity Of Tutor And Mentor Relationships

Numerous factors were identified as affecting the longevity of the tutor and mentor relationships with learners:

(1) Initial screening and matching of tutors and mentors with students who had similar characteristics;

(2) Degree of coordination among tutors, mentors, and classroom teachers;

(3) Frequency and duration of tutoring and mentoring sessions;

(4) Time of day when tutoring and mentoring sessions occurred;

(5) Location of tutoring and mentoring sessions;

(6) Level of parental participation and support; and

(7) Amount and quality of training for mentors and tutors.

Factors Used to Match Learners with Peer Tutors and Adult Mentors

The factors used by the projects to match learners with peer tutors and adult mentors included:

- Ability to work together (86 percent);
- Student's area of special need (79 percent);
- Skilled or confident peer tutors or mentors matched with more needy or "difficult" students (67 percent);
- Personal preference of peer tutors and mentors (55 percent);
- Personal preference of learners (55 percent);
- Similarity of cultural background (55 percent);
- Same gender pairing (48 percent);
- Cross age pairing (48 percent);
- Similarity in language background (48 percent); and
- Same age pairing (21 percent).

Program Costs

Grants were used for personnel and benefits (57 percent), supplies and equipment (12 percent), contractual services (9 percent), training (1 percent); indirect costs (1 percent), and travel (1 percent). Staff activities included supervising and monitoring peer tutors and mentors; training teachers, mentors and tutors; coordinating services with other special services or classroom teachers; recruiting, selecting and matching peer tutors and mentors with learners; and evaluating project activities.

Planned program costs per learner varied significantly, from $231 to $7,333. The least expensive model was a tutoring program in a large urban school district (Chula Vista, California); the most expensive model was a rural school district in Oaks, Oklahoma, which had a small number of tutors and protégés, paid peer tutors and mentors, and transported learners to the university 30 miles away twice a week for the services.

Program Challenges

Several challenges were identified by the evaluators. Due to variations in the type and quality of data collected by the 31 grantees, the evaluation was unable to conclude that the demonstration program was universally successful. In addition, the one year demonstration period thwarted

planning and start-up activities. Many projects did not achieve full implementation, and half ended up requesting extensions. Nonetheless, eight of the projects did report multiple outcomes that met the evaluation screening requirements (reporting sufficient quality data) and showed modest positive effects, including gains in standardized test scores, GPAs and course pass rates, increased attendance, decreased numbers of disciplinary referrals, and positive responses to attitudinal surveys.

The unusually rich racial/ethnic diversity among peer tutors was reported to be a notable achievement, meriting further investigation in light of prior research suggesting that shared cultural background may increase the likelihood that a learner will benefit from the tutoring experience.

Features of Effective Peer Tutoring and Mentoring Services

Analysis of the eight most successful projects reveals a set of five categories of promising practices.

(1) Reducing the stigma associated with receiving help was accomplished by recruiting at-risk students to serve as peer tutors, and training them to act as mentors for their tutees. At-risk students who served as peer tutors experienced, often for the first time, confidence, prestige, pride and positive feedback from others. They were found to need substantial support to be successful in their new role as helpers, so effective projects included preservice training, ongoing debriefing and problem-solving sessions, and reflective journaling. In one project, the peer tutors and tutees shared giving and receiving assistance. Tutors were trained to also serve as mentors during tutoring sessions, discussing social issues of mutual concern. Several projects went a step further, taking special care to convey to tutees that they were not dummies because they needed help, and that they would be called upon to reciprocate.

(2) Providing incentives was often necessary to help tutors see their tutoring responsibilities as important and productive work.

(3) Training tutors and supervising classroom teachers needed to be frequent, focused on instructional and problem-solving strategies, and congruent with tutoring activities in order to be effective. Effective teacher training explained project goals, and the importance of developing and making full use of the tutors' leadership skills. In some projects, as teachers learned to relinquish some classroom control they behaved more like coaches and managers, rather than dispensers of knowledge. The evaluators suggest that training should be expanded to recognize and support teachers as influential role models for the peer tutors and to assist them in learning how to develop peer tutors' teaching skills (rather than managing their behavior).

(4) Matching tutors with their tutees on a one-to-one basis, relying on interpersonal bonds, proved to be the most effective method.

(5) Collaborating with local colleges, universities, and other professional organizations brought new ideas and research into schools and strengthened school-community relationships, in some cases lending credibility to new and innovative practices schools.

Policy Implications

In conclusion, the demonstration program achieved some success and was delivered at a per-learner cost comparable to that of federal Title I services. Modest positive effects on the academic performance and/or social integration of participating students in the first year suggests that, given the chance to mature, these and similar programs could yield positive results for more students on a sustained basis.

Peer assistance appears to be instrumental in helping disadvantaged youth improve academically and develop feelings of belonging in school. Properly matched tutors and tutees can develop positive personal bonds. Cross-age tutoring in particular seems to foster bonds so that participants come to regard one another as surrogate siblings or extended family members.

Expanded use of peer tutoring and mentoring services in several other specific contexts appears to be promising, particularly in schools with large student populations.

- New or limited English proficient (LEP) students, when paired with older students who serve as tutor-mentors, may socialize more successfully into the mainstream school culture. Peer tutors help them negotiate the rules, schedules and activities, and foster academic growth.
- Using Title 1 eligible adolescents as peer tutors could produce a range of positive effects similar to those reported in this demonstration program.
- A strong training and ongoing monitoring program would be essential to this model.

Providing mentoring services to Title 1 eligible adolescents offers a different set of important benefits: (1) successful role models; (2) personal assistance and support; (3) exposure to new career paths; (4) job shadowing experiences; and (5) tutoring.

The evaluators identified three areas in which the demonstration program could be improved. First, take advantage of grantees with prior peer tutoring and mentoring experience, and pair them with inexperienced grantees. Second, provide inexperienced school grantees with technical assistance. Finally, award multi-year grants so there is sufficient time for development and implementation.

For many teachers and students, recognizing and structuring in-school learning as a social and cooperative endeavor represents a fundamental shift. Such a shift may require a conscious decision and concerted effort to break with the conventional teaching-learning mold in which students listens to teachers or study quietly in isolation.

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