FOCUS on Exceptional children

Peer Tutoring in Elementary And Secondary Programs

Joseph Jenkins and Linda Jenkins

The task facing professionals who teach students with handicaps is clear enough — how to raise achievement rates and thereby reduce the discrepancy between handicapped children and their peers. Teachers with whom we have talked are confident they could teach almost anything to almost anyone, if they had the time. A student who requires 80 repetitions of a rule before applying it consistently has a problem only if the teacher does not have enough time to provide the repetitions. Of course, time spent with this student is probably time taken away from other students who already have learned the rule, or who are at an earlier spot in the curriculum. Whether, or when, a particular student learns a rule will probably not be determined by the teacher's ability to teach but, rather, by the teacher's available time. The problem of having sufficient time for teaching is a function of class size and of the varieties of human differences found in schools.

Data gathered in elementary classrooms have identified "academic engaged time" as a highly significant correlate of achievement—one that distinguishes classrooms that produce above and below average achievement levels. Berliner, Fisher, Filby, and Marlieve (1976) have described academic learning time as the time a student spends engaged in academically relevant tasks that are moderately difficult. Academic engaged time is not the same as allotted instructional time. A typical elementary classroom allots from 90 minutes to 2 hours daily to language arts instruction. Observations of what the students do during this period, however, reveal that far fewer minutes are actually spent engaged in a learning task.

Academic engaged time is highly related to content coverage, which itself has been shown to be consistently and significantly related to student achievement gain. In summarizing research on effective classrooms, Rosenshine and Berliner (1978) concluded:

> A fairly consistent pattern emerges from the studies cited. The primary finding is that time spent engaged in relevant content appears to be an essential variable for which there is no substitute. Teachers who make a difference in students' achievement are those who put students into contact with curriculum materials and find ways to keep them in contact. (p. 12)

> Within the area of instruction in basic skills in primary grades, the major skill needed by a teacher is that of obtaining "sufficient" content coverage and academic engaged minutes per day. (p. 13)

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THE RATIONALE FOR TUTORING

Because every skill cannot be taught simultaneously, a sequence of instructional objectives is usually developed. Ideally, a student should be able to concentrate on mastering one objective at a time before facing the next objective in the sequence. Grouping students for instruction, however, usually prevents individuals from making maximum progress. Ordinarily a student who is instructed in a group will be forced either to proceed to the next objective before attaining mastery of the current objective or to remain on an objective he or she has already mastered while waiting for the peer group to attain adequate performance.

As long as individual students' learning rates vary, small-group instruction will produce less than optimum rates of progress through an instructional sequence, because, by its nature, grouping for instruction guarantees that some children will not receive instruction on an objective appropriate for them. Thus, even though a well designed group format can produce high levels of task engagement, the academic engaged time for an individual student (learning-relevant content) will be less than the total instructional time for the group. From this analysis, it appears that academic engaged time could be augmented by substituting one-to-one instruction for some small-group sessions and private seatwork assignments.

Unfortunately, teachers are not themselves able to provide much individual instruction, as evidenced by the amount of group instruction and private work observed in classrooms. Teachers who devote much time to individual students are overall *less* effective (Stallings & Kaskowitz, 1974), presumably because attention to the individual detracts from the time available for other class members. If teachers desire to increase academic engaged time through one-to-one instruction, they must expand their reserve of instructional personnel. They need not look far. Some of the best helpers are other students who can be recruited from inside their own school.

RESEARCH SUPPORT FOR TUTORING

A meta-analysis of 65 tutoring programs was recently reported (Cohen, Kulik, & Kulik, 1982). The effects of tutoring programs on the tutees' academic performance were greater in well structured and more cognitively oriented programs. Tutoring programs of a shorter duration had larger student gains. Tutors had a better understanding of the subject matter in which they were tutored, and student attitudes toward subject matter were more positive in classrooms with tutoring programs. This effect was shared by tutor and tutee.

Several studies have contrasted the effects of tutorial and small-group instruction. Jenkins, Mayhall, Peschka, and Jenkins (1974) compared teacher-led small-group instruction with one-to-one instruction delivered by cross-age tutors. The tutored children were learning disabled and mentally retarded youngsters receiving service in special education resource rooms, and the tutors were regular third and fourth grade students who had undergone training and had worked as tutors for several months. Across several tasks including work recognition, oral reading, spelling, and math facts, learning was greatest in the tutorial condition, with one-to-one instruction from a peer exceeding teacher-led small-group instruction.

Program cost is another factor that deserves attention because public education is expensive and becomes more so every year. A group of special educators in Vermont conducted a cost effectiveness study in which they compared two forms of service delivery to handicapped children, one of which involved cross-age tutoring (Armstrong, Conlon, Pierson, & Stahlbrand, 1979). For several years school districts in Vermont had employed

paraprofessional teacher aides to tutor handicapped students. The aides were trained and supervised by a special education consulting teacher who designed and monitored individualized teaching programs for each special education student.

Working within this context, Armstrong et al. designed an alternative means of service delivery. They recruited and trained high school seniors to work with consulting teachers in tutoring special education students who were failing to master regular education curriculum objectives. Throughout the school year these high school students tutored three periods a week and conferred with the consulting teacher one additional period weekly. Their students, who came from first through fourth grade classrooms, gained an average of 1.7 months for each month tutored — exactly the same gain registered by equivalent students who were tutored by paraprofessional aides.

Complete data were maintained on the costs associated with training and supervising both the high schoolers and the aides, and the additional c̄ost of salaries for the latter. Expenses associated with the paraprofessionals were over three times greater than those for the high school tutors, even though both groups were equally effective in facilitating student achievement. The high school students acquired useful teaching, measuring, and managing skills and rated their experience as highly rewarding.

The most recent evidence on cost effectiveness comes from a study by Levin, Glass, and Meister (1984). They compared four common interventions for improving reading and math achievement in elementary schools. Cross-age tutoring, using student tutors, was more than twice as cost effective as the next strongest intervention— computer assisted instruction — which in turn was more effective than reducing class size or increasing instructional time.

In summary, several lines of research suggest that one-to-one tutoring has much to offer even when it is conducted by another student. Among the apparent benefits of tutoring are: increased academic engaged minutes, more learning within a single lesson, and more optimum progressions through curriculum sequences for the individual learner. In addition to these benefits, tutoring at the secondary level can also provide an opportunity for students to acquire study skills necessary for learning information in courses required for graduation.

CRITICAL COMPONENTS OF SUCCESSFUL PEER TUTORING PROGRAMS

We have attempted to pinpoint characteristics of tutoring programs that contribute to success. These char-acteristics have been identified from research and from 13 years of experience with peer tutor programs. The following pages delineate each of the critical components in implementing a successful tutor program.

Lesson Formats

Tutoring proceeds more smoothly when tutors have a lesson format that enables them to function without asking teachers, "What do I do today?" With *highly structured and carefully prescribed lessons*, tutors know what to do.

Structured lessons are also advantageous to the teacher. When teachers don't have to explain each lesson to their tutors, they can assume a managerial role, monitoring several tutoring projects simultaneously. They can plan in advance for new lessons, devote time to problem lessons needing revision, and attend to individual crises without interrupting the progress of other tutoring pairs.

After tutoring has begun, changes in lesson formats may be needed to maximize individual student progress. In our experience the basic format of the lesson remains the same for 90% of the students. What may change is the amount of time spent on a particular task or on motivational procedures.

Content of Instruction

Some common-sense notions support correlating tutoring content with classroom content. In the first place, the concepts of normalization and least restrictive environment imply that services for students with learning problems should be designed in ways that will help them maintain enrollment in regular class settings. When students with learning problems cannot keep up with their classmates, some teachers are inclined to dispatch them to another setting (e.g., a self-contained special education class). In secondary schools, students who do not keep up are given failing grades, jeopardizing their chances of graduation. Thus, the challenge for special and remedial education teachers is to help students remain in the mainstream.

Because teachers define objectives in terms of their classroom curricula, they tend to judge a student's competence in relation to success or failure in those materials. Remedial services based on the student's classroom curriculum will more likely improve performance in that curriculum. In contrast, services based on another curriculum, even if they effectively teach that curriculum's objectives, are less likely to teach the "right" skills — i.e., those the classroom teacher uses as his/her criterion. To teach the same curriculum, adaptations in

presentation style may be needed to create a structured lesson format.

In most situations tutoring provides the opportunity for *extra instruction, practice, repetition,* or *clarification* of a concept that enables students to succeed in the classroom curriculum. Improved performance on academic objectives selected by the regular teacher can be recognized by both teachers and students.

If tutoring does not help improve students' progress, the curriculum may have a major design inadequacy. For example, in schools that use beginning reading with a sight-word emphasis, supplemental phonics instruction may be required. Teachers in one such district trained cross-age tutors to teach from a phonics-based curriculum (DISTAR I) while the teachers continued using the district curriculum. Another teacher in this school district taught a group of low-performing third graders using a non-district, phonics-based program (*Corrective Reading*) and used third grade peers to tutor in the district's adopted curriculum.

In secondary level tutoring programs the program manager must monitor whether tutoring content matches the real demands of classroom teachers. Is information from reading assignments and lectures tested? What is the testing format — true-false, matching, multiple-choice, short answer, or essay? What are the teachers' criteria for grading—test scores, number of assignments turned in, class discussion? Is the student complying with attendance and make-up policies?

Mastery Learning

Closely related to the issue of instructional content is the degree to which a tutoring program approximates a mastery learning model. In a mastery model, any skills targeted for instruction are considered to be of sufficient importance to require that students demonstrate mastery of them. *In a mastery-based tutoring model, a skill is identified and instruction in that skill occurs every day until students master it.*

Conventional wisdom suggests the importance of carefully selecting tutoring content and of guaranteeing that students master the content. Programs that focus on the "wrong" content will not help the students much, even if they succeed in teaching that content. Likewise, tutoring programs emphasizing the "right" content will also fail if they do not guarantee that students master this content.

Tutors' satisfaction with and sense of accomplishment from their jobs are affected by observing their students actually master the instructional content. One of the more potent intrinsic reinforcers connected with teaching is the sense of accomplishment that comes with having discernibly helped someone.

Frequency and Duration of Tutoring Lessons

One of the first considerations in implementing a tutoring program is the scheduling of instructional sessions. How long should each session last, and how many days per week should tutoring occur? Time available for tutoring may be greatly affected by schedule conflicts such as whole-school grouping for reading and math, the numbers of periods available in which secondary students can earn credits for graduation, and competing opportunities for extracurricular or service activities.

In tutoring programs at the secondary level, students are usually scheduled daily for one period. In middle schools, which have more varied class schedules, scheduling a tutoring class for fewer than 5 days per week is possible. No research on frequency of tutoring at the secondary level has been done, as most secondary schools are locked into set schedules. Two studies, however, investigated the scheduling factor in elementary tutoring programs using a pull-out model (Ellson, Harris, & Barber, 1968; Mayhall & Jenkins, 1977). Tutoring was more effective when scheduled daily and for sessions that lasted approximately half an hour.

Regular education teachers who wish to incorporate tutoring into their own classrooms can schedule tutoring periods of briefer duration and still obtain substantial effects. One study (Hall, Delquadri, Greenwood, & Thurston, 1982) found that a 15-minute peer tutoring period within a regular classroom markedly improved the performance on weekly spelling tests for a group of low-performing third graders.

Other considerations, although not data-based, favor scheduling daily sessions of moderate length. One consideration is the classroom disruption produced by setting changes, movement, and so forth, and the additional teacher energies consumed in organizing this extra transition. To justify this, tutoring sessions should last long enough to have an effect and not just result in extra bother. Another consideration is especially pertinent in programs using cross-age tutors. Classroom teachers often prefer a fixed time, a regular (daily) period when their students will be out of the room for tutoring. This allows them to plan for and concentrate exclusively on the remaining students. In most secondary tutoring programs tutoring is a regularly established class period.

To imply that for a tutoring program to be effective, it *must* be scheduled daily for half-hour sessions would be misleading. On the contrary, a number of successful tutoring programs employ a less than daily schedule, or one with individual sessions lasting under 30 minutes.

Our point is that when temporal factors were studied experimentally, results favored the more *continuous programs of moderate duration.* These findings in combination with nuisance factors, such as interruption of classroom schedules and transition time, point to daily sessions of moderate length as the preferred organization as long as other factors, such as availability of tutors, do not dictate otherwise.

Tutor Training

The last situation teachers want to create is an unpleasant, negative interpersonal experience for children. Researchers have observed that if left to their own, older children occasionally show impatience with, or boss and ridicule, younger students whom they are "helping" (Lippitt, 1968). *Tutors have to be trained in appropriate interpersonal behaviors that result in comfortable, satisfying experiences for both members of the tutoring dyad.*

Behaviors that tutors should be trained to perform include giving clear directions, encouraging and praising learners for their efforts, confirming correct responses, correcting errors in a non-punitive fashion, and avoiding overprompting. Interestingly, children who tutor appear not to engage in these behaviors spontaneously (Niedermeyer, 1970). Fifth and sixth grade students who had received no specific tutor training tended during tutoring sessions to confirm correct responses less than 50% of the time, rarely gave corrective feedback, did not praise their tutees, nor did they engage in friendly, non-instructional conversation before or after the tutoring sessions. In contrast, tutors who had received training in these behaviors exhibited high rates of appropriate instructional and interpersonal behavior.

Efficiency considerations suggest that tutors be trained in gathering and replacing instructional materials, measuring and recording student performance, allocating time to specific tasks, and possibly monitoring or participating in post-tutoring games. Other tutoring tasks, such as teaching letter sounds, sound blending, arithmetic algorithms, specialized correction procedures, literal or inferential questioning, note taking, organization of notes around main ideas, and the like, require specific training if a tutor is assigned to teach them.

Tutor training should match the lesson format developed by the tutor trainer. Moreover, training should not end once actual tutoring begins. As to the content of the continued training, careful supervision of the tutors will alert teachers to additional training needs.

In an elementary or secondary setting tutoring might occur four times per week with one day a week scheduled for continued training or teacher conferencing with the tutor. In the secondary program, the first 5-10 minutes of each tutoring class can be used to provide a mini-lesson on tutorial procedures. If the tutees are assigned to the same classroom as the tutors, they can be included in the training. If the tutees choose not to participate, they can work independently on other assignments.

Class Climate and Active Supervision

School climate is positively correlated with student achievement and with student and staff satisfaction, and it is a significant factor in tutoring programs. The tutoring center or class should be a place where caring and a commitment to personal growth are obvious features. *Respect and mutual concern* should be explicitly encouraged and shaped between tutors, tutees, and the teacher. The teacher and students should *establish high expectations* for all involved in the program. Is the tutor yawning, inattentive, or crabby? Is the tutee complaining or being unkind to the tutor? Signs of boredom and noncompliance should be recognized early, and a positive, task-oriented pattern should be established.

We recommend that teachers interact daily with every dyad. *Active supervision helps keep tutors and tutees interested.* Some days the teacher may spend most of the lesson with one or two pairs, but teachers should try to "visit" every tutoring pair at least once during each session.

Finally, teachers should model the positive reinforcement, enthusiasm, interest, and commitment to high expectations that they want tutors to demonstrate. Active involvement by the teacher sends a message that he/she is interested in the students' daily achievements and successes.

Staff and Administrative Support

Tutoring programs interface with the total school program and require support from a number of individuals. Teachers who manage a tutoring program need well-refined interpersonal skills because they must relate to a large number of students and staff, frequently negotiating solutions to problems. They serve as advocates for the tutee and occasionally the tutor, and they consult with regular teachers as necessary. The *advocate role is a key in peer tutoring programs.* Often, students who are tutored do not have a parent who is able or willing to assume an advocacy role. Many secondary students do not want their parent "interfering" with their life at school.

Because teacher referral is most important in recruiting prospective tutors, the teaching staff must support peer tutoring as an integral component of the school curriculum. Principals must approve the program so that teachers can release tutors from class. At the secondary level they must arrange for tutors to receive credit for their participation.

Program Organization

How can a school organize to provide the tutor training and supervision necessary for a successful program? There are several possibilities. One organization for an elementary setting places a special education resource teacher or a remedial teacher in the *program manager role*. This individual might devote three or four periods daily to peer- or cross-age tutoring programs. The program manager is responsible for recruiting tutors from various classrooms within the school or, if geographically feasible, from a nearby secondary school. Ordinarily special education and remedial teachers have sufficiently flexible schedules at the beginning of the school year to accomplish this task.

Another organizational framework for an elementary school places the school librarian in the program manager position. For example, the librarian might, in collaboration with several classroom teachers, organize and monitor tutoring for 10-15 low-performing students.

As an alternative to the program manager type of organization, regular elementary classroom teachers could organize a tutoring program within their own classrooms or collaborate with one or more of their colleagues to develop a *cross-classroom program*. One instructional period such as sustained silent reading time, the independent work time, or the round robin reading time can be set aside daily for tutoring. Several schedule variations are possible within these frameworks, ranging from daily tutoring to a combination of tutoring and teacher-led instruction on separate days. In one elementary school the principal assigned an aide for 20 minutes daily for 2 weeks so that a teacher of 25 low-performing first grade readers could train 25 fifth and sixth grade tutors during her language arts block. The tutors monitored the children's oral reading, allowing the teacher to spend her time introducing new skills and developing comprehension and language skills.

In secondary schools several program organizations are possible. The special education teacher might coordinate tutoring services for students assigned to *resource rooms*, rather than attempt to instruct 11-15 mainstreamed students in the various content classes (e.g., world history). Instead of devoting several minutes to multiple content areas, the resource teacher can train and supervise tutors to suplement content areas instruction.

Similarly, remedial teachers in reading and math can organize their services on a tutoring model. Typically students' entry-level skills vary widely in these classes, and *individualized instruction* by tutors is one means of addressing the needs of a diverse student population.

Finally, a teaching position could be established specifically for managing a tutoring program. Creating a *full-time teacher position* enables a school to schedule tutoring every period during the day. Although this option appears to be expensive, it is actually cost-effective compared to other remedial models because it results in serving 50 to 80 tutees and as many tutors.

A tutor manager position in one school district was staffed by using teachers from several departments — special education, ESL, basic skills, and regular education. Using staff members from various departments helped to define the program as one for *all* students, not just those in special education. Having a regular education teacher as a part of the tutoring team helped in recruiting tutors; the regular teachers had personal contact with a larger number of students and, thus, were better known by the student body.

In our most successful secondary experiences about one-third of the students have been from special education and the rest from the remedial or general population of students. This class is the only "special education" class that some handicapped students take, and IEPs are written to reflect this intervention. Inclusion of nonhandicapped students makes sense because in most classrooms one to three youngsters need help, and with 150 students per day teachers are unable to provide extra instruction to help those students succeed. Providing service to low-achieving students not only helps them, but it also broadens the impact of the tutoring program and gains wider staff cooperation and support.

Measurement of Progress

One obvious disadvantage of turning over instructional duties to another person is the loss of information about how students are progressing. One means of compensating for this information loss is observing the teaching-learning activities (Mayhall et al., 1975). Teachers can also keep in touch with learner progress by *keeping daily performance data on instructional objectives.*

Teachers who have access to the daily measures are better able to adjust tutoring programs to achieve greater learning (Jenkins, Mayhall, Peschka, & Townsend, 1974). Decision making improves when people have access to better information, a proposition that is as true

in classrooms as it is in government and industry. In addition to their contribution to decision making, good data systems can have other beneficial effects as well. When students recognize that their progress toward specific objectives will be measured at the end of every day's lesson, they are less likely to drift off task.

We have found that tutors can collect daily performance data on each teaching objective. Within a reading lesson that includes instruction on letter sounds, isolated words, reading in context, and comprehension questions, the tutor can measure each element separately and display the results visually on a chart. By inspecting these charted performances, the tutor manager determines how each child is progressing, when instructional procedures have to be changed, and when the child is ready for a new task.

Measurement at the Elementary Level

Below are two examples of measurement procedures used for tutoring reading in elementary settings.

Simple Monitoring. Third grade peer tutors have used the data sheet shown in Figure 1. The classroom teacher establishes a rule that to continue, a tutee must make two or fewer reading errors.

READING RECORD

Student: Donald   **Tutor:** Jessica
Book: Riding Rainbows

Date	Page No.	Error Tally	Errors	Comments
9-24	8	3	what, him, why	
	8	2	that, what	worked
	9	1	pigeon	hard!
10	0			
9-25	11	2	what, why	
etc.				

FIGURE 1
Format and Example
For Simple Monitoring: Elementary Level

Daily Performance Chart. The daily performance chart monitors the student's functioning on behaviors that are directly taught. Figure 2 gives an example of a daily performance chart showing aspects of a student's reading performance. Using the bands on this performance chart, the teacher monitors comprehension accuracy (first band), letter sound accuracy (second band), oral reading rate (third band), and reading accuracy (fourth band). The reading accuracy and rate data are based on a 100-word passage drawn from the story being read. If the student reads a sample with less than 95% accuracy, he/she must work on that story another day. Comprehension data are based on answers to several questions covering the story's content. At least 80% comprehension of each story is required.

Measurement at the Secondary Level

Tutorial programs at the secondary level are based on content from mainstream classes. This places regular classroom teachers in a prominent role in evaluating the success of tutoring, because the primary data on program effects come from performance in their classes. Several type of records are kept to help the tutor teacher monitor assignments, tests, and classroom performance.

Daily Assignment Record. Each tutee keeps a daily record of class assignments. The tutor cross-checks these with the notetaker's record (described later). When the program manager visits the dyad, he/she checks to see that the tutee is keeping an accurate record.

Monthly Calendar. The tutor maintains a calendar that lists future tests, quizzes, major assignments, projects, term papers, and the like. The tutor and program manager use this to determine if adjustments in daily goals are required.

Log of Daily Goals and Accomplishments. The tutoring dyad establishes goals for each day's session. At the end of the period, tutor and tutee evaluate their accomplishments and establish a tentative goal for the next day. A notebook containing these goals is kept open on the desk, allowing the teacher to check them as he/she monitors each group. In that way, the teacher can make suggestions about the number and quality of goals and participate in rating the effectiveness of the pair.

Weekly Progress Check. Each week the tutor visits briefly (3-5 minutes) with the content teacher at a pre-arranged time. The tutor inquires about assignments completed by the tutee, test or quiz scores, attendance, and participation in discussion or labs, and solicits suggestions to help the tutee succeed in the course. Information from the progress check is shared with the tutee and the tutor manager.

Selecting and Pairing Tutors With Learners

With availability dictating the pool of potential tutors, teachers cannot always follow their natural preference for older, academically competent tutors; nevertheless, elementary teachers have designed high quality programs using tutors as young as 7, 8, and 9. As a general rule, however, older, more able students are the first choice because they are easier to train, require less supervision, and are better able to manage discipline problems. Aca-

STUDENT: Cassandra   School: Franklin   Teacher: Jenkins   Semester/year: F/84
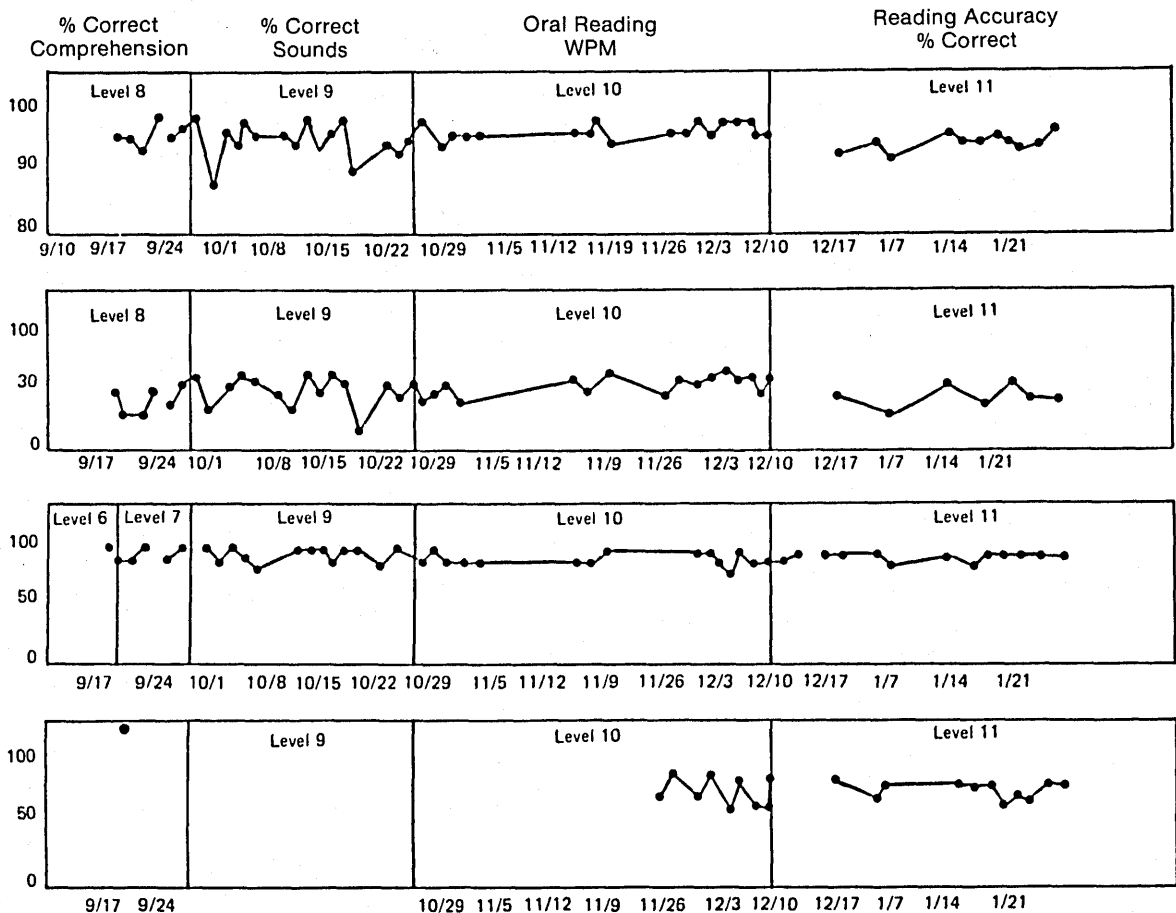
FIGURE 2
Example of Daily Performance Chart

demically capable fifth and sixth grade students make ideal tutors, and they are often available because they have little trouble meeting the challenges at their grade level. Often, they are willing to use their classroom study time efficiently or, sometimes, to work on their classroom assignments outside of school time so that they can qualify as tutors.

When teachers select tutors at the secondary level, students currently or formerly enrolled in the target content class are preferred but not necessary. Tenth graders have tutored students in senior health, and eighth graders have tutored in ninth grade social studies or language arts. Given the class notes, study guides, and text, reasonably good students can successfully tutor in a course they have not personally taken (except math).

The more *crucial factors in tutor selection relate to the tutor's personal characteristics.* Program organizers

normally seek students who are dependable, responsible, sensitive, and caring, or students who appear likely to develop these traits. Classroom teachers are usually able to identify several students with these traits who have time to participate in tutoring.

CONSIDERATIONS IN IMPLEMENTING A TUTORING PROGRAM: ELEMENTARY

Getting Started

To initiate tutoring in a school, a teacher or program developer first secures the support of the principal, staff, and parents. In beginning a tutoring program, a good rule to follow is to *start small.* The teacher should identify students who need additional practice but who do not

present serious behavior management problems. The next step is to assess the students' mastery of curriculum objectives, identifying what they need to learn next.

Designing Lessons and a Measurement System

Tutors are not skilled diagnosticians, curriculum developers, or experts in designing instruction. These are teacher competencies and responsibilities. Lessons can be structured using the same curriculum (e.g., reading and spelling) that is used in the classroom. A typical beginning reading lesson conducted by a tutor would involve several minutes' work on letter sounds, several minutes' instruction on new words, and the remainder of the period devoted to oral reading. The basic structure of the lessons changes little from day to day. Tutors do not have to invent each day's lessons anew; rather, they follow an established lesson format.

The program manager has to develop a procedure for measuring students' performance on each aspect of the lesson. Tutors measure and chart progress daily, and the manager employs these data in making instructional modifications.

Recruiting and Scheduling Tutors

The next step for the program developer is to obtain names of potential tutors from teachers. An orientation meeting is held with these students, and they are requested to obtain parent permission for participating in the program. Tutoring periods agreeable to the tutors and the teachers of tutees are then scheduled.

Designing and Conducting Tutor Training

The content of tutor training varies with the subject area in which they tutor, the kind of performance measures the program employs, and the types of children to be tutored. Nevertheless, training usually addresses these general topics: information about the program and the tutors' responsibilities, measurement procedures, lesson structure and teaching procedures, and personal behavior. To avoid confusion, tutor training should be held during the regularly scheduled tutoring period.

First, trainees are given *information on the purpose of the program and the responsibilities* of being a tutor. Responsibilities pertaining to tutoring itself include a consistent time commitment, punctuality, confidentiality, and positive regard for the learner. The tutor's own classroom responsibilities include maintaining their standard quality of work on their regular assignments and keeping informed about and making up any work they missed while out of the classroom.

Considerable training time is devoted to teaching the tutors *measurement procedures* through a data system. Trainees learn what performance data they will collect (e.g., percent correct and rate of math facts, oral reading, and spelling) and the procedures for collecting these data (e.g., random samples of math facts from specified domains, pre-selected reading passages, and structured spelling lists). Tutors also may have to learn how to use stop watches and pocket calculators to compute summary statistics.

Next the training addresses *lesson structure and teaching procedures*. Depending upon the tutors' academic specialization (e.g., reading or math), trainees learn how to teach specific skills (e.g., sound blending), appropriate use of prompts, error correction procedures, the various components of a lesson, and the amount of time allocated to each component. An outline for training tutors who will teach reading is given in Figure 3.

Teachers may demonstrate an entire lesson while trainees observe. Teachers may also model lesson components or small-scale instructional episodes, followed by role-playing opportunities for the trainees, who exchange tutor and student roles. Finally, tutors are introduced to their jobs by allowing them to assume responsibility for parts of lessons, and—as they become comfortable—gradually assume more responsibility.

In the category of interpersonal skills, trainees learn how to display positive verbal and nonverbal *personal behavior*, including active listening, conversing, and praising good effort. They learn not to show impatience, annoyance, or disappointment. They learn that errors are a signal for more teaching, not for punishment and disapproval.

Beginning Tutoring

During the first few solo tutoring sessions, the teacher has to monitor lessons carefully and conduct post-tutoring debriefing sessions. It is wise to stagger the beginning of tutoring with just a few pairs starting on a given day. As tutors grow more accustomed to their roles, monitoring and debriefing sessions can be reduced (but never completely dropped).

Maintaining Tutors' Involvement and Interest

Keeping tutors motivated is a challenge to the tutor manager. The most important reinforcer is *personal attention* from the teacher. Time spent with tutors in discussing the tutoring project, as well as other aspects of their school and personal lives, has considerable influence on tutors' interest and continued participation in the program. Another means of maintaining tutors'

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Discriminate and Tally Word Recognition Errors: Omissions	Discriminate Word Recognition Errors: Additions and Substitutions	Monitoring Oral Reading: Pauses, Repetitions	Recording Errors on Data Sheet	Tallying Errors in All Categories
Lesson 6	Lesson 7	Lesson 8	Lesson 9	Lesson 10
Error Correction Procedure	Praising and Ignoring	Teaching Isolated Letter Sounds	Comprehension Questions: Asking and Correction Procedures	Review of All Procedures and Questions and Answers

FIGURE 3
Sample Tutor Training for Reading: Schedule and Skills

motivation is by drawing *attention to their accomplishments* with quarterly reports, through informal discussion with their parents, teachers, and principal, school or local newspaper articles, and comments and remarks that remind them of the importance of their contribution to the children they teach.

A third means of maintaining motivation is through *systematic scheduling of reinforcing events* such as tutor luncheons, tutor parties, tutor awards, letters of thanks from principals of tutees, daily material rewards such as candy or stickers, allowing the tutoring room to be a place to meet before school officially opens for students, academic grades or credits for tutoring, and personal letters of recommendation for jobs, camps, or future schooling. This combination of motivational procedures has proven successful in holding the interest of cross-age tutors for as many as three consecutive years of service.

CONSIDERATIONS IN IMPLEMENTING A TUTORING PROGRAM: SECONDARY

General Description of Secondary Tutoring

At the secondary level the tutoring class meets daily throughout a semester. Tutees attend both their content class (e.g., American history) and the tutoring class in which they receive additional instruction and practice.

Tutors and tutees receive training from the teacher at the beginning of each semester and, after tutoring begins, daily for 5-10 minutes. This instruction focuses on social skills and study strategies to improve the study and tutoring skills of the students. To ensure coordination with the classroom teacher and his/her curriculum expectations, tutors meet regularly each week with the classroom teacher. As many as 10-15 tutors may be working with 10-15 tutees at one time in the peer tutoring class.

Both tutors and tutees receive *elective credit* for the tutoring class. Tutees also receive credit for the mainstream class for which they are tutored.

An exemplary student enrolled in a content class is selected by the teacher to be a *notetaker*. The notetaker is given NCR paper on which to record classroom notes.

This student delivers a copy of the notes to the tutor program manager. In the tutor room as many as 50 sets of classroom notes may be available each semester. Using these notes, tutors help students complete their own notes and study the class lectures.

Getting Started

To initiate a tutoring program, the program manager obtains a commitment from building and, if appropriate, central administrators. Next, he/she selects staff to teach the classes and identifies the number of periods in which tutoring will be offered. We recommend that tutoring be available to any motivated student who volunteers and that at least half of the tutees come from outside of special education.

The program manager makes a presentation to secure staff approval and support and writes a description of the tutoring class for the course catalogue. Elective or an occupational credit should be arranged for tutors and tutees.

Recruiting Tutors, Tutees, and Notetakers

The most effective recruiters of *tutors* are regular classroom teachers who personally recommend the program to potential tutors. Counselors can also play an important part in the recruitment process because they are likely to know which students would find tutoring appealing. The tutor manager can make presentations in regular classrooms to explain the program. Applications are left with the classroom teacher. Once a program has been established in a building, these presentations can include participation by former tutors and tutees. Before any student is scheduled into the class, the program manager's signature is required. Recruiting tutors is a time-consuming task, requiring 2-3 days of release time each semester.

Recruiting *tutees* follows the same process. Classroom teacher referral and personal contact with the appropriate students is the most effective procedure. Counselors often know students who need assistance in order to pass a class. If parents are aware of the program, they

may encourage their child to elect this class. Students themselves may elect this program if they anticipate difficulty in a particular course. The tutor manager should interview tutees to ensure that they are motivated to participate.

After tutees have selected a target class and identified both the teacher and period, the tutor manager consults the classroom teacher to identify a good *notetaker*. The teacher then arranges for this student to take notes on NCR paper (one personal copy, one for the classroom teacher, and one for the tutor). The notetaker delivers a set of the notes and any hand-outs to the tutor room each day. Some classroom teachers, particularly junior high teachers, offer "extra credit" to notetakers. Even without this incentive, obtaining notetakers usually is not difficult.

Scheduling

The more periods per day the program is offered, the easier the scheduling is. Priority registration, especially for tutors who need a particular class for graduation, can be helpful. The tutor manager may need one release day to modify the schedule and balance the classes between tutors and tutees. If fewer tutees are scheduled at the beginning of a semester, space will be available for students who discover they need assistance later in the semester.

Designing and Conducting Tutor Training

At the beginning of the semester, tutors and tutees go through 2-4 weeks of training. The content and skills taught in this phase should be selected to create an atmosphere of acceptance and empathy between the tutors and tutees and to provide instruction in the social skills and study strategies necessary for tutoring. The lessons developed by the authors in collaboration with Vicki Morrell, Kathy Vranesh, and Vicki Fitzpatrick are outlined in Figure 4. (Readers may acquire these by contacting the authors.)

Devoting the initial 4 weeks of the semester to training can be difficult for some managers as the discrepancy between the two "groups" of students may create pacing and motivational problems. Also, tutees may become panicky about their performance in the content classes. At the junior high school level the discrepancy between tutor and tutee skills is smaller and teachers have been able to maintain the 4-week training model.

A compromise that seems to please most high school teachers is to spend the initial 12-14 days in tutor training. Tutors and tutees are then matched and tutoring begins. The first 5-10 minutes of each class are used for further training. Teaching daily mini-lessons helps focus the students on the tutoring tasks and allows for adjustments of the training, based on student needs. Some tutoring dyads may want to start studying immediately at the beginning of the period, so this 5-10 minutes of training must be firmly established as the normal routine.

Training notetakers occurs at the beginning of the semester. In the high school, one 30-minute period will suffice. (In the junior high, an hour's training is necessary.) Training involves describing the use of NCR paper, the location of the tutoring room, how and where to deliver the notes for each class, notetakers' responsibilities for finding substitutes when they are absent, and the importance of their role.

Matching

During the first class, tutors and tutees complete a schedule of their semester classes. Tutees select the class in which they require assistance. (We recommend targeting one content class per tutee, but the tutor manager may allow tutoring in more than one class if a student is able to meet the requirements of the target class with 2 or 3 days of peer tutoring per week.) Tutors identify the subject areas in which they can provide tutoring.

Lesson 1 Course Introduction Roles and Responsibilities Attendance and Grading Policies	Lesson 2 Individual Differences	Lesson 3 Active Listening Nonverbal Messages	Lesson 4 Task Analysis	Lesson 5 Direct Instruction Model
Lesson 6 Behavior Management	Lesson 7 Goal Setting	Lesson 8 Motivation	Lesson 9 Studying from Notes and Study Guides	Lesson 10 Critical Attributes of a Good Tutor and Tutee Match-Up Organize Tutor and Tutee Notebooks

"Mini-Lessons" for Daily Instruction	
Level of Questioning: Recall, Understanding, Application Studying from Notes and Study Guides Paraphrasing Time Management: Setting Priorities Personal Presentation and Negotiation Skills Environmental Analysis of Classrooms	Decision Making and Problem Solving Test Taking Skills Memory Strategies Notetaking *Multipass* (Schumacher, Deshler, Alley, Warner, & Denton, 1982) Visual Imagery

FIGURE 4
Secondary Tutor Training: Possible Schedule

Age and sex differences have not been a problem in matching tutors and tutees. The important characteristics are the tutors' confidence and skill level. More highly skilled and confident tutors are usually placed with the more "difficult" students. Although most students receive one-to-one instruction, some subject areas, such as math or traffic safety, lend themselves to a 1:2 or 1:3 ratio.

Maintaining Tutors' Involvement and Interest

Peer tutoring provides a more caring climate in the school, as students and teachers monitor each other's behavior and invest in each other's success. Interactions between the manager, tutor, and tutee provide abundant opportunities to develop relationships that enhance the tutorial situation. As Goodlad (1984) has reported, secondary students want others to show concern for them as persons; yet, the structure of the secondary school all too often prevents this. Tutoring is a highly personal program, and this may be one of the most reinforcing aspects for all the students involved.

As in the elementary setting, the most important reinforcer is the attention and personal interest of the tutor manager. Tutor managers model interest and concern for each student by greeting them individually as they enter the room and by being available between classes to reinforce the notetakers when they deliver their notes. Tutors and managers draw attention to tutees' accomplishments by posting test and assignment grades on a Student Success Bulletin Board. Tutees write personal notes of thanks to their tutor for the help they have received. Cookies and thank-you notes are sent to the classroom notetakers. Managers write letters to tutors every semester thanking them for their commitment (these letters are also signed by the principal). Tutor managers also write letters of reference for a job or college.

Other reinforcers for tutors include a page in the yearbook, a bulletin board display along with school athletes, awards at the school awards assembly, or a reception for the tutors and tutees that school administrators attend. Both intrinsic and extrinsic reinforcers are used to motivate and maintain the interest of students in the program.

SUMMARY

In addition to the benefits of tutoring to tutees, its consequences to the tutors is an important consideration. Space does not allow discussion of this aspect here. The reader is referred to Coleman (1974), Allen (1976), Cohen et al. (1982), Annis (1983), Gartner, Kohler, and Reissman (1971), and Argyle (1976) for discussions of cognitive and noncognitive benefits to tutors.

Tutoring in some form was probably the first kind of pedagogy among primitive peoples, preceding more formal and organized forms of "schooling." Because of its prehistoric origins, tutoring is easily dismissed as "old hat" in today's technologically-oriented world. We believe that this kind of thinking is misguided, reflecting a type of modern, unexamined chauvinism. Sometimes the first ideas are the best ones.

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