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PEER TUTORING AS A TEACHING STRATEGY

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Pupils can learn better from each other than in some normal classrooms. This article explores current knowledge about "peer tutoring". It suggests how it can help special groups of pupils and how it can be organised.

Peer Tutoring as a Teaching Strategy

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The search for effective ways to improve motivation and achievement are major activities for any school. The administrator must, however, be concerned not only with effectiveness but also costs. This article considers a technique which has been found to be both effective and cost-effective.

The Cost-Effectiveness Of Four Interventions

The Institute for Research on Educational Finance and Governance at Stanford University recently used existing research findings to compare the cost-effectiveness of four feasible interventions for improving basic skills (Levin, Glass, & Meister, 1984; Wilby, 1984). Three of the four interventions were strategies widely recognised and canvassed both in the UK and in the US and the fourth was a kind of Peer Tutoring called Cross-Age Tutoring. Briefly, the four interventions were:

Reducing class size

There is constant demand for improvement in the pupil-teacher ratio (PTR) and it is frequently implied that such improvement would lead to higher achievement by pupils.

Increasing instructional time

In primary schools concern has been expressed that teachers vary considerably in the amount of time allocated to instruction in basic skills such as mathematics and reading. In secondary schools there is constant concern about the amount of time made available to various subjects. Increasing the amount of time spent on a subject or skill is a popular prescription for raising achievement levels in that subject or skill.

Computer assisted instruction

An amount certainly in excess of £9 million has been spent on developing micro-electronics in education. There is a general belief underlying this investment that one of the tasks computers can do well is to assist learning.

Cross-age tutoring

Coss -age tutoring refers to older pupils tutoring younger pupils in a one-to-one situation. (There is some evidence that cross-age tutoring is more effective than "same-age tutoring", Fitz-Gibbon, 1981).

In the Stanford Study, the effectiveness of each intervention was computed as an "Effect Size" and analysed by the technique of research synthesis called meta-analysis (Glass,

McGaw, & Smith, 1981; Fitz-Gibbon, 194). The research showed cross-age tutoring to have been both the most *effective* intervention and the most *cost-effective*, and by a considerable amount. Considering this result along with a substantial body of evidence for the effectiveness of Peer Tutoring (Allen, 1976; Cohen, Kulik, & Kulik, 1982), it would seem that the technique of Peer Tutoring needs to be thoroughly examined and developed.

Peer Tutoring: What Is Meant By The Term?

It is important to stress that Peer Tutoring in the sense that the term is used today is *not* the old pupil-teacher system nor the monitorial system, although it may in a sense owe something in conception to those innovative systems of a previous era. As generally used today, however, Peer Tutoring is quite different. In those earlier systems *able* pupils were selected to teach *groups* of younger pupils. In Peer Tutoring *all* pupils in a class, not just the most able, are trained to tutor on a *one-to-one* basis. Peer Tutoring offers all pupils the chance to be tutors; the monitorial system offered some selected pupils the chance to be teachers. Furthermore, the pupils who are expected to benefit from Peer Tutoring as used today are often those acting as the *tutors*, as much if not more than those receiving the individual tuition. Indeed, tutors are usually expected to benefit as much, if not more, than tutees, and not only in terms of academic achievement. Peer Tutoring has frequently been implemented by asking remedial and/or disruptive pupils to serve as tutors to younger pupils, with the aim of improving their motivation, attitudes, cooperation and attendance, as well as achievement.

Another difference lies in the fact that Peer Tutoring does not replace normal teaching but reinforces it. Indeed, although some Peer Tutoring projects run continuously, others run only intermittently, allowing tutoring to take place for just two or three weeks at a time, simply to emphasize and reinforce key areas of the curriculum.

Why does Peer Tutoring generally improve achievement?

There are many reasons why the older pupils, the *tutors*, learn work better by tutoring it than by practising it in the normal classroom situation. One important reason is motivation. Tutors have to teach, and therefore they have an *immediate* reason for learning. A second important reason is that the very process of teaching causes learning. For example, in order to teach, the tutor has to find words to explain, has to emphasize and explain again, and has to mark the younger pupil's work. This verbalising and the recognition of positive and negative instances are activities which a psychologist would prescribe for meaningful learning. They are activities which fix the work in the tutor's mind and produce better learning than normal. Having taught a topic, tutors remember it months later, whereas much that is learned by more passive methods may be largely forgotten, particularly by less able pupils (e.g. Fitz-Gibbon, 1981).

For the younger pupils, the *tutees*, there is the benefit of personalized instruction and also the feeling, expressed by many of them, that they can ask questions about the work more easily of a pupil-tutor than of a teacher.

Because cross-age tutoring is a classroom procedure which is well enjoyed by tutors and tutees, and is likely to have good effects on their attitudes and the development of communicative and social skills, there would be good reason to use the method of Peer Tutoring even if tutors only achieved at *the same* level as pupils not spending their time tutoring. However, the dominant finding from the experiments which have been conducted

on Peer Tutoring is that pupils learn more in tutoring experiments than in normal classroom instruction (Hartley, 1977; Cohen, Kulik, & Kulik, 1982; Sharpley, & Sharpley, 1983).

Specific Areas Of Application For Peer Tutoring

In the following paragraphs descriptions are given of ways in which Tutoring projects can serve a large variety of needs: for special groups of pupils, for staff development and in-service or pre-service training, for particular curriculum areas and in a variety of learning environments.

Since role changes have powerful effects, it is possible that most of the effects suggested below might in fact be possible. However, the amount of evidence for the effectiveness of some kinds of tutoring intervention is not large, particularly if one looks solely at the UK literature. Where there is evidence, reference is made to it and in all cases it should be understood that the applications are put forward principally as lines of investigation worth pursuing.

Applications To Special Groups Of Pupils

Difficult, disruptive, truanting or delinquent pupils

Schools often make tremendous efforts to "reach" difficult and disruptive pupils, to find topics which are "relevant" or interesting, to set up individualized learning situations to help these pupils to succeed. While such efforts should probably continue a different approach might be considered: would it be more effective to stop asking what the school can do for difficult pupils and to ask instead what such pupils can do for the school?

At Warwick University a project had truanting pupils act as tutors, emphasizing the effect of the tutoring role on the attendance, cooperation and motivation of the tutors, work documented on an available videotape. The organiser wrote that tutoring provides tutors with

> an opportunity for them to feel they can contribute to others and that they are valued and respected, a rare experience for this type of pupil (Bond, 1985).

A student funded by the Social Science Research Council and working at Newcastle University ran two projects with young offenders in detention centres, using Peer Tutoring for remediation of reading problems.

> Trainees learned to read and to improve their reading skills considerably. If that were the sole criterion to be applied then that would be sufficient to vindicate the method ….. However ….. behavioural progress was made as well. Because many participants enjoyed the activity so greatly and thereby valued it, their attitudes towards themselves, towards their peers and towards staff were changed for the better (Posen, 1983).

Walbottle High School, Tyne and Wear, bussed difficult, remedial, non-examination, Easter-leavers to a nearby ESN-M school where they were welcomed as helpers with the mentally-handicapped pupils. Although having histories of being disruptive at the High School they were helpful, pleasant and responsible at the ESN-M school and worked patiently with the pupils. Due in no small part to careful training and preparation by the staff, this programme was deemed a success and is to continue.

In summary, Peer Tutoring would appear to be particularly promising as a method for working with difficult pupils in a variety of contexts. When the role assigned to pupils is changed from that of passive learner, with its connotations of being quiet and well-behaved, to that of active tutor, difficult pupils can become useful to others and make less trouble for themselves.

Girls, science and technology

Girls tend to choose careers in which they will interact with people. Equally, at school, they might choose options in which they will have a chance to interact with people. Mathematics, science or technology courses which provided regular opportunities to use knowledge being gained by helping younger pupils could expect to attract more female pupils and could expect them to be better motivated on the course. This promising line of research, highly relevant to the acute shortage of physics teachers, has yet to be pursued.

Pupils in multi-ethnic schools

Multi-cultural and/or anti-racist education is now a required part of the curriculum of many UK schools. Unfortunately there is little consensus about the appropriate styles of programmes and those advocating various kinds of multi-cultural/anti-racist teaching have not provided any evidence that what they advocate actually produces the kinds of results they hope for. In the face of much rhetoric and conflicting opinion *is* there any evidence of "what works" in multi-cultural education?

A survey in the United States found

> that teacher workshops, minority history, multi-ethnic texts, bi-racial student advisory committees and similar school programs made no difference in the racial attitudes or interracial friendships of high school students.

One variable, however,

> made a strong and consistent difference: the question asked of students "How often has your teacher assigned you to work on schoolwork with a student of another race?" (Slavin, 1979, p. 322)

While caution must be exercised in interpreting survey data in causal terms this finding suggested that assigning pupils to work together in group work or in peer tutoring should promote better relationships between ethnic groups in schools, an argument which can be well supported from theories and experiments in social psychology (Malamuth and Fitz-Gbbon, 1977).

There are other, perhaps more important reasons for using PT in multi-ethnic schools (Fitz-Gibbon, 1983). PT provides the opportunity to enhance the use of mother-tongue instruction. By the use of older pupils a school can provide academic help in all the language spoken by its pupils, frequently a quite impossible task otherwise. Moreover, the experience of being a tutor might encourage more pupils from minority backgrounds to enter the teaching profession.

Stone (1981) demanded that programmes for ethnic minority children should be concerned with "the inducting of children into knowledge, skills and abilities rather than ….. the provision of social work or therapy". Peer Tutoring might get the best of both worlds: cognitive gains and social gains.

Gifted pupils and sixth formers

It should not be thought that only less able pupils can benefit from being asked to tutor. Zacharias recommended it for top flight science students (Zacharias, 1965) and a recent controlled experiment showed GCE O-level candidates learned topics in physics better by tutoring than by normal classroom activities (Charlton, 1986). Booth (1987) described how he used PT to get his lower sixth form physics students to revise basic concepts by working through O-level papers with his fifth formers.

In general, gifted and able pupils need to be assigned tasks which are meaningful, challenging and open-ended (Kerry, 1983). Tutoring younger pupils is such a task. Enrichment work for gifted older and younger pupils could be provided by means of regularly scheduled tutoring sessions, allowing teachers more time to help slower learners.

Pupils with Special Needs integrated into normal schools

Some handicapped pupils integrated into normal schools may need help on occasions.

If a school has a regular programme of pupils-helping-pupils, as in a Tutoring Centre, there is likely to be less embarrassment when pupils are needed to help handicapped pupils. It may be important to have the handicapped pupils serve as tutors to others, that is to ensure that the helping is not all in one direction (Custer, & Osguthorpe, 1983). In Birmingham and Kirklees (Yorkshire) "paired reading", a technique originally developed for use with parents, is being employed by educational psychologists using remedial pupils in place of the parents. Particularly in the Yorkshire project the benefits to the tutors themselves have been documented: "….. children who act as tutors to their peers increase their own reading ages by as much as, if not more, than those they are helping" (Bayliss, 1986, p. 8; see also Wheldall, & Mettem, 1985; and Topping, 1988). Hurford described a programme in which primary school pupils helped language-impaired children to improve their social skills (Hurford, 1980).

Teacher Training And Staff Development

Peer tutoring projects are not only helpful to pupils; they often have an influence on teachers too, and can be a source of skill-learning and support.

The skill of explaining

At the heart of good teaching, particularly perhaps in the areas of mathematics, science and technology, is the skill of explaining clearly. As with other skills, people improve with practice *if* they receive clear and immediate feedback as to how effectively they are explaining. This feedback is of high quality in a tutoring situation. The tutee is closely observed and free to ask questions the moment he or she fails to understand. By explaining to a tutee a teacher can observe the learning process closely and begin to recognise the pitfalls the learner is likely to encounter. Because the kind of feedback provided in a class-teaching

situation is too complex and is confounded with control problems, teacher training should begin with one-to-one tutoring and close observation of the learning of several individual pupils. The existence of a Tutoring Centre in a school would facilitate the provision of such experiences for teachers in training.

Ineffective teachers

There are different sorts of ineffectiveness. One sort of ineffectiveness is an inability to "keep discipline". Sometimes very concerned and dedicated persons, who are excellent at helping individual pupils, and who may also be excellent with easy-to-manage classes, do not seem to develop effective group-management strategies when confronted with less tractable pupils. A common mistake is to focus too much attention on an individual pupil with the consequence that other pupils get out of hand. They lack what Kounin called "with-it-ness" (Kounin, 1970). If a way of working can be found for teachers and classes that seem to be heading for trouble, such a solution may often be preferable to looking for dismissals, especially since (a) such difficulties are often temporary in the case of young teachers and (b) dismissal is extremely difficult. In a school with a Tutoring Centre a teacher having trouble with a class would be able to schedule Peer Tutoring sessions and work effectively in this manner. Pupils could thus benefit from Peer Tutoring whilst the teacher developed classroom management skills.

Teachers' expectations

Teachers have often been criticised for having low expectations of pupils but no remedy, apart from exhortation, seems to have been proposed.

One possible remedy is for teachers to see their pupils in a new role, and therefore in a new light. It has frequently been observed in tutoring projects that teachers are surprised at the behaviour of the tutors. Previously difficult and indifferent pupils evidence mature behaviour; many tutors express their concern to help the younger children. Although no research has been conducted on this particular question, it is a reasonable hypothesis that the experience of running a tutoring project may improve teachers' perceptions of the abilities and attitudes of their pupils.

Curriculum Areas

Peer Tutoring is applicable in most curriculum areas and its value is particularly apparent in some areas indicated below.

Information technology

There is a danger that the *technology* part of information technology (IT) is emphasized at the expense of the *information* part if IT. The primary purpose of IT is to gain skills in managing information. Information technology is appreciated when it serves a purpose. The work done in a Tutoring Centre produces much information which needs recording, storing and retrieving. The records for each tutor-tutee pair, for example, can be kept on a user-friendly database, up-dated by tutors. Reports can be prepared from this database for teachers and possibly for parents. Thus tutors can learn to use information retrieval systems as part of their tutor training. They can also use word-processing facilities to produce reports on the progress of their tutees and see micros used to analyse data comparing the progress made by

the various tutees taught by their class. It would also be possible to have computers programmed to *test* tutees on work they have been taught. This use of computers would ensure accurate testing, and diagnostic messages could be produced which would direct the tutor to topics which the tutee needed to review.

In short, a Tutoring Centre, a centre of human one-to-one interaction, if equipped with one or two reasonably powerful micros, could demonstrate the ways in which good technical systems can make it easy to monitor progress, keep records and prepare reports, and can in this way facilitate concern for individual people.

Science and technology in primary schools

Secondary schools have more science and technology equipment than primary schools and more teachers with strong qualifications in these areas. But primary pupils need not wait till they arrive at the secondary school to benefit from the secondary school's expertise. Primary pupils can be brought to the secondary school for specially prepared series of science lessons taught by pupil-tutors. The older pupils will benefit from being tutors and the younger pupils will be introduced to science and technology, and will benefit from the availability of equipment as well as from the individual attention. Charlton's physics project utilized a three tier tutoring design: fourth formers (physics O level candidates) tutored middle school pupils who then tutored younger pupils still, thus providing a "cascade" of science instruction from the secondary school downwards. Comparisons with control groups showed tutors doing better than those who worked through the topics as normal in class (Charlton, 1986).

Mathematics

There is a large body of research demonstrating the effective use of Peer Tutoring in mathematics. According to a summary using meta-analysis, in 35 studies of tutoring projects in mathematics children acting as tutors achieved, on average, a level higher than 73 per cent of equivalent pupils remaining in ordinary classes, and the same gains in achievement applied also to pupils who received tutoring, i.e. to the tutees (Cohen, Kulik, & Kulik, 1982).

As previously cited Levin, Glass, & Meister study showed, these gains are exceptionally large.

Communicative competence

Examining boards are introducing examinations which include measures of communicative competence in spoken English as well as in foreign languages. Peer Tutoring provides one of the best ways of practising verbal communication that the school could provide. The tutor has a demanding task which elicits communication, and an authentic audience in the young tutee, an audience which generally motivates the tutor to communicate as effectively as possible. An experiment on the use of Peer Tutoring in French in an inner city school in Northeast England showed not only good learning gains but also improved attitudes to French as a subject among those who had been tutors (Fitz-Gibbon, & Reay, 1982).

TVEI, YTS, etc.

With the advent of the Technical and Vocational Educational Initiative (TVEI) in schools, ways to teach *skills* effectively to large numbers will become more important. Skills have

traditionally been taught one-to-one ….. such as in apprenticeship schemes ….. and for good reasons. Skill development needs careful scrutiny and management, on-the-spot and immediate. One cannot take home a set of exercise books to "mark" to see if pupils are using a drill correctly. Peer Tutoring is an effective method for developing and practising skills, as was clear from a visit to a YTS project in the Tyneside region. One instructor regularly found ways to leave youngsters who had just learned a skill to help youngsters beginning to learn a skill. "I know that explaining it to someone else helps them to learn." (Another instructor, however, had a feeling that it wasn't right for him to get one trainee to help another. Asked where he arrived at such an impression he felt it derived from the training in teaching which he had received. "Nothing like Peer Tutoring was ever mentioned," he remarked.)

At Durham University, a YTS coordinators reported that Peer Tutoring lent itself naturally to a situation in which a new influx of trainees joins an already skilled group every few months (Bradshaw, 1986).

Safety

An important aspect of skill-development is that safe methods of working should be developed. Safety is easily explained but requires that people also practise it. In other words attitudes to safety are as important as information about safety. By having older trainees explain safety procedures to younger trainees, it is predictable that the older trainees will improve their attitudes to safety and be more likely to observe safety precautions themselves.

Drugs and Health

The argument just indicated with regard to teaching about safety applies also in the realm of teaching about drugs and health; changing a person's role is known to be one of the most powerful ways of changing attitudes. When put in the role of tutors, even the most disaffected pupils express the mores of the school: "Do you homework!" "Try hard!", they exhort the tutees, expressing the values or attitudes associated with the role they have taken on. There is strong evidence from social psychology that such an expression of attitudes tends to lead the person making it to agree more with the attitude than they did previously (Collins, & Hoyt, 1972). Counter-attitudinal behaviour can lead to attitude change. If asked to provide information about drugs and health the probability is that older pupils would not only have some effect on the younger pupils but would also be affected themselves. This approach is currently being used in the Smoking Education for Teenagers Project, funded by the Health Education Council at Bristol University (Gray, & Gammage, 1985). Another reason for the use of Peer Tutoring in health education arises because of the "it's-not-an-exam-subject" syndrome with which health education must often contend. Lacking the extrinsic motivation of an examination, teachers must seek ways to make the class intrinsically motivating. The introduction of an enjoyable tutoring component and the genuine opportunity to help younger pupils can provide this intrinsic motivation.

Personal and social development

The major problem reported by those who have run tutoring projects is "scheduling", finding time on the timetable (Fitz-Gibbon, 1978, p. 29). The arrival on many school timetables of a slot for "Personal and Social Development" has enabled some schools to use this slot for tutoring. Learning to communicate, to exercise authority, and to be responsible for a younger

person are all part of Peer Tutoring, and all valuable experiences for developing pupils' personal and social skills.

Parenting skills

By working on educational tasks with younger pupils, and playing educational games with them, older pupils can be expected to develop skills and confidence which they will later apply to working with their own children, as parents. This could be one of the most important long-term effects of Peer Tutoring projects. It should be a particularly important effect in areas in which there is no tradition of parents helping pupils with educational activities.

Methods Of Learning

Many schools offer the experience of learning in a variety of ways such as from video or from computers. Peer Tutoring offers another learning method and can also amplify the effectiveness of technology-based methods.

Learning from video

"Distance learning" is highly efficient and much of what pupils learn in school subjects could be put onto video tapes and is being put onto video tapes. Yet there is an understandable resistance to the idea of pupils going to school to "watch television", especially in view of how much television they watch already. The whole image is far too passive, even if the results might be cost-effective. If however, video programmes of a few minutes showed pupils how to tutor in a topic, this use of video would probably be more acceptable and more effective than leaving pupils as passive viewers. Pupil can watch a video on a topic for a few minutes and then tutor on the topic for 20 or 30 minutes.

This use of videos for training tutors would take care of another problem reported by teachers running tutoring projects: "not enough time to train tutors".

Computer assisted learning and learning about computers

Older pupils can greatly assist younger pupils in learning how to use computers. Indeed, there are usually many pupils of all ages who have themselves become far more expert on computers than some of their teachers. The existence of a Tutoring Centre in which it is expected that pupils help each other would encourage teachers to make full use of the expertise which resides in these pupils. Furthermore, given the present state of software, which is not yet as user-friendly or bug-proof as it might be, children working at computers often need more close and individual guidance and supervision than a teacher can possible provide. They can benefit considerably from having a helpful older pupil at their side.

Graded tests and modular courses

As more subjects introduce regular assessment and certification, as in "graded tests", one problem will become particularly acute: how to take care of those who need to re-sit one test although most of the class is moving on. These "repeat" pupils could benefit themselves and others by revising the work by means of preparing a series of tutorial sessions.

Of course, some might wonder if it is appropriate to have those who have failed a topic teach the topic to younger pupils. Indeed the answer may seem obvious: it is not. But where is the empirical evidence? In fact, slow tutors, properly prepared and supervised, can be very effective. A common mistake of more able pupils is to move through the material too quickly, believing that if they have stated something then the pupil has learnt something. Slower tutors are more laboured and repeat instructions more often, characteristics which make them very effective for some tutees.

Possible Perceived Problems

Some doubts which might be concerning the reader are considered below.

The question of costs

What level of funding is needed by any school wishing to use Peer Tutoring? Studies of Peer Tutoring projects in the United States have shown that they are run at a variety of cost levels and are effective at very low cost levels as well as very high cost levels (Levin, Glass, & Meister, 1984; Hartley, 1977). If two teachers in the same school simply arrange to pair up their classes for cross-age tutoring the above-normal costs are essentially zero; it is just another way of teaching. Another example of about zero costs was provided by a school which freed a member of staff from normal teaching duties, by general consensus among the school staff, in order to run tutoring projects. Feeling that the pupils gained so much from the tutoring projects, the staff were willing to take an extra pupil or two into their classes in order to have the projects continued with maximum effectiveness. Note that the overall pupil-teacher ratio is not affected: it is a matter of assigning tasks.

This is not to pre-judge the matter of costs, however. They can be kept very low but many more explorations are needed with projects run at different cost levels before the choices available to decision-makers can be clearly spelled out. It is for this reason that costs should be assessed in the running of the Tutoring Centre, despite the difficulties involved.

It should not be forgotten that costs must be evaluated against feasible alternatives. For example, the cost of placing difficult pupils in special units is high, and the "sin bin" label may not in the long run promote good socialization into society. An effective Tutoring Centre in a school could probably reduce the numbers of pupils whom the school could no longer contain, avoiding problems and saving costs. If this case were accepted it would be reasonable to ask for considerable funds to enrich a Tutoring Centre. These are difficult areas to assess but an attempt must be made.

Would parents object?

This is a problem which is often anticipated but rarely manifested in practice. The pupils enjoy tutoring so much that their parents are pleased rather than displeased. In a survey of 94 projects in the US (Fitz-Gibbon, 1978) schools were asked to what extent "parent objection to the project" was a problem. The results were:

88 responded "This was definitely not a problem."
11 responded "I do not think this was a problem."
1 responded "Uncertain."
0 responded "I think this was a problem."

0 responded "This was definitely a problem."

Indeed, "objects from parents" was the least of all the problems acknowledged. (The major problem was timetabling and the second most frequently reported problem was "More demand for tutoring than we could accommodate" a rather positive "problem".) In any case, since the research evidence that both tutors and tutees benefit from Peer Tutoring projects is so strong, schools can readily justify their use of the procedure.

Would unions object?

Peer Tutoring is not a way to replace professional teachers with unpaid, non-professional pupils; it is a way to enable professional teachers to be more effective. Essentially it is a teaching technique.

To emphasise that Peer Tutoring is not a threat to teacher-pupil ratios or to teachers' professionalism two distinctions are valuable. First, *tutoring is not teaching*. The teaching role includes diagnosis and prescription. The teacher selects the content to be taught, often the methods to be used and the pace at which the instruction should proceed. The teacher tests the pupils and diagnoses problems and it is the teacher who trains the tutor in the first instance. The tutors simply convey some information in a one-to-one situation; this is not teaching.

The second important distinction is between "Tutorial Service Projects" and "Learning by Tutoring" projects (Fitz-Gibbon, 1978). In a Tutorial Service Project the main aim is to provide one-to-one instruction for tutees, to provide a service. Thus sixth formers might help with remedial reading. It is a reasonable kind of project if the sixth formers are volunteers (e.g. Crone, & Geddes, 1978) but it is suggested that Learning By Tutoring projects are more appropriate and avoid the possible objection that pupils are being "used".

Recommendations

The major recommendation is to try out Peer Tutoring either with small scale projects involving two classes or by creating a "Tutoring Centre": a large room (which should be available due to falling rolls) equipped appropriately. The bare essentials are tables or desks at which pairs of pupils can sit for the tutoring sessions. It is desirable that these are arranged in such a way that the tutoring pair is not distracted by others. An arrangement found highly effective is to create booths around the outside walls. Tutors and tutees sit in the booths and the supervising teacher has materials on a table in the centre of the room and is available for help when summoned by a tutor to a booth. The teacher will have prepared the tutors, preferably before each session, but problems may still arise needing the teacher's help.

Conclusions

The effort or organising Peer Tutoring may be worthwhile just because pupils enjoy it. That they also learn effectively and tutor younger pupils effectively represents an added bonus, a bonus which, according to a great deal of research, can be quite well relied upon to appear. There is also the "hidden curriculum" in Peer Tutoring to be considered. Peer Tutoring encourages cooperation among pupils, in marked contrast to the competition which many examination-related activities encourage. The admirable, strong vein of idealism in many, if not indeed in all, teenagers is encouraged and developed; learning becomes a means to help

others in their community, not only a route to self-aggrandisement, a way to get qualifications, a way of getting ahead.

If notions of the hidden curriculum and helping relationships are not appealing, then hard-nosed cost-effectiveness arguments can be advanced, with hard-nosed evidence as presented by the study from Stanford described at the beginning of this article.

Peer Tutoring has great potential and an appeal as broad as the tough-minded/tender-minded continuum in attitudes.

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