COLLABORATIVE INSTRUCTION TO PROMOTE INCLUSION

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Collaboration is fundamental to creating an inclusive learning environment in which responsibility for successfully educating a diversity of learners is shared amongst the members of the school community. Collaborative organisational structures support a school climate of teamwork, cohesion, shared responsibility and sense of purpose. In order for diversity to enrich student learning, educators must create positive social environments that avoid isolation, rejection and stereotyping, and structure instruction to promote high levels of interaction that is supportive, respectful and accepting of all students. This chapter outlines the key features of collaborative learning for both professionals and students and suggests some practical guidelines for enhancing success.

Collaboration

In order for inclusion to be successful, collaboration should occur at all levels including collaboration with teachers and other professionals, and with families and members of the broader school community. Collaborative organisational structures support a school climate of teamwork, cohesion, shared responsibility and sense of purpose. A variety of collaborative structures have emerged that support and enhance professional collaboration, including peer collaboration, collaborative consultation and cooperative teaching. The question about how instruction might be provided effectively and flexibly to the diverse range of students in our classrooms has generated a number of alternative instructional strategies. Schools can be structured competitively, individualistically or collaboratively. In competitive and individualistic structure, students typically compete with each other for letter grades awarded for submitted work or performance on exams. Under this structure a limited number of students achieve high grades, students tend to work independently and collaboration amongst students is not encouraged. There has been substantive research over the past 90 years that has compared achievement in collaborative arrangements with achievement in competitive and individualistic learning. These studies have provided strong support for the effectiveness of collaborative instruction for improving social and academic competence for students of diverse abilities. Collaborative learning benefits students in many ways, including higher academic achievement (Johnson and Johnson 1989; Webb et al. 1995; Slavin 1995, 1990; Tomlinson et al. 1997; Putnam 1998), self-esteem (Johnson and Johnson 1989) and peer relationships (Johnson et al. 1986), and positive relationships between students and teachers (Tomlinson et al. 1997). Meta-analyses and other reviews of research (Slavin 1983; Educational Research Service 1989; Natasi and Clements 1991; Wade et al. 1995; Johnson and Johnson 1989) have provided positive support for the effectiveness of collaborative learning. Furthermore, these studies demonstrated that, compared with competitive or individualistic learning, students who learned in a collaborative environment were more actively and fully engaged in their learning, demonstrated better critical thinking and reasoning skills, generated more novel ideas when presented with problems and transferred more of what they learned to new contexts.

Active involvement in learning has been shown to be especially important for students with disabilities and others who tend to be passive in academic settings. Collaborative learning also reduced students' levels of stress and anxiety when compared with competitive methods, and promoted more positive attitudes toward the content matter and to the learning experience itself, and increased retention. Collaborative instruction also enables students to develop important peer relationships that contribute to social development. The benefits of collaborative instruction are particularly important in influencing the engagement of students who are at risk of being marginalised.

Advantages of using collaborative instruction

There are many advantages of collaborative instruction and they can be summarised as:

• interactive and cooperative rather than competitive and individualistic

• individualised learning goals and individual accountability

• structured and positive learning in heterogeneous groups

• active participation and higher levels of engaged time compared with teachermediated instruction

• improvement in self-esteem and attitude towards academic tasks

• increased participation of all students in classroom learning

• higher academic achievement and retention

• ideal learning context for teaching, practising and reinforcing pro-social behaviours

• improvement in peer and student-teacher relationships

• increased respect for diversity

• collaborative skills are valued by society for work and leisure.

A number of collaborative instructional strategies that are simple to implement can increase a teacher's effectiveness in teaching the diverse range of students in their classroom. Cooperative learning, peer tutoring and reciprocal teaching are examples of collaborative instructional strategies that structure student interaction in heterogeneous groups, encourage mutual interdependence and provide for individual accountability.

Cooperative learning

Cooperative learning encourages collaboration through structured interaction in small groups. As the name implies it involves students in cooperation for a shared outcome. One of the goals of a cooperative learning is to enhance individual student understanding and retention of whatever is being taught through group work. Another is to develop positive attitudes

toward subject matter and toward learning in general. Cooperative learning also helps develop interpersonal and social problem-solving skills. The characteristics of cooperative learning include:

•   face-to-face interaction

•   positive group interdependence

•   individual accountability

•   emphasis on tasks

•   responsibility, appropriate use of interpersonal and small-group skills

•   group processing.

Setting up cooperative learning and making it successful

Using cooperative-learning groups as an instructional strategy requires some modification to more traditional instructional procedures and planning. Teachers have not always implemented cooperative learning effectively. Further, not all cooperative learning groups lead to collaboration (Cohen and Lotan; Hollins et al. 1994, 1995) or demonstrate positive outcomes for all students (Blumenfeld et al. 1997). So what makes a cooperative-learning group successful? Research has identified several strategies that teachers can use to enhance the effectiveness of cooperative-learning groups.

Twenty strategies to enhance effectiveness of cooperative-

learning groups

1.   Assign students to heterogeneous groups.

2.   Assign students to small groups of optimal size (4–6 students).

3.   Decide on a group composition that will result in a high level of participation and cohesiveness in the group.

4.   Review and modify group composition regularly.

5.   Arrange seating in a circle so that all students can see each other and no one person is seated in a position of 'authority'.

6.   Select a task that students are willing to do and that is effective in engaging students in the content to be learned.

7.   Incorporate manipulative materials to encourage involvement and to provide a focus for group activities.

8.   Specify both the academic and collaborative objectives.

9.   Establish rules for peer involvement in groups.

10.   Determine the role assignments (e.g.encourager, observer, recorder, research runner, includer, checker etc.).

11.   Teach students group-interaction skills e.g.how to question, listen, share, paraphrase and participate.

12.   Monitor student interactions.

13.   Practice acting in the role of facilitator.

14.   Provide adequate spacing between groups to minimise distraction.

15.   Promote interdependence along with individual responsibility.

16.   Use some form of individual and group accountability.

17.   Individualise the criteria and task requirements so all students have an opportunity for success.

18.   Provide feedback to students on both the task and the process.

19.   Include student evaluation and reflection of group performance.

20.   Recognise outstanding group performance.

Assigning students to cooperative learning groups

The first issue for teachers planning a cooperative-learning (CL) activity is how to constitute the groups. First, what is an appropriate size? The optimum size suggested for CL groups is between four and six students. Fewer students may not provide sufficient differing points of view. More students may prevent group cohesion or cause some students to withdraw completely from active participation. A larger group requires more time to develop productive collaborative relationships.

Heterogeneous groups composed of students of different ethnic backgrounds, genders and races, and with varying learning styles and achievement levels, are preferable. Students of different abilities should be equally distributed in each group. Students at higher levels of competence may be better at explaining concepts to others in the group and may do so more frequently. The process of explaining will improve these students' understanding while other students can benefit from the explanations provided by these peers. Further, the development of intellectual argument and acceptance of a variety of perspectives promotes mutual construction of meaning and is vital for the social interaction and development of all students. Grouping students of varying abilities and achievement levels typically leads to a greater variety of ideas and more frequent giving and receiving of explanations in discussion.

It is important to remember that forming heterogeneous groups does not mean randomly selecting students and assigning them to groups. Therefore, when thinking about assigning your students to groups, try to view them along a continuum of a number of characteristics. Some characteristics may be important for particular groups or tasks. For example, some

students may be particularly proficient at hands-on construction or dramatic performance or music. Others may be more or less socially skilled or verbal in a group context. Grouping students who can stay focused on a task with those who find it more difficult to do so may be an effective way to create a group with complementary styles. By observing groups and changing their composition regularly you can take advantage of individual students' strengths and capabilities and ensure that the same students are not always the most skilled in the group. Assigning each person in the group a specific role and changing the roles is also very important to ensure that one or two students do not dominate or take over the role of leader in the group and that everyone has the opportunity to function in each of the differing roles.

The manner in which the teacher establishes the CL experience is also important for promoting positive outcomes. Teaching students how to work in groups, and clearly outlining the learning task and expectations of students can have a positive effect on the quality of the group interaction. Students with disabilities should be placed in groups and monitored to ensure that participation is successful.

Selecting the task

Teachers should attempt to construct or select tasks that will engage all students in the content to be learned. Tasks that lend themselves to collaboration are those that have more than one solution, that can be expressed in a variety of formats and, most importantly, that require discussion and explanations in order to demonstrate student thinking. Stein et al. (1996) found that a teacher's choice of task could influence students' thinking and learning. Emmer and Gerwels (2002) found that the use of manipulative materials that are shared by group members was an important characteristic of more successful CL activities. The manipulative materials encouraged student involvement and helped provide a focus for the group activities. Finally, the CL task must be clearly defined so students understand what is expected from them in the assignment.

Promoting positive interdependence

Successful CL activity creates positive interdependence amongst group members who support, assist and encourage each other. This happens when the group's goal or product outcome depends upon all of the group members' actions. No single student should feel successful until every member of their group is successful—in achieving both their individual learning task as well as their group learning task. Interdependence builds group cohesion and improves performance.

Example: **Group interdependence**

In this example, the group's task is complete when every member of the group can give one rule for 'good listening'. Achieving this group goal depends on the performance of every member of the team. Each member of the group will be a specialist for a different part of the narrative—for instance, one person will specialise on the characters, another on the plot, another on the setting. The group must cooperate on how to put the narrative together.

Group participation: Doing this task depends on the participation of every member of the team. Each member of the group will have a different role. Your group will be credited on how well each of you performs in that role. One of you will be the encourager and will be responsible for getting everyone to state their ideas, another will be the checker and will need to check that everyone can say how your group solved the problem.

Reward for this group's achievement depends on the performance and the participation of every member of the team in different roles.

It is not always easy to design activities with task or role interdependence. Emmer and Gerwels (2002) suggest that interdependence may not be needed in every lesson. When interdependence is absent from a lesson, 'teachers can use other compensatory features to encourage group interaction and involvement' (p. 87).

Individual accountability: Individual goals

Interdependence ensures that each student's contribution to the task is important for the group's success. Additionally, it is vital that each student is individually responsible for his or her own success. In an observational field-based study of 18 school teachers experienced in the use of CL, Emmer and Gerwels (2002) found that the use of individual or group accountability (or both) was associated with lesson success. Accountability can vary with each student. Each student will be responsible for learning something but not every student will be expected to have learned the same thing. Individual evaluations are vital for determining what each student has learned. Teachers can also encourage students to evaluate their own learning and performance in the group.

Increasing individual accountability

Some ways a teacher can increase individual accountability is to require each student to:

•   perform an identifiable part of the group task

•   record his or her observations in individual notebooks (to be collected and read)

•   record individual work contribution (daily) in a notebook

•   report individually on group work

•   evaluate their individual performance—the achievement of their goals and how well they functioned within the group.

Procedures for accountability should be balanced to maintain individual responsibility along with collaborative processes but without increasing teacher preparation and assessment time.

Monitoring the group functioning

The close monitoring of CL groups is essential for their success (Emmer and Gerwels 2002). The teacher must take an active role in monitoring the task progress of the groups and group interaction. Emmer and Gerwels (2002) suggest monitoring is needed at the beginning of a

CL session to ensure students understand their task, and during the activity to identify any academic or group interaction difficulties. It is also an opportunity to clarify instructions, remind students about effective collaborative and communication strategies and to answer questions. Teachers should observe individual participation as well as group performance and the quality of the interaction among the students. Who is participating and who, if anyone, is not? Are the behaviours necessary for successful CL (listening, encouraging, volunteering ideas, negotiating) in the students' repertoires? To what extent do students provide explanations and demonstrations, paraphrase and question each other?

Teachers can also have one or more students act as an observer for the group—monitoring encouragement, interruptions and participation. The 'Observation wheel' (see Box 8.4) is an excellent tool for structuring these activites. This information, when used constructively, not punitively, can serve as a basis for enhancing students' reflection, evaluation and social skills development.

Observation wheel

1.   Use one observation wheel for each five-minute interval.

2.   Place the names of the students on the wheel, exactly as they are sitting in the group.

3.   Indicate when a student speaks to another student with an arrow pointing in the direction of the receiver.

4.   Indicate further messages with marks across the shaft of the arrow

5.   Place an * against a student's name every time he or she interrupts or talks over another member.

6.   Place a next to a student's name every time he or she encourages another member to participate.

Some of the things students can look out for to help compile the observation wheel include:

•   patterns of communication within the group

—Did members of the group participate equally?

—Who talked and to whom? Did some students talk more than others?

—Did some students not talk at all?

—How often did individual students talk, and for how long?

—Did some students interrupt others?

—Did some students encourage others?

       —Was every member of the group listened to? If not, why not?

—Did the patterns of communication change from the first part of the

—session to the later stages?

• information sharing

—How was information in the group shared?

—Was the needed information easily obtained by all group members?

—Did students offer their information to other students at appropriate times?

—Did students request each other's information?

—Did students encourage others to share information?

—Did students respond positively to other students' contributions and suggestions?

—Did students ask each other questions or paraphrase to clarify their understanding of other students' information?

• decision making and problem solving

—Was the information of all group members utilised?

—How did the group make decisions?

—Was there an obvious leader/organiser?

—Was the problem solving of the group effective?

—What problems did the group have in working together?

—How could problem solving be made more effective in this group?

Feedback to students

Information gained from informal observations and/or using the observation wheel should be used to provide feedback to students. Emmer and Gerwels' (2002) findings that more successful CL lessons were higher in teacher monitoring and feedback emphasises the importance of these activities for identifying difficulties and success in CL groups. Teachers can use this information to modify teaching, redirect group activities and thus help CL groups work effectively. When a teacher or student gives feedback to the group that arises from using the observation wheel, it is essential that the feedback summarises the patterns of communication, but does not name any individual. For example, using the information recorded on the observation wheel the observer could say:

In this group session some members interrupted several times. More than one member of this group encouraged other members to participate. Some members did not participate at all or only spoke to another member once or twice. As time went on, only a few members of the group actively participated in the decision making.

Group discussion arising from teacher or student observations should also occur without reference to individual students:

What can we do to increase the participation of all members of this group? Does anyone have suggestions for improving the quality of the communication or the decision-making of this group?

Student evaluation and reflection

Observational information can also be used in conjunction with group reflection and evaluation at the end of a session. Students can be asked:

•   How did you feel about the amount of your participation?

•   What prompted or prevented your participation?

•   What could have been done to gain wider participation?

•   To name something each member did that was helpful for the group.

•   What is one thing you could do to make the group function better?

Teachers can also have students design their own evaluation form.

Teaching cooperative learning skills

After observing students and determining what their various communication and group skills are, teachers can target particular skills for further development. Explicit instruction may be necessary for learning rules , expectations for appropriate behaviour and for improving group-interaction skills (how to: question, listen, share, paraphrase and participate). Teaching should always include modelling of good performance of the skill, practice and feedback on performance.

If CL is to be successful, the learning experience needs to be structured to consider the social skills of all the students involved. All students should be encouraged to actively participate by volunteering their ideas and to listen to the ideas of others before selecting a particular solution to a problem. One CL skill that is very important for students is the ability to respond to a number of differing opinions. A range of differing opinions provides students with an opportunity to question their own views and to search for more information. However, in order for this process to be constructive, students must have developed adequate social skills to efficiently communicate their own ideas as well as listen to the ideas of others and to handle praise and criticism. Students' CL skill repertoire should be balanced between behaviours that foster encouragement, sensitivity and friendliness and those that contribute a sense of assertiveness, control and strength (Riches 1996).

Rules for active listening in a CL group

1.   Look directly at the face of the person who is speaking.

2.   Stop writing or any other work and be quiet while the other person is speaking.

3.   Keep your mind on the content of what the other person is saying (make mental pictures or repeat key words quietly to yourself to help make sense of what they are saying).

4.   Listen to how the speaker is feeling as well as to what is being said, and pay attention to his or her facial expressions.

5.   Encourage the speaker with head nods and other positives.

6.   Do not make a decision until the speaker is fully heard.

7.   Ask questions and paraphrase to check and confirm your understanding of both the content and the feeling of what has been said.

Five-point scale of listening

1.Not-listening:

•   distracted

•   does not look at speaker's face nor acknowledge or respond to speaker in any way

•   fidgets or writes, draws etc. during speaking.

2.   Selective listening:

•   only listens to one part of the message, e.g. content (what is said) or how it is said, not both

•   wrongly anticipates what is to be said—interrupts

•   sometimes looks at speaker, other times tunes out—gazing somewhere else

•   rarely acknowledges speaker or responds to what is said.

3.   Learning to listen:

•   maintains good eye contact and looks at speaker's face

•   acknowledges with facial expressions and gestures (e.g. head nod) in keeping with message

•   listens to content and emotion

•   sometimes interrupts and wrongly anticipates what is to be said

- does not ask clarifying questions or repeat back what has been said.

4. <u>Good listening:</u>

- waits for key pauses to acknowledge speaker

- appropriate level of eye contact and use of gesture

- repeats main points of speaker without expanding

- does not interrupt

- rarely encourages

- sometimes asks clarifying questions.

5. Active listening:

- is very involved and interested

- verbal and non-verbal acknowledgments are often given as speaker pauses

- conveys warmth and interest by positive praise

- repeats key points and volunteers more information

- conveys an understanding of key emotions or their own interpretation of what they understood from speaker

- asks clarifying questions

- encourages speaker to expand and talk further when appropriate

- changes role from listener to speaker only when speaker is fully finished.

Peer-mediated instruction and interventions

Peer-mediated instruction and interventions (PMII) is the collective name given to the various teaching alternatives that involve students working together to support each other's learning. Students' peer-teaching roles vary from providing direct instruction and modelling (peer tutoring) to encouraging and monitoring performance. The focus of these activities is varied and can have interpersonal, cognitive as well as academic objectives and can also be combined with self-management.

Research has consistently demonstrated that PMII has academic and interpersonal and social benefits for a range of students including those with disabilities (Utley et al. 1997; Maheady et al. 2001; Utley 2001). As with the other collaborative instructional alternatives presented in this chapter, there is substantive evidence to support the use of PMII in facilitating the inclusion of students with disabilities, including enhancing academic performance, improving

interpersonal relationships and the acceptance of individual differences (Utley 2001). In reviews of PMII, Maheady et al. (1991, 2001) and Utley et al. (1997) have highlighted the positive benefits of exemplary peer-teaching programs such as classwide student tutoring teams (CSTT) (Maheady et al. 1991) and Numbered Heads Together (NHT) (Kagan 1992). As such, the systematic use of PMII provides an effective solution for teachers attempting to meet the instructional challenges of the diverse range of students in their classrooms today.

PMII can be used with individuals and small groups, cross-age or on a classwide basis. PMII includes peer modelling, peer-initiation training, peer networking and peer tutoring (Utley et al. 1997). A special series of remedial and special education (RASE) provides an in-depth analysis of PMII along with a synthesis of research findings and descriptions of good practice (Utley 2001). These authors conclude that PMII components are:

highly effective for students with special needs because they allow teachers to individualize instruction ... and the academic and social benefits associated with such programs can be extended to non-disabled pupils in the same setting. (Maheady et al. 2001, p. 70).

Maheady et al. 's (2001) summary of the research on PMII documents the capacity of these instructional arrangements for increasing student achievement, minimising behaviour-management issues and enhancing social skills.

Advantages of PMII

Among the many advantages of PMII are:

•   create learner-friendly instructional environments

•   increase student on-task time and response

•   reduce teacher-student ratios as students are in effect the tutors for one another

•   increase opportunities for students to receive feedback and encouragement

•   students prefer peer-teaching instructional alternatives.

Teachers should ensure that peer-mediated instruction and interventions are implemented correctly. Omission of any of the components of a PMII can compromise the effectiveness of the results (Maheady 2001). Frequent monitoring of the progress of all students is also vital to determine whether each and every student is making the intended gains (Vaughn et al. 2001). Like all collaborative arrangements, successful peer collaborations require teachers to engage in careful planning and student training. Teachers will therefore need to employ many of the same strategies suggested earlier in this chapter, for implementing CL groups, if peer collaborations are to be both successful and effective. In short, careful planning, student training, correct implementation and frequent monitoring of student progress are vital for successful peer collaborations.

Peer tutoring

Peer tutoring is a general descriptor for the CL strategies involve pairs of students in teaching and learning on a one-to-one basis. Tutees are the students who receive the instruction or encouragement from the tutors. In cross-age tutoring arrangements an older student acts as a tutor for a younger student. In reciprocal teaching arrangements students alternate between tutor and tutee roles. The effectiveness of peer tutoring is supported by substantial research evidence, and provides teachers with another instructional alternative to cater for the diverse range of students in their classrooms today. Peer tutoring has been found to have a significant positive influence on:

•students' academic performance (Hedin 1986; Gartner and Lipsky 1990; Topping and Lindsay 1993), particularly for the learning and application of basic skills or factual knowledge

•the social acceptance of students with disabilities and increasing interactions amongst students with disabilities and their non-disabled peers (Garcia-Vasquez and Ehly 1992; Fulton et al. 1994)

•affective and social skills development for both the tutor and tutee (Mastropieri and Scruggs 1987; Foreman 2000)

•self-efficacy and attitudes to learning (Cohen et al. 1990)

•higher-order cognitive-skills development (e.g. Pallincsar and Brown 1984; Davidson 1994; Vaughn et al. 2001; Gersten et al. 2001)

•organisational skills and completion of academic class work (Coenen 2002).

Advantages of peer tutoring

There are many reasons why peer tutoring should be used including that it:

•allows students to have access to one-on-one assistance

•provides opportunities to learn and interact socially in mutually supportive ways

creates learning in a supportive context and improves self-efficacy

•assists others in tasks

•heightens engagement of the learner with both the materials and the task

•gives an opportunity for more extended practice on a task than might ordinarily be possible

•is flexibile, cost effective and easily implemented along with existing programs

•allows modelling of academic and social skills by a peer

•improves attitudes about students with disabilities

•enhances social relationships and decreases negative behaviour

•reinforces academic skills

•encourages positive social interaction

•provides an opportunity to experience the value of learning together and helping another

•is time efficient

•is effective with all ability levels

•produces important affective and skills-based improvements for both the tutor and tutee.

Implementing peer tutoring

Implementing peer tutoring in the classroom can involve matching two students for a specific activity or setting up a peer-tutoring program for your whole class or even the entire school. You may wish to develop your own system or implement one of the many well-researched programs that already exist, such as the Class-wide Peer Tutoring Program (Greenwood et al. 1989).

A student of any age can act as a tutor or tutee. Tutors may be approximately the same age or year level as their partner or may be older and, with specific training, may have several roles.

Successful peer-tutoring programs

As with other collaborative alternatives, the positive benefits can be enhanced by ensuring these elements are included:

•intensive and explicit training of tutors before beginning any program

•'active'learning activities

•structured and carefully prescribed lesson

•tutoring sessions scheduled to occur frequently but to be of short duration (e.g.four to five times a week for no longer than 30 minutes per session)

•a positive climate in which tutors are made aware of the importance of frequent positive feedback and encouragement for their partners

•high levels of positive feedback and encouragement for both tutors and tutees

•regular monitoring of students' progress, engagement, student interaction and rapport.

There have been many reasons given for the positive effects of peer tutoring, not the least of which is research evidence that states that face-toface instruction leads to an improvement of two standard deviations over conventional class teaching, with 98 per cent of individually taught learners scoring above the average for group-taught learners (Cohen et al. 1982; Bloom 1984; Wasik and Slavin 1993; Pinnell et al. 1994).

Peer tutoring to support literacy and student reading

Several studies provide support for the use of peer tutoring as an adjunct to support literacy and student reading—often referred to as paired reading. While the specific technique utilised varies, the research literature in support of paired reading is substantial (Devin-Sheehan et al. 1976; Eldridge 1990; Topping and Lindsay 1993; Fuchs et al. 1997) with attainment gains for both tutors and readers widely reported (Topping 1987; Topping and Mc Knight 1987).

Reciprocal teaching

Reciprocal teaching (RT) was developed as an instructional strategy to improve reading comprehension in small groups of students (Pallinscar and Brown, 1984; Pallinscar et al. 1989). RT activities support students' participation through the practice of specific comprehension strategies with peers. While reading, for example, RT students learn and practise the following comprehension strategies: generating questions, summarising, clarifying word meanings and predicting subsequent content. Initially the teacher models the strategies, then as students become more confident and competent through guided practice, they take increasing responsibility for mediating discussion with their peers. Sessions gradually become dialogues where students prompt each other to use, apply and verbalise a strategy and comment on the application.

The premise of RT is that by engaging in structured and active dialogue with a peer, students with learning difficulties will increase their participation and improve their understanding (Pallincsar and Klenk 1992; Rojewski and Schell 1994). It is expected that the thinking or cognitive processing that is accomplished between learners during RT activities will eventually be accomplished by individual students. This notion that individual cognitive development is constructed through participating in social groups is consistent with the Vygotskian perspective. RT is also said to be effective for students with learning disabilities because it supports self-regulation and motivation and gives student learning a sense of fun (Borkowski 1992). Research has also demonstrated that reciprocal teaching can be effective in a variety of settings (Pallincsar et al. 1989; Fillenworth 1985; Vaughn and Schumm 1995; Lederer 2000).

Starting reciprocal teaching (RT)

Step 1: Teach the whole class the four comprehension strategies: predicting, clarifying, questioning and summarising.

Step 2: Form groups of approximately six members with a range of reading abilities and within the group form pairs of students with similar reading abilities.

Step 3: Start RT groups with direct and scaffolded instruction. The level of teacher directedness and the amount of scaffolding will depend upon the students' level of skill with each of the four strategies and in working collaboratively in a group. Teachers who have already taught collaborative skills, e.g.active listening (see Box 8.6), may be able to use a less directive approach.

Step 4: Increase RT group independence by reducing level of teacher scaffolding and change teacher role to one of facilitator.

Step 5: Introduce writing into each RT step.

Step 6: Assess students' comprehension by asking higher-level comprehension questions.

(Hacker and Tenent 2002, pp. 716–18)