Chapter 3 Teaching in Small Groups

INTRODUCTION

This chapter assumes you have been asked to teach a small group. It also assumes that the group you are to take will meet on more than one occasion and therefore will present you with the opportunity to establish and develop a productive group learning atmosphere. Small-group teaching can be a most rewarding experience. However, to achieve success you will need to plan carefully and to develop skills in group management. You should not fall into the common error of believing that discussion in groups will just happen. Even if it does, it is often directionless, unproductive, unsatisfying and perhaps threatening. To avoid these problems you will need some understanding of how groups work and how to apply a range of small group techniques to achieve your goals.

THE IMPORTANCE OF SMALL-GROUP TEACHING AND LEARNING

Teaching in small groups enjoys an important place among the teaching and learning methods commonly found in education for two rather different reasons. The first of these can be described as **social** and the other as **educational**. For many students in higher education, and especially those in the early years of their studies, the small group or tutorial provides an important social contact with peers and teachers. The value of this contact should not be underestimated as a means for students to

meet and deal with people and to resolve a range of matters indirectly associated with their learning, such as difficulties with studying, course attendance and so on. Such matters will, of course, assist with the attainment of the more strictly educational objectives of your course.

Among the educational objectives that you can best achieve through students participating in small group methods are the development of higher-level intellectual skills such as reasoning and problem-solving, the development of attitudes, and the acquisition of interpersonal skills such as listening, speaking, arguing and group leadership. These skills are important to all students who will eventually become involved with other professionals, the community, learned societies and the like. As such, they are important in the process of becoming lifelong learners. The distinction between social and educational aspects of small-group teaching is rather an arbitrary one but it is important to bear it in mind when you plan for small group teaching.

WHAT IS SMALL-GROUP TEACHING?

Most of what passes for small-group teaching turns out to be little more than a lecture to a small number of students. Nor is size, within limits, a critical feature for effective small-group teaching. We believe that small-group teaching must have at least the following three characteristics:

- active participation;
- face-to-face contact;
- purposeful activity.

Active participation

The first, and perhaps the most important, characteristic of small group teaching is that teaching and learning are

brought about through discussion among **all** present. This generally implies a group size that is sufficiently small to enable each group member to contribute. Research and practical experience have established that between five and eight students is ideal for most small group teaching. You will know that many so-called small groups or tutorial groups are very much larger than this ideal. Although a group of over 20 students hardly qualifies as a small group, it is worth remembering that, with a little ingenuity, you can use many of the small group teaching procedures described in this chapter with considerable success with larger numbers of students. Generally speaking, though, in such a situation you will be looking for a technique that allows you to break the number down into subgroups for at least some of the time.

Face-to-face contact

The second characteristic of small-group teaching is that it involves face-to-face contact among all those present. You will find it difficult to conduct satisfactory small group teaching in a lecture theatre or tutorial room with students sitting in rows. Similarly, long boardroom-type tables are quite unsuitable because those present cannot see all other group members, especially those seated alongside. Effective discussion requires communication which is not only verbal but also non-verbal, involving, for example, gestures, facial expressions, eye contact and posture. This will only be achieved by sitting the group in a circle.

Purposeful activity

The third characteristic of small-group teaching is that the session must have a purpose and must develop in an orderly way. It is certainly not an occasion for idle chit-chat although, regrettably, some teaching in groups appears to be little more than this. The purposes you set for your small group can be quite wide. They include

discussing a topic or a problem, and developing skills such as criticizing, analysing, problem-solving and decision-making. It is highly likely that you will wish the small-group session to achieve more than one purpose. In universities and colleges, most groups are expected to deal with a substantial amount of content. However, you will also wish to use the small-group approach to develop the higher intellectual skills of your students and even to influence their attitudes. To achieve these various purposes you will need considerable skills in managing the group and a clear plan so that the discussion will proceed in an orderly fashion towards its conclusion.

MANAGING A SMALL GROUP

Small group teaching is considerably more difficult to manage than a lecture because you must take a closer account of the students' behaviour, their difficulties and the emotional aspects of being in a group. To achieve success with a small group you must also have a clear understanding of how a group operates and how it develops. You have particular responsibilities as the initial leader of the group and your role will vary considerably, both within a session and from session to session. For instance, if you adopt an autocratic or authoritarian style of leadership (not an uncommon one) you may well have a lot of purposeful activity but there will be a limited amount of spontaneous participation. You should preferably adopt a more cooperative role where you demonstrate an expectation that the students will take responsibility for initiating discussion, providing information, asking questions, challenging statements, asking for clarification and so on. A successful group is one that can proceed purposefully without the need for constant intervention by the teacher. This is hard for most teachers to accept but is very rewarding if one recognizes that this independence is one of the key goals of small group teaching and is more important than satisfying one's own need to be deferred to as teacher and content expert.

In managing a group, there are two main factors that have to be considered. These are those relating to the **task** of the group and those relating to the **maintenance** of the group. In addition there must be a concern for the needs of each student within the group.

The tasks of the group: Tasks must be clearly defined. This is something that must be high on the agenda of the first meeting. The reason for the small group sessions and their purpose in the course must be explained. In addition, you must initiate a discussion about how you wish the group to operate, what degree of preparation you expect between group meetings, what role you intend to adopt, what roles you expect the students to assume and so on. Because such details may be quickly forgotten it is desirable to provide the student with a handout. Figure 3.1 lists some headings which may be helpful.

FIGURE 3.1 SUGGESTED HEADINGS FOR A SMALL-GROUP HANDOUT

- Course title, description and aims.
- Teacher's name and availability.
- List of students' names.
- How the group is to run (eg teacher's role, students' roles, method to be used).
- Work requirements (eg assignments, case presentations).
- Assessment arrangements.
- Reading matter.

Maintenance of the group: This refers to the achievement of a good 'climate' for discussion. It must be one that is open, trusting and supportive rather than closed, suspicious, defensive and competitive. It is important to establish that the responsibility for this factor rests with the students as well as with the teacher. The firm but pleasant handling of the loquacious or dominating students early in the session or the encouragement of the quiet student to contribute are examples of what must be achieved to produce the required environment for effective group discussion.

The successfully managed group will meet the criteria shown in Figure 3.2.

FIGURE 3.2 CRITERIA FOR A GOOD GROUP (AFTER HILL, 1982)

- Prevalence of a warm, accepting, non-threatening group climate.
- Learning approached as a cooperative rather than a competitive enterprise.
- Learning accepted as the major reason for the existence of the group.
- Active participation by all.
- Equal distribution of leadership functions.
- Group sessions and learning tasks are enjoyable.
- Content adequately and efficiently covered.
- Evaluation accepted as an integral part of the group's activities.
- Students attend regularly.
- Students come prepared.

STRUCTURE IN SMALL-GROUP TEACHING

We mentioned earlier the need to have a clear plan so that the group discussion will proceed with purpose and in an orderly fashion. A structured approach to the task and the allocation of the time available is a useful tool for you to consider. A simple example of such a structured discussion session is illustrated in Figure 3.3. This approach will be particularly helpful when students new to your course may not know how to interpret your simple direction to 'discuss'. The approach is suggested for any course where a reading task has been set.

Note that the structure lays out **what** is to be discussed and how much **time** is budgeted. Such a scheme is not intended to encourage undue rigidity or inflexibility, but to clarify purposes and tasks. This may seem to be a trivial matter, but it is one which creates considerable uncer-

FIGURE 3.3 STRUCTURED CASE DISCUSSION SESSION

1	PRELIMINARIES/HOUSEKEEPING MATTERS	5 MINS
2	A STUDENT PRESENTS THE INITIAL HISTORY AND EXAMINATION FINDINGS OF A WARD PATIENT	5 MINS
3	GROUP ASKED TO GENERATE HYPOTHESES AND DIAGNOSES, DISCUSS IMMEDIATE MANAGEMENT AND INITIAL INVESTIGATIONS	15 MINS
4	INFORMATION PROVIDED ON WHAT THE STUDENT (AND CONSULTANT) THOUGHT WAS THE DIAGNOSIS, WHAT WAS DONE, AND WHICH INVESTIGATIONS WERE ORDERED. GROUP DISCUSSES ANY DISPARITIES	10 MINS
5	STUDENT PRESENTS FURTHER DATA ON INVESTIGATIONS AND PROGRESS. GROUP DISCUSSES ANY DISPARITIES	10 MINS
6	GROUP LEADER OFFERS CONCLUDING REMARKS AND OPPORTUNITY FOR CLARIFICATION OF UNRESOLVED ISSUES	5 MINS
	TOTAL	50 MINS

tainty for students. Keeping to a time budget is very difficult. You need to be alert to how time is being spent and whether time from one part of the plan can be transferred to an unexpected and important issue that arises during discussion.

Another structure is illustrated in Figure 3.4. This structure includes the principle of 'snowballing' groups. From an individual task, the student progresses through a series of small groups of steadily increasing size. There are special advantages in using this structure which are worth

FIGURE 3.4 A SNOWBALLING GROUP DISCUSSION (AFTER NORTHEDGE)

INDIVIDUAL WORK STUDENTS READ BRIEF BACKGROUND DOCUMENT ON TOPIC, READ CASE HISTORY AND EXAMINE LABORATORY RESULTS	10 MINS
WORK IN PAIRS STUDENTS COMPARE UNDERSTANDINGS, CLEAR UP DIFFICULTIES, MAKE PRELIMINARY DIAGNOSIS AND DECIDE ON FURTHER TESTS	10 MINS
WORK IN SMALL GROUP PAIRS REPORT TO THE SMALL GROUP. GROUP DISCUSSES DIAGNOSES AND FURTHER TESTS, SEEKING AGREEMENT OR CLARIFYING DISAGREEMENTS. GROUP PREPARES REPORT FOR WHOLE GROUP	15 MINS
REPORTING BACK TO WHOLE GROUP EACH SMALL GROUP PRESENTS REPORT, TEACHER NOTES MAIN POINTS ON BOARD, BUTCHERS PAPER OR OVERHEAD TRANSPARENCY. AS GROUPS CONTRIBUTE, TEACHER AND STUDENTS OFFER COMMENTS. TEACHER OR STUDENTS ATTEMPT SUMMARY OF POINTS RAISED AND SOME FORM OF CONCLUSION	20 MINS

noting: it does not depend on prior student preparation for success; the initial individual work brings all students to approximately the same level before discussion begins, and it ensures that everyone participates, at least in the preliminary stages.

For teachers of science students there is a wealth of stimulating examples of small group teaching methods in the book *Small Group Teaching in Undergraduate Science* by Black. In one section of this book, which discusses the teaching of intellectual skills, a broad structure is recommended, as shown in Figure 3.5.

FIGURE 3.5 STRUCTURED SESSION FOR TEACHING INTELLECTUAL SKILLS (AFTER BLACK)

- A set of prepared problems.
- A group large enough to be divided for part of the time into four subgroups of about four students each.
- Subgroups working for about half the time on the problems.
- A brief report on the work of each group.
- Class discussion based on the group's reports.

INTRODUCING STIMULUS MATERIALS

A very useful means of getting discussion going in groups is to use what is generally known as 'stimulus material'. We have seen how this was done in the snowballing group structure described previously. The range of stimulus material is really very large indeed. It is limited only by your imagination and the objectives of your course. Here are a few examples:

- A short multiple-choice test (ambiguous items work well in small groups.
- A case study.
- A short open-ended situation on video, such as a person-to-person encounter.
- A patient in a medical or dental course.
- Observation of a role-play.
- Visual materials (eg photographs, slides, specimens, real objectives, charts, diagrams, statistical data).
- An audio-recording (eg an interview, sounds, a segment of a radio broadcast).
- A student's written report on a project, field-work or laboratory-work.
- Material displayed by computer, possibly on the World Wide Web.
- A journal article or other written material, such as an abstract. (The paper by Moore gives an interesting example of this approach using extracts from literary works to help students understand the broader cultural, philosophical, ethical and personal issues of the subject under study. The added benefit, of course, is a broadening of the educational experience of students.)

ALTERNATIVE SMALL-GROUP DISCUSSION TECHNIQUES

As with any other aspects of teaching, it is helpful to have a variety of techniques at one's fingertips in order to introduce variety or to suit a particular situation. Such techniques include:

- one-to-one discussion;
- buzz groups;
- brainstorming;
- role-playing;
- plenary session.

One-to-one discussion

This is a very effective technique which can be used with a group of almost any size. It is particularly useful as an 'ice-breaker' when the group first meets, and is valuable for enhancing listening skills. It can also be used to discuss controversial or ethical issues so that forceful individuals with strong opinions will be prevented from dominating the discussion: they will also be required to listen to other opinions and express them to the whole group. (See Figure 3.6.)

FIGURE 3.6 CONDUCTING A ONE-TO-ONE DISCUSSION

Procedure

- Group members (preferably including the teacher) divide into pairs and each person is designated 'A' or 'B'.
- Person A talks to person B for an **uninterrupted** period of 3–5 minutes on the topic for discussion.

- Person B listens and avoids prompting or questioning.
- Roles are reversed with B talking to A.
- At the conclusion the group reassembles.
- Each person, in turn, introduces themselves before introducing the person to whom they were speaking. They then briefly paraphrase what was said by that person.

B **Use as ice-breaker**

- Group members are asked to respond to a question such as 'Tell me something about yourself' or 'What do you expect to learn from this course?'.

C **General use**

- Group members respond to appropriate questioning, eg 'What is your opinion about...?'.

It is useful to insist on the no interruption rule (though not so much when used as an ice-breaker). Prolonged periods of silence may ensue but person A will be using this time for uninterrupted thinking, a luxury not available in most situations. Often the first superficial response to a question will be changed after deeper consideration.

Buzz groups

These are particularly helpful to encourage maximum participation at one time. It is therefore especially useful when groups are large, or if too many people are trying to contribute at once or, alternatively, if shyness is inhibiting several students. (See Figure 3.7.)

FIGURE 3.7 CONDUCTING A BUZZ GROUP

Procedure

- The group is divided into subgroups of 3–4 students.
- Discussion occurs for a few minutes (the term 'buzz' comes from the hive of verbal activity!).
- A clear task must be set.
- Each subgroup reports back to the whole group.

FIGURE 3.8 CONDUCTING A BRAINSTORMING SESSION

Brainstorming

This is a technique that you should consider when you wish to encourage wide and creative thinking about a problem. It is also valuable when highly critical group members (including perhaps yourself?) appear to be inhibiting discussion. If used frequently, it trains students to think up ideas before they are dismissed or criticized. The key to successful brainstorming is to separate the generation of ideas, or possible solutions to a problem, from the evaluation of these ideas or solutions. (See Figure 3.8.) Before using brainstorming, we suggest you have a look at Stein's book on creativity.

Procedure

- Explain these rules of brainstorming to the group:
  - criticism is ruled out during the idea generation stage;
  - all ideas are welcome;
  - quantity of ideas is the aim (so as to improve the chances of good ideas coming up);
  - combination and improvement of ideas will be sought once all new ideas are obtained.
- State the problem to the group.
- A period of silent thought is allowed during which students write down their ideas.
- Ideas are then recorded (in a round-robin format) on a blackboard, overhead transparency or flipchart for all to see.
- When **all** ideas are listed, and combination and improvement of ideas are complete, discussion and evaluation commences.

Role-playing

This is a powerful and underused technique. It is very valuable in teaching interpersonal communication skills, particularly in areas with a high emotional content. It has been found to be helpful in changing perceptions and in developing empathy. It is not a technique to use without some experience so you should arrange to sit in on a role-play session before using it in your own course. In this regard, colleagues teaching psychology, education, psychiatry or counselling should be able to help you, as will the Green Guide by Ernington.

FIGURE 3.9 CONDUCTING A ROLE-PLAY

Procedure

- Explain the nature and purpose of the exercise.
- Define the setting and situation.
- Select students to act out roles.
- Provide players with a realistic description of the role or even a script. Allow time for them to prepare and, if necessary, practise.
- Specify observational tasks for non-players.
- Allow sufficient time for the role-play.
- Discuss and explore the experience with players and observers.

Plenary session

In many group teaching situations, and indeed at conferences and workshops, subgroups must report back to the larger group. This reporting back can be tedious and often involves only the subgroup leaders who may present a very distorted view of what happened. The plenary session method may help you with these problems. (See Figure 3.10.)

FIGURE 3.10 CONDUCTING A PLENARY SESSION

Procedure

- Subgroups sit together facing other subgroups.
- The chair of subgroup B invites the chair of subgroup A to briefly report the substance of the discussion in subgroup A.

- The chair of subgroup B then invites members of subgroups B, C, D etc to ask questions of any member of group A.
- After 10 minutes the chair of subgroup C invites the chair of B to report on the discussion in subgroup B and the process is repeated for each subgroup.
- The 10-minute (or other) time limit must be adhered to strictly.

USING TECHNOLOGY FOR TEACHING SMALL GROUPS

By combining computers and communication technology, you can make fundamental changes to the way you present and distribute material and interact with your students. By using these technologies, the distinctions between large- and small-group teaching tend to break down, so it is more useful to discuss the matter separately, which we do in Chapter 4.

However, some examples of the ways in which technology can be used to support small-group teaching are:

- by using electronic mail (e-mail) to communicate with one or more students;
- through electronic discussion groups;
- by adopting conferencing techniques using computer, sound and video.

Implementing electronic teaching is very different to other approaches in many ways. For instance, uninitiated colleagues will be totally uncomprehending if you object to being interrupted when you are working at your computer by saying that you are 'teaching'!

One fundamental different between face-to-face teaching and interacting online is that you will be interacting with

what is known as a 'virtual' group. This means that the group does not exist as an entity at any one time or place, but that it is dispersed both in time (within limits) and place, and that the group interacts 'asynchronously' (at different times). Furthermore, there are different rules of behaviour for electronic communication known colloquially as 'netiquette' which both you and your students should observe. To learn more about this topic you can search for it on the World Wide Web. A very good overview is provided at: http:www.albion.com/netiquette/book/index.html or in the book *Netiquette* by Virginia Shea, published by Albion Books in 1994.

WHEN THINGS GO WRONG

You will undoubtedly have a variety of difficulties to deal with in your group sessions. For example, you might decide to ignore the behaviour of a sleeping student or an amorous couple in the back row of a lecture class, providing it was not disruptive, but it would be impossible to do so in a small group. How you resolve problems with the working of the group is critical. An authoritarian approach would almost certainly destroy any chance of establishing the cooperative climate we believe to be essential. It is generally more appropriate to raise the problem with the group and ask them for their help with a solution.

One of your main roles as a group leader is to be sensitive to the group and the individuals within it. Research has identified a number of difficulties that students commonly experience. These are connected with:

- making a contribution to the discussion;
- understanding the conventions of group work and acceptable modes of behaviour;
- knowing enough to contribute to the discussion;
- being assessed.

These difficulties frequently get in the way of productive discussion. They tend to be due to genuine confusion on the part of students, combined with a fear of exposing their ignorance in front of the teacher and their peers. It is therefore essential for you to clarify the purpose of the group and the way in which students are to enter into the discussion. Their previous experience of small group sessions might lead them to see the occasion as only a threatening question-and-answer session. They must learn that ignorance is a relative term and that their degree of ignorance must be recognized and explored before effective learning can begin. A willingness by the teacher to admit ignorance and demonstrate an appropriate way of dealing with it will be very reassuring to many students.

Confusion in the students' minds about how they are being assessed can also cause difficulties. Generally speaking, assessing contributions to discussion is inhibiting and should be avoided. If you do not have discretion in this matter then at least make it quite clear what criteria you are looking for in your assessment. Should you be able to determine your own assessment policy then the following criteria are worth considering:

- require attendance at all (or a specified proportion of) group meetings as a prerequisite;
- set formal written work, eg a major essay, a series of short papers, a case analysis;
- set a group-based task, eg keeping an account of the work done by the group.

The teacher's perceptions of group difficulties may not necessarily match those of the students. A discussion with the group about how they think things are going or the administration of a short questionnaire are ways of seeking feedback.

Once the group is operating it is important to monitor it. You must be sensitive to the emotional responses of the

group and to the behaviour of individual students. When things go wrong, you will find it helpful to access the wisdom of experienced practitioners. The book by Richard Tiberius is a recommended resource.

EVALUATING SMALL-GROUP TEACHING

Evaluation implies collecting information about your teaching and then making judgements based on that information. Making judgements based on what one student says, or on rumour or intuition, is simply not good enough. You must collect information in a way that is likely to lead to valid judgements. However, constant evaluation of small-group activities is not recommended as it may inhibit the development and working of the group. Evaluation may be of two types: informal or formal.

Name ..... **Course** .....

Please indicate your thoughts about the tutorial given by this particular tutor.

Indicate your present thoughts by means of a tick on the four-point scale.

(A) **The tutor**

good group leader	- - - -	poor group leader
fits into the group	- - - -	too forceful
likes opinions		discourages the
questioned	- - - -	questioning of opinions
patient	- - - -	impatient
never sarcastic	- - - -	sarcastic
lively	- - - -	monotonous
pleasant manner	- - - -	unpleasant manner
interested in students	- - - -	not interested in students
interested in my ideas	- - - -	not interested in my ideas
interested in me as an individual	- - - -	does not know me
encourages me to discuss problems	- - - -	unable to discuss problems
treats me as an equal	- - - -	treats me as a subordinate
clearly audible	- - - -	mumbles
stresses important material	- - - -	all material seems the same
makes good use of examples and illustrations	- - - -	never gives examples
explanations clear and understandable	- - - -	quite incomprehensible
appears confident	- - - -	not confident

(B) **The tutorials**

well organized	- - - -	muddled
good progression	- - - -	poor progression
well prepared	- - - -	not well prepared
time well spent	- - - -	a waste of time
		merely repeat lecture
new material covered	- - - -	material
have thrown new light on lecture course	- - - -	irrelevant to understanding of lecture course
overcome difficulties encountered in lectures	- - - -	difficulties not dealt with

(C) **The student's response**

I am fully aware of my progress	- - - -	I seem to be 'working in the dark'
I enjoy contributing	- - - -	I try to say nothing
I look forward to the tutorials	- - - -	I would prefer not to attend
I have learnt a lot	- - - -	I have learnt nothing
I am more inclined to continue with the subject	- - - -	I have developed an aversion to the subject

Advice or suggestions for the future should be written on the back.

FIGURE 3.11 EXAMPLE OF TUTORIAL QUESTIONNAIRE (ADVISORY CENTRE FOR UNIVERSITY EDUCATION, UNIVERSITY OF ADELAIDE)

Informal evaluation: This can proceed from your careful reflection of what happened during your time with the group. You may do this by considering a number of criteria which you feel are important. For example, you may be interested in the distribution of discussion among group members, the quality of contribution, the amount of your own talk, whether the purpose of the session was achieved and so on. Of course, your reflections will be biased and it is wise to seek confirmation by questioning students from time to time. However, the importance of informal evaluations lies in your commitment to turn these reflections into improvements. If you are concerned with your own performance, discussion with the group may be very helpful.

Formal evaluation: One formal approach to evaluation has already been described, the evaluation discussion.

Other approaches include the use of questionnaires and the analysis of video-recordings of the group at work. Standard questionnaires are available which seek student responses to a set number of questions. An example is shown in Figure 3.11.

Although such standard questionnaires can be useful, you may find it more beneficial to design one that contributes more directly to answering questions which relate to your own course and concerns. As questionnaire design is a tricky business, it is recommended that you seek the assistance of a teaching unit. The analysis of videotapes of your group at work is also a task which would require the expertise of someone from a teaching unit or a relevant teaching department such as psychology.

Evaluation discussion

Perhaps a better approach is to use the potential of small-group interaction as a tool of evaluation. We find the evaluation discussion technique to be very useful (see Figure 3.12). An advantage of evaluation discussion is that it can give you feedback on what students are learning, how they feel about their learning and your teaching.

FIGURE 3.12 CONDUCTING AN EVALUATION DISCUSSION

Procedure

- Before the group meeting students are asked to write a 1–2 page evaluation of the group's work focusing equally on their intellectual and emotional reactions to the **processes** of teaching and **what** they are learning.
- Each student reads this evaluation to the group.
- Each member of the group is then free to ask questions, agree or disagree, or to comment.

For success you must be sure to create a non-judgemental atmosphere of acceptance where negative as well as positive information can be freely given. Listen rather than react!

GUIDED READING

For a wide-ranging discussion of the purposes and techniques of small group teaching we suggest you turn to the collection of papers edited by D Blight: *Teach Thinking by Discussion*, SRHE/NFER-Nelson, Guildford, UK, 1986. This monograph also provides a good introduction to the research literature on small groups. Also, *Small Group Teaching: A troubleshooting guide* by Richard Tiberius (Kogan Page, London, 1999) is recommended.

Another excellent guide, to both the theory and the practice of group work, is D Jacques, *Learning in Groups* (Second Edition, Kogan Page, London, 1991).

Books and journals referred to in this chapter:

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Northedge, A (1975) 'Learning through discussion at the Open University', *Teaching at a Distance*, **2**, pp 10–17.