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ABSTRACT

The art of lecturing is examined in detail and suggestions are offered on how to lecture in an effective manner. The first of two main sections deals with the preparation of lectures, offering guidance on such matters as determining the objectives, choosing the content, planning the structure, deciding on the method of delivery, and preparing supportive materials. The second section discusses lecturing technique per se and provides advice on orienting students at the start of a lecture, communicating effectively with students, holding students' attention, making sure that students obtain adequate notes, and ending a lecture. An annotated list of four references recommended for further reading is included. (MES)

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Some hints on how to be an effective lecturer

Introduction

In "A guide to the use of mass instruction techniques" (booklet number 3 in this series), we examined the various methods that can be used as vehicles for mass instruction and discussed their respective strengths and weaknesses. Of these techniques, by far the most widely used in tertiary education establishments is the *lecture*; indeed academic staff in such establishments are generally described as ' lecturers'. In this booklet, we will therefore take a detailed look at the art of lecturing and offer some hints on how the average lecturer can carry out this highly important aspect of his or her work in the most effective manner. The booklet is primarily intended for new, inexperienced lecturers, although it is hoped that even the most experienced 'old hands' (to whom most of what is said will no doubt seem fairly obvious and basic) will also find something useful in it.

The main body of the booklet is divided into two sections. The first of these deals with the preparation of lectures, offering guidance on such matters as determining the objectives, choosing the content, planning the structure, deciding on the method of delivery and preparing any supportive materials needed. The second deals with lecturing technique *per se*, offering hints on how to orient one's students at the start of a lecture or programme of lectures, how to communicate effectively with students, how to hold the attention of a class, how to help ensure that the students obtain adequate notes, and how to end a lecture.

Preparing for a lecture

Let us assume that you have carried out a survey of the various methods that *could* be used to teach a particular section of a course (as recommended in booklet number 2 – "A guide to the selection of instructional methods") and have decided that a lecture (or programme of lectures) would be most appropriate. You now have the task of preparing for this lecture or programme, something that should be tackled by working systematically through the various stages described below.

Determining the objectives

As was stressed in the first booklet in the series ("Educational objectives"), the first vital step in any systematic approach to course or curriculum design should be the establishment of a clear set of *objectives* for the course or curriculum – preferably couched in

behavioural terms – ie in terms of what the learner should be able to *do* after receiving the instruction. This is just as important for a lecture or programme of lectures as it is for a complete course or module – more so in fact, since it is at the lecture level that the success or failure of a course or module is generally determined. Despite this, it is probably true to say that many lecturers fail to give enough attention to the objectives of their lectures.

Thus, when you start to plan a lecture, you should always ask yourself the basic question: "what is the main *purpose* of this lecture?" In some cases, the answer may be fairly obvious, particularly if the syllabus to which you are working is written in the form of a series of detailed objectives (as are those of many of the courses operated in tertiary education establishments, particularly those of the SCOTVEC 'Higher Diploma' and 'Certificate' type). In other cases, it will be up to you to decide what your objectives should be. When doing so, less experienced lecturers would be well advised to keep their objectives for each lecture fairly simple and straightforward, eg to pro– vide a clear and systematic review of a topic in order to help the students identify the main issues or factors involved, or to help the students to acquire a basic understanding of a principle and its applications. Remember too that lectures are best suited to the achievement of objectives of the *lower cognitive* type, so that any attempt to achieve *higher cognitive* objectives (eg developing the students' powers of evaluation) or *affective* objectives (eg changing their attitudes) may well prove difficult, especially for an inexperienced lecturer.

Choosing the content

Once you have established your objectives for a lecture, your next step should be to choose the *content*. Again, this may well be fairly straightforward if the syllabus to which you are working specifies the material to be covered in some detail. In other cases, however, it will be up to you to interpret a word or phrase in the syllabus (eg "capital" or "the second law of thermodynamics") in terms of what *you* think the teaching of the topic represented by the word or phrase should involve in the particular course of which it forms a component. This will obviously involve a number of factors, including the level of the course, the existing knowledge of the students, the time available and so on. If you are in any doubt about what the teaching of a particular topic should entail, never be afraid to seek the advice of a colleague – preferably someone who has already taught the section or module in question.

Another problem faced by lecturers is just how much material they should try to cover in a lecture. Most new lecturers try to pack in far too much, and, as a result, often fail to cover any of it adequately.

Particular care should be taken in the selection of illustrative material, eg examples chosen to illustrate a general point or principle of some sort. In many cases, it is these illustrations that stick in the memory of the students, thus providing a cognitive link that helps them to remember the point or principle in question as well as helping them to understand the point or principle in the first place. You should also remember that illustrative material usually takes longer to present or explain than you might expect.

Planning the structure

Once you have selected the content of a lecture, the next step in the planning process should be the development of a *structure* that enables this content to be covered in a clear, logical and systematic way. In most cases, this involves developing a 'skeleton outline' for the lecture – usually in the form of a series of headings and sub-headings. The process of planning the structure is, of course, closely related to that of choosing the content, and, in some cases, it may be advisable to carry out the two processes in parallel; in others, it may be better to develop the basic structure for the lecture first, and then choose the detailed content to fit this. Whatever the method chosen, however, the outcome should be the production of a systematic structure that enables adequate coverage of the chosen content to take place.

The basic structures that it is possible to adopt for a lecture include the following:–

(i) A simple list (or series of lists) of topics, which are examined in turn.

(ii) Classification hierarchies that show the relationship between the various topic groups, topics and sub-topics being examined.

(iii) Chained structures, in which the student is led through the various stages of an argument, proof, derivation, etc in logical sequence.

(iv) 'Ruleg' (Rule/Example) structures, which begin with the statement or derivation of a general principle or rule of some sort and then look at examples or applications which illustrate the principle or rule.

(v) 'Egrule' (Example/Rule) – or 'inductive' – structures, which start by looking at specific cases or examples of an as-yet-unstated general principle or rule in action and then use these to arrive at the principle or rule by a process of induction.

(vi) Problem-centred structures, which begin with the statement of the problem, then present and discuss various possible solutions, and finally present a conclusion of some sort.

(viii) Comparative structures, in which two or more systems, points of view, theses, etc are compared under a series of headings.

(viiii) Matrix structures - a variation on the basic comparative structure that involves building up information about different systems under different headings by filling in a matrix of some sort.

(ix) Linked idea pattern structures of the 'organic notes' or 'mind map' type: these start in the middle of the field, and build up a linked pattern of concepts or topics by moving from one to another along lines of association or logical relation.

(x) Networks - more formalised patterns designed to show how concepts, factors, sub-systems, etc are inter-related.

It is, of course, possible to use more that one of these basic structures within a single lecture, but care should be taken not to make the resulting structure too complicated for the students to follow.

Deciding on the method of delivery

The fourth step in the planning of a lecture involves deciding on the *method of delivery* that you are to use. This will again depend on a variety of factors, including the nature of the material that you will be covering, the maturity and ability of the students, the size of the class, the nature of the environment in which you will be working, the range of facilities that are available to you and, most important of all, your own personal preferences.

Some of the possible methods of delivery that you *could* use for a lecture or section thereof are:

(i) A straightforward oral exposition, in which no visual support materials are used (not recommended for entire lectures, but an extremely useful technique for use *within* a lecture, eg when you want the students to give their undivided attention to an explanation or argument).

(ii) An oral exposition supported by writing (or drawing) material on a chalkboard, markerboard, flipchart or OHP as the exposition is delivered (probably the delivery method that is most widely used by lecturers).

(iii) An oral exposition supported by pre-prepared OHP transparencies, flipcharts, charts, etc (another widely used method that has the advantage of enabling the display

material to be carefully prepared *before* the lecture, and retained for repeated furture use).

(iv) An oral exposition supported by slides (yet another extremely popular method, but one that requires room darkening, thus making student note-taking impossible during the actual presentation).

(v) An oral exposition supported by display of realia, models, or equipment of some sort, or by practical demonstrations (another popular method, espeically in teaching science, engineering and 'practical' subjects).

(vi) An oral exposition supported by creating (or calling up) display material using a computer terminal of some sort (a method that is becoming increasingly widely used in a whole range of fields).

(vii) Talking the students through material provided in handout form or material contained in a set textbook (a method that enables a given amount of material to be covered much more quickly than by the other methods listed because of the fact that the students do not need to take notes).

It is, of course, again possible to use more than one of these methods of delivery within a single lecture.

Preparing any supportive materials needed

The fifth and final stage in the planning of a lecture is the preparation of the various supportive materials that you will need. Unless you have a photographic memory, these will almost certainly include notes of some sort for use as 'aides memoire' or cues during the delivery of the lecture. Such notes can again take a wide variety of forms, depending on your own personal preference, the most popular probably being loose sheets of paper or cards of some sort (these allow notes to be changed, revised, updated and re-arranged with minimum difficulty). Another widely-used method is to use pre-prepared OHP transparencies, slides, charts, etc that will actually be displayed to the class during the lecture as the cue material, thus making separate 'lecturer's notes' unnecessary. Whatever the method used, the materials should be prepared well before the lecture is due to take place, since notes prepared in a rush at the last minute are seldom satisfactory. Also, an ill-prepared lecture invariably creates an extremely bad impression with students.

It is equally important that any other materials that will be needed during a lecture (eg slides or handouts) should also be prepared well in advance. This is particularly true if you are relying on support services of some sort to produce the materials (eg a photographic technician to produce slides or a central reprographic unit to produce

handouts). Such services generally have a back-log of work waiting to be carried out, so it is unrealistic to expect them to produce *your* material at short notice – particularly during term time when demand is heavy. Thus, you should always try to plan well ahead in order to ensure that all the materials you require are ready when you need them.

Delivering a lecture

Let us now turn our attention to the actual delivery of a lecture, and discuss some of the steps that can be taken to ensure that this is done in an effective way. We will do so by taking a look at four of the main problems that are faced by anyone giving a lecture – how to orient the students at the start of the lecture, how to communicate effectively with them, how to hold their attention, and how to ensure that they obtain satisfactory notes – and offering hints on how these problems can be overcome. We will then offer advice on how to end a lecture – something that few lecturers do properly.

Orienting students at the start of a lecture

One of the most common faults of lecturers – even experienced lecturers – is failing to orient their students properly at the start of their lectures. Such orientation is particularly important at the start of a course, module or series of lectures, when the students may well be meeting you for the first time and will not know who you are, how you expect them to behave during your classes, or what you are going to teach them.

Introducing yourself

If you are meeting a class for the first time, you should always *introduce yourself*. Just how you do this will depend on the type of course, the level of the students and the degree of formality (or informality) that you wish to establish with them. You should, however, make sure that they know who you are and where they can find you if they want to get in touch with you for any reason.

Establishing the 'ground rules' for your lecture

If your lecture is the first one in a course, module or series, you should also make sure that students know *how you expect them to behave during your lectures*. Thus, you should tell them whether you expect them to take notes while you are actually talking or whether you will give them guidance or instructions on what to take down (eg by dictating notes after you have discussed or explained a topic, by writing material on a chalkboard or OHP roll, or by displaying pre-prepared material for them to copy). If your teaching is to be based on handouts or on a set textbook, you should also make this

clear to the students. You should also make sure that the students know what your attitude to questions is, eg whether they may ask questions or request clarification during the actual course of the lecture or whether they may only ask questions at the end of the lecture or at separate tutorials laid on for the purpose. You should also let them know the extent to which you are available for consultation outwith formal class contact time, eg by telling them when to come and see you in your room if they have any problems.

Briefing students at the start of a course, module or series of lectures

Another thing that you should always do at the start of a course, module or series of lectures is to give the students *advance notice of the ground that you intend to cover* – preferably by giving them a lecture schedule or syllabus, if they do not already possess one. You should also try to put your programme of lectures 'into context' by explaining the overall purpose or function and telling the students what they should know or be able to do at the end of it.

Briefing students at the start of an individual lecture

It is equally important that you brief your students properly at the start of each individual lecture that you deliver, telling them (for example) how it follows on from earlier work, what sort of lecture it is going to be, what material will be covered, and what you will expect them to know and/or be able to do as a result. Such briefing is particularly important if you are departing from your usual routine in any significant way, eg if you are to give them a handout where you have previously expected them to take their own notes, or if you are to change your method of delivery.

Communicating effectively with students

The primary aim of every lecturer should be to make sure that he/she *communicates effectively* with his/her students. In order to do so, a lecturer should try to achieve three things – *clarity of delivery*, *clarity of expression* and *clarity of structure*. Let us look at these in turn.

Clarity of delivery

The lecture is essentially an oral communication vehicle, so it is *absolutely essential* that your students should be able to hear what you say without difficulty. Thus, you should always speak *clearly* and *distinctly*, making sure that you can be heard by *all* the students in the room – not just those at the front. You should look at the class while you speak, establishing eye contact with students in all parts of the room from time to time (this helps you to check whether you are making yourself heard to them and are retaining their attention).

Avoid 'talking to the chalkboard' or 'mumbling into your notes', both of which make it difficult for your students to hear you clearly. Also, try to avoid irritating mannerisms or making excessive use of favourite phrases. Most people are completely unaware of such mannerisms and annoying habits of speech, but both can easily be identified by having one of your performances recorded on videotape for subsequent study; such an experience is generally an excellent antidote to any tendency towards self-satisfaction or complacency! Other forms of evaluation of lecture performance could involve the use of a student evaluation questionnaire or inviting a colleague to 'sit in' on one of your lectures.

Clarity of expression

Effective communication depends on suitable choice of words as well as on clarity of delivery. Many lecturers, being fully aware of the complexity of the material that they are presenting, embellish practically every statement with qualifications and asides in an attempt to do the material justice, thus making it difficult for the students – who are generally unfamiliar with the material – to distinguish the really important points from the peripheral ones. (The preceding sentence is a good example.) Thus, you should always try to make an important point in a simple sentence. Once you have done so, you can then add any qualifications or complexities that you feel are necessary, again using fairly simple sentences if possible. Remember that *spoken* language is totally different from *written* language, and that it is much more difficult for a listener to follow tortuous arguments delivered in convoluted prose than it is for a reader to follow similar material. Also, avoid the temptation to try to impress your students by using long or difficult words – you will only confuse them. If you *must* use complex terminology for some reason, repeat the point in simple words. Also, try to follow every general point that you make with an illustrative example of some sort; this can be a great help to students both in understanding and in remembering the material.

Clarity of structure

A third important element in effective communication is *clarity of structure*. In other words, your lecture should not only have a clearly-defined structure but you should *make sure that your students know what this structure is*. There are two basic techniques that you should use in order to do this. First, you should tell your students what the basic structure of your lecture is to be right at the start – by, for example, displaying a pre-prepared OHP transparency that gives an outline of the structure and talking briefly to this. Second, you should keep your students informed of the progress that is being made through the structure *as you deliver the lecture*, by, for

chalkboard as the lecture proceeds so that the structure progressively builds up. Pre-prepared OHP transparencies showing the different section headings can also be extremely effective in this 'signpost' role, as can title slides in a slide presentation. It is also important to make the structure clear in your *spoken* presentation, by, for example, telling the students when you have finished each section, pausing for a short time in order to emphasise the point, and then introducing the next section. Skilful use of verbal links of this type is one of the signs of a good lecturer.

Holding your students' attention

In "A guide to the use of mass instruction techniques", it is shown that one of the main problems associated with the lecture method is that student attention tends to fall off fairly rapidly with time. This fall off takes the form of an increasing frequency of *attention breaks* (known as *microsleeps)* in which the student 'switches off' concentration for a short time – typically about 2 minutes. Research seems to indicate that, in a typical 50-minute 'straight' lecture, student *attention span* (the time between attention breaks) tends to fall from roughly 12–15 minutes at the start of the lecture to around 3–5 minutes towards the end. Thus, any lecturer who fondly imagines that he or she can talk continuously for 50 minutes and retain the full attention of all the members of a class throughout this time is almost certainly living in a fool's paradise.

Fortunately, there are a number of techniques that can be used to help hold student attention and reduce the effects of this fall off in attention span. The most important of these are probably *liveliness of presentation, variety of presentation,* and *variation of activities*. Let us now examine them in turn.

Liveliness of presentation

Anyone who has had any experience of being lectured to knows that the personality of the lecturer can make a tremendous difference to the impact of the presentation and the extent to which audience interest is sustained. If a lecturer has a lively, engaging personality and gives an impression of being interested in the material he or she is presenting, this almost inevitably leads to the establishment of a good 'rapport' between lecturer and students, and thus helps to sustain the latter's interest. Conversely, a lecturer who creates an impression of being dull, and of not really being very interested in the material being taught, can hardly complain if the students show a similar lack of interest. Thus, lecturers should at all times make a conscious effort to radiate liveliness and enthusiasm, or, if this is not possible, should at least try not to behave as if the whole exercise was one big bore.

Variety of presentation

The second technique that can be used to help retain student attention is *variety of presentation*. If you deliver a lecture in a dreary monotone, without making any attempt to vary your pace or pitch, you will have very little hope of holding the attention of your students for any length of time. Indeed, some of them may well fall asleep on you! Thus, you should always make a conscious attempt to vary both the *pace* and the *pitch* of your delivery (but *not* the *volume*) and to make effective use of pauses and other dramatic effects. In other words, you should try to be a bit of an actor!

Some useful 'tricks of the trade' that can be used to help vary your presentation include the following:

- Speak particularly slowly and deliberately when you are making an important or key point, but balance this by using a faster pace for illustrative comment.
- If you want to make a point particularly strongly, repeat it, preferably after a suitable dramatic pause, or say the same thing again in different words.
- Make a deliberate attempt to change the pitch of your voice at appropriate places, eg by dropping the pitch at the end of a sentence or section and raising it when posing a question or making a dramatic point.
- Try to make effective use of pauses. Remember that these are the 'punctuation marks' of speech, so you should use pauses of suitable length to denote 'commas', 'full stops', 'ends of paragraphs' and 'ends of chapters'.
- Vary the length of your sentences, using short sentences to make key points and longer ones for illustrative or less important material.
- Make use of rhetorical questions and similar dramatic effects where appropriate (but do not overdo them).

Variation of activities

The third – and possibly the most effective – way of counteracting fall off in student attentiveness with time is to vary the *activities* that they have to engage in during the course of your lectures. One simple way of doing this is to separate the tasks of *listening* and *writing*, insisting that the students give you their undivided attention when you are presenting new information or giving an explanation or illustration and only allowing them to take notes once you have finished. Another way is to introduce *active student participation* of some sort into the lecture at suitable points, eg by making use of *buzz group* techniques of the type described in "A guide to the use of group learning techniques" (booklet number 5 in the series). Appropriate use of

lecture at suitable points, eg by making use of *buzz group* techniques of the type described in "A guide to the use of group learning techniques" (booklet number 5 in the series). Appropriate use of such buzz sessions and similar 'mental breathers' can do a great deal to sustain student attention at a high level. A third way to introduce variety into a lecture is to make use of things like short slide, video or film sequences, short sections of audiotape material, computer-generated material or practical demonstrations at appropriate places. This can again help to sustain student interest and attention for a longer period than would otherwise be possible. It is highly likely that any time 'lost' in the lecture by providing such activity sessions or illustrative breaks will be more than recouped in terms of more effective student learning.

Making sure that your students obtain adequate notes

If you ask the average student what, above all else, he or she expects to get out of a lecture, the answer will probably be "a decent set of notes". It is, after all, these notes that the student will have to rely on to recall what happened during the lecture, to obtain guidance on any subsequent study required as a result of the lecture and – most important of all – to learn up the material for examination purposes. Thus, it is absolutely vital that you try to ensure that *every* student leaves *every one* of your lectures with an adequate set of notes on the material covered.

The way in which you do this will, of course, depend to a considerable extent on the *method of delivery* that you have decided to adopt for your lecture. In particular, it will depend on whether you expect the students to be responsible for making their own notes on what is being covered or whether you intend to provide them with 'ready made' notes of some sort, eg by dictating material, writing material on a chalkboard, markerboard or OHP, displaying pre-prepared material, or issuing the students with handouts. Let us now look at how each of these methods can be used to best effect.

Helping students to make their own notes

If you are expecting your students to take their own notes during a lecture, you should try to make their job as easy as possible. The most effective way in which you can do this is to use a chalkboard, markerboard, flip chart or OHP to make it clear to the students what the *structure* of your lecture is (eg by displaying section headings and sub-headings) and to provide visual reinforcement of any key points that you want to make sure that they include in their notes. Very few students have the ability to make good notes purely on the basis of what they *hear* (if you do not believe this, try making notes on a talk given on the radio and see how you get on). Thus, it is absolutely

essential that you make effective use of a *visual aid* of some sort if you want them to obtain adequate notes.

Another thing that you should remember if you are expecting your students to make their own notes is that it is practically impossible to *take effective notes* on what a lecturer is saying and, at the same time, *fully understand* what is being said. Note-taking invariably makes extremely heavy demands on students' concentration, leaving them little opportunity to *think* about what is being described, explained or argued. Thus, it is advisable to separate the processes of note-taking and attentive listening in so far as this is possible. As we saw in the previous section, this also helps to prevent fall-off in student attention span by making them vary their thought processes during the course of the lecture.

Providing students with 'ready made' notes

The only foolproof way of making sure that every student receives an adequate set of notes is, of course, to provide the class with ready-made notes. As we have seen, this can be done in a number of ways, some of the more important of which we will now examine in more detail.

(i) *Dictating notes.* If you are not too pressed for time, this can be an extremely effective way of giving notes to a class. It is, however, invariably rather slow, since you have to work at the pace of the slowest writers in the class if you do not want to leave them behind.

(ii) *Writing material on a chalkboard, OHP, etc.* This is probably the most popular method of ensuring that a class obtain full notes, and, if done properly, can be extremely effective. It is, however, crucially dependant on the lecturer being able to produce legible material when working at speed – something that many people find extremely difficult. If you intend to use this method of delivery, it is therefore vital that you develop the necessary graphic and calligraphic skills. Detailed advice on how to do so is given in two other booklets in this series – "A guide to the use of non-projected displays" (booklet number 13) and "A guide to the use of the overhead projector" (booklet number 14).

(iii) *Displaying pre-prepared material.* An alternative to writing or drawing materials on a chalkboard, markerboard or OHP as you go along is to produce pre-prepared material on acetate sheets, and to display this during your lecture using an OHP. Pre-preparing material in this way has two definite advantages. First, it allows you to take all the time and care that you need to produce effective material. Second, it

prepare such materials can be found in "A guide to the use of the overhead projector".

(iv) *Use of handouts.* Providing students with ready-made notes in the forms of *handouts* is undoubtedly the most effective way of ensuring that every student in a class receives a quality set of notes, and that students who are slow writers or possess inadequate graphic skills are not disadvantaged. Use of handouts also enables a given amount of material to be covered in a much shorter time than is possible by any method that involves the students in taking or copying notes, so is probably the best method to use if time is extremely limited. They are, of course, particularly useful for giving students copies of complicated diagrams, maps, tables of data, etc. The use of handouts in lectures and other mass-instruction situations is discussed in more detail in another booklet in the series – "How to produce printed and duplicated materials" (booklet number 11). This also gives detailed guidance on how to produce such materials.

Ending a lecture

All too often, lecturers bring their lectures to an end simply by noting that their alloted time is up (or being informed of this fact by their students!), closing or picking up their notes, and walking out of the room – with or without a perfunctory valedictory remark of some sort. Such an ending is far from satisfactory from the students' point of view, especially if it leaves the final topic that was being covered unfinished or otherwise leaves them 'up in the air'.

Ideally, you should try to do the following three things at the end of *every* lecture:

(i) Bring your main exposition to a close by summing up or reviewing the material that you have covered. This can be extremely useful to the students, since it helps them to 'pull together' what they have heard and (hopefully) learned.

(ii) Follow this summary with a brief preview of what you will be covering in your next lecture. This is again extremely useful to the students, since it helps them to see the links that exist (or should exist!) between lectures.

(iii) Try to leave at least five minutes at the end of your lecture for questions, and *encourage* your students to make effective use of this time. This will not only help them to clear up any problems that may have arisen in the course of your lecture, but will also provide you with useful feedback on how effective your lecture has been.

Further Reading

(i) *Lecturing and Explaining,* by G A Brown; Methuen, London; 1978. (This is one of the best and most useful books every written on the art of lecturing, dealing with all the areas covered in this booklet in much greater detail. Highly recommended for *all* lecturers.)

(ii) *53 Interesting Things to Do in your Lectures,* by G Gibbs, S Habeshaw and T Habeshaw; Technical and Educational Services Ltd., Bristol; 1984. (Another book that should be set reading for all lecturers – both new and experienced. It again covers all the areas dealt with in this booklet, offering sound practical advice on how to lecture effectively.)

(iii) *What's the Use of Lectures?,* by D Bligh; Penguin Books, Harmondsworth, 1972. (This describes in detail research evidence on learning from lectures and also discusses various methods of preparing and giving lectures. Yet another invaluable book for all lecturers.)

(iv) *Producing Teaching Materials,* by H I Ellington; Kogan Page, London; 1984. (A handbook written for the practising teacher and lecturer; it gives detailed guidance on how to produce teaching materials of all types, and also gives advice on how to make effective use of audiovisual aids in lectures.)