The Handbook
for Economics Lecturers

Seminars

Rebecca Taylor, University of Portsmouth
Edited by Dr Peter Davies, University of Staffordshire

1 Introduction

Although the terms 'seminar' and 'tutorial' are sometimes used to distinguish different ways of working with students, the words are often used interchangeably. In this chapter the term 'seminar' is used to refer to all teaching in which small groups of students meet regularly under the guidance of a tutor to discuss a particular topic. Typically, students are expected to do some preparatory work prior to the session. This chapter provides information and guidance specifically related to seminars that are supported by lectures. It explores the benefits of incorporating different seminar styles into a teaching programme and presents different formats that may prove useful in developing student interest. The chapter also provides suggested activities and discusses advantages and disadvantages of incorporating assessment into the seminar.

Traditionally, seminars have been used by universities in two ways. First, they have been used to reinforce content presented to students through a lecture programme. Discussions in these sessions tend to explore the lecture material in more depth and are expected to enable students to recognise the relevance of the material to current issues and evidence. The format is often fairly rigid, with discussion guided by a set of prepared questions on the lecture. In the case of quantitative modules, the focus is often on worked examples. For example, students may be guided through answers to a set of problems they have worked on prior to the session. Such sessions aim to show students the level of understanding they are expected to demonstrate and the activities give them an opportunity to evaluate their progress. Second, seminars have been used to develop students' ability to synthesise viewpoints and evidence on a particular topic. This objective has usually been pursued by requiring one or more of the students in a group to prepare a presentation for the session.

Whilst these traditional styles of seminars have an enduring place in most courses, they offer limited opportunities for students' involvement. Alternative approaches to the organisation of seminars are more capable of helping students to learn from each other, more able to accommodate different learning styles, and more likely to encourage students to participate in the learning process. In addition, variety within a programme of teaching and learning will help to sustain students' interest. To that end, the format of this chapter is intended to make it fairly straightforward for a lecturer who is more familiar with traditional formats to identify one or two alternative approaches that could be introduced into a programme of seminars. The chapter also offers some guidance on how the effectiveness of seminars may be evaluated.

The case for alternative approaches is not clear-cut and it is important to evaluate whether net benefits are likely to justify the costs of change. The preparation and management of more interactive tasks is more time consuming and more demanding on teaching skills than working through a problem sheet or leading a discussion on economic issues. The evaluation of any format for seminars must acknowledge drawbacks as well as advantages, and this is the approach adopted here.

Evaluations of seminars also need to take account of students' familiarity with the approach to teaching and learning being employed in a session. New approaches may cause students to feel anxious if they do not feel that they understand the process being employed. These fears can be addressed by ensuring that students understand the objectives of the session and the assessment criteria. More fundamentally, it may be necessary to develop some students' conception of what it means to be a learner, and this is a more difficult and more long-term task.

2 Factors to consider in the design of seminars

This section outlines five important issues to consider when designing an undergraduate seminar programme:

- the variation in students' abilities and ways in which to create a valuable learning experience regardless of initial ability in a given subject area;
- student learning styles and seminar activities that are appropriate to each type of learner;
- transferable skills and the importance of incorporating these skills into a varied programme of seminar activities;
- student activity and learning, which includes the importance of students engaging in the learning process and the link between understanding, application and motivation;
- a discussion of the role of seminars in a programme of teaching and learning.

2.1 Variation in students' abilities

The widening participation agenda increases the need for active learning in seminars. Lecturers increasingly face groups of students of mixed ability and mixed experience. Students in the same group may have very different levels of understanding and may be facing very different problems in trying to improve that understanding. The organisation of the seminar ought, therefore, to provide the lecturer with opportunities to diagnose a range of misunderstanding. It is no longer plausible to assume (as one might in the course of a discussion) that the understanding of a topic demonstrated by one student will be fairly typical of the group or that other students will have been able to understand the significance of dialogue between the lecturer and one student in the group. Seminars that are planned to provide a range of opportunities for interaction can play a critical role in helping lecturers to identify specific problems.

TOP TIPS

Consider grouping the students by ability in seminar sessions in order to focus on specific areas of understanding and application.

For example, seminars on quantitative methods often include some students who have studied mathematics at A-level and some who have not. The latter will have considerable difficulty working through problems that students who have studied mathematics to A-level will find very straightforward. One response to this problem is to organise the students into small groups and give students who have higher levels of attainment in mathematics an explicit peer-tutoring role towards those who are less confident. The more confident students will develop their understanding because they will have to clarify their own understanding when they try to explain ideas to their peers. The students with lower levels of mathematical attainment will benefit from more extensive dialogue than would be possible in a session entirely focused on the lecturer.

2.2 Learning styles

There are two broad accounts of differences in styles of learning. One account, which may be appropriately termed 'conceptions of learning', comes from the work of phenomenographers such as Marton *et al.* (1984), Entwistle (1981) and Ramsden (1996). A second account of differences in learning focuses on learners' 'processing skills' and routines. Typically, this account assumes that individuals have a preference for one learning style and that most teaching activities are also geared towards one style of learning. It is argued that effective learning is more likely to take place where individual preferences match the learning style of the activity. Thus, while it is impossible to cater consistently for all learning styles in every activity used, it is useful to provide a variety of teaching methods within a programme in order that all students have the opportunity to participate in a learning activity that is specific to their learning style. One school of thought in this tradition derives from the work of Gardner (1993), who identifies different types of intelligence (such as spatial, kinaesthetic and linguistic) in which students are more or less skilled. A second school of thought derives from the 'experiential learning tradition' and the work of Kolb (1999).

TOP TIPS

When selecting individuals for group work, mix the learning style in each group – don't have all the activists in one group and all the theorists in another. As no activity is best suited to all learning styles, a mixture of learning styles in each group will mean that the students who are able to relate to the activity can encourage those who are having more difficulty engaging in the process.

Theorists in the experiential learning tradition identify four types of learning style: the activist learner, the reflective learner, the theorist learner and the pragmatic learner. Table 1 outlines those activities that will be most or least appropriate for each type of learner.

The 'phenomenographic' tradition (Entwistle, 1981; Marton *et al.*, 1984) suggests that students may have more or less effective conceptions of learning and that it might be possible for university teachers to improve students' approach to learning by altering the teaching methods used. The evidence provided by this research tradition suggests that students who adopt a 'deep' approach to learning achieve better outcomes in higher education than students who adopt a 'surface approach' to learning (Gibbs, 1992; Biggs, 1999; Fry *et al.*, 1999). A deep approach to learning 'is typified as an intention to understand and seek meaning, leading students to attempt to relate concepts to existing experience, distinguishing between new ideas and existing knowledge, and critically evaluating and determining key themes and concepts' (Fry *et al.*, 1999, p. 30). A surface approach to learning 'is typified as an intention to complete the task, memorize information, make no distinction between new ideas and existing knowledge; and to treat the task as externally imposed (as extrinsic). Rote learning is the typical surface approach' (Fry *et al.*, 1999, p. 30). Finally, some students adopt a strategic approach that involves students structuring their learning in order to obtain high grades in the programme of study.

Biggs (1999) discusses characteristics of students (e.g. misunderstanding requirements, anxiety) and teaching (e.g. providing insufficient time for activities, emphasising coverage at the expense of depth) that may result in students adopting a surface approach to learning. Biggs also reviews the characteristics of students and the teaching and learning experience that encourage students to adopt a deep approach to learning. The signals provided to students by the way in which their learning is assessed give rise to the idea of 'constructive alignment'. That is, there is little point in striving to encourage students to adopt a deep approach to their learning if students perceive the style of the assessment as rewarding rote learning more strongly than deep understanding. In the words of Biggs, 'A good teaching system aligns teaching method and assessment to the learning activities stated in the objectives, so that all aspects of this system are in accord in supporting appropriate student learning' (1999, p. 11).

These views of learning styles and approaches to learning have different implications for seminar leaders. The experiential learning and multiple intelligences perspectives on learning styles suggest that seminar leaders should vary the type of task in seminars to accommodate the innate

Table 1 Seminar activities appropriate to each type of learner (according to 'experiential learning')

Activist style	
Learns best from activities where:	*Learns least from activities where:*
• there are new experiences/problems, etc.; • they can become engrossed in short tasks, games, competitive teamwork tasks, etc.; • there is excitement/drama/crisis and things chop and change with a range of diverse activities to tackle; • there is chance of limelight, e.g. leading discussions, giving presentations; • they are involved with other people, e.g. bouncing ideas off them, solving problems as part of a team.	• learning involves a passive role, e.g. listening to lectures, reading, explanations; • they are not directly involved; • they are required to assimilate, analyse and interpret lots of data; • they are required to engage in solitary work, i.e. reading, writing, thinking on their own; • they are asked to repeat the same activity over and over again.
Reflector style	
Learns best from activities where:	*Learns least from activities where:*
• they are encouraged to watch/think/chew over activities; • they are able to listen/observe a group; • they can reach a decision in their own time without pressure and tight deadlines.	• they are forced into the limelight; • they are worried by time pressures or rushed from one activity to another; • they are pitched into doing something without warning.
Theorist style	
Learns best from activities where:	*Learns least from activities where:*
• they are in structured situations with a clear purpose; • they are required to understand and participate in complex situations; • they have time to explore the associations and interrelationships between ideas, events and situations.	• they have to participate in situations that are unstructured, where ambiguity and uncertainty are high, e.g. open-ended problems; • they are faced with a hotchpotch of alternative/contradictory techniques without exploring any in depth; • they find the subject matter platitudinous, shallow or gimmicky.
Pragmatist style	
Learns best from activities where:	*Learns least from activities where:*
• there is an obvious link between the subject matter and a problem set; • they are practising techniques with coaching/feedback; • they are given techniques that are applicable to the real world.	• the learning is not related to an immediate need or relevance; • there is no practice or clear guidelines on how to do it; • they cannot see sufficient reward from the learning activity.

Source: Honey and Mumford (1995).

preferences of different learners. The phenomenographic distinction between deep and surface approaches to learning suggests that seminar leaders should encourage all students to adopt a deep approach. However, each of these perspectives on learning suggests that it is helpful to encourage students to develop greater self-awareness of their personal approach to learning.

Helping students to understand how they learn can increase their motivation and achievement in a whole range of activities. This can be accomplished through a separate study skills unit, typically through a learning style questionnaire (see, for example, Entwistle, 1981; Honey and Mumford, 1995). Students usually find these self-review activities informative and helpful, enabling them to engage more effectively in the seminars. However, there is a danger that ideas introduced in study skills modules can become detached from the core elements of an economics degree if they are not overtly reinforced by seminar leaders.

2.3 Transferable skills

The QAA subject benchmark for economics degrees includes the aim that programmes in economics should 'develop in students, through the study of economics, a range of transferable skills that will be of value in employment and self-employment' (QAA, 2000, p. 1). Whilst this statement does not specify which transferable skills should be developed through degree programmes in economics, it is usually taken to include social skills (such as ability to work in a team) in addition to the numerical, analytical and communication skills more readily associated with traditional learning in economics.

If these skills are to be developed within a degree programme, students need not only the opportunities to exercise skills, but also explicit guidance on how to improve their level of performance. Whilst economics degree programmes explicitly guide the development of students' quantitative skills, the direction given to students to help them improve other skills is frequently not explicit. Seminars can play a key role in providing this guidance as well as in providing students with a context in which to exercise and evaluate their skills.

The traditional seminar provides weak support for the development of communication and social skills, and this provides a further reason for employing an alternative approach. Seminars that help to develop students' transferable skills make it more likely that the learning outcomes of the module will be achieved. This is self-evident in so far as module descriptions include transferable skills in their stated outcomes. To the extent that improved transferable skills enhance students' capacity for learning, the development of these skills should also improve subject-specific outcomes as well.

Seminars are very well suited to developing students' presentation and team-working skills. Many students initially find the idea of giving a presentation quite daunting. In part this reflects limited previous experience, but it also reflects uncertainty as to how to present effectively. Presentation skills need to be taught as carefully as quantitative skills. That is, before expecting students to give a presentation it is important to teach them how to present. The implication of the benchmarking statement (that students will develop transferable skills) is that it is just as much the role of the economics lecturer to develop students' presentation skills as it is to teach them how to carry out a t-test. Useful information on transferable skills in the context of group work and assessment may be found in Bennett *et al.* (2000), whilst Fallows and Steven (2000) provide a useful discussion of the link between key skills and employability.

2.4 Student activity and learning

Each view of learning styles reviewed earlier emphasises the importance for learning of students' active involvement in seminars. Sections 2.2 and 2.3 have focused on the outcomes of learning. Students' active involvement is crucial in encouraging a 'deep approach' to learning and in developing transferable skills. This section concentrates on the importance of active involvement for the process of learning. In order to develop a full understanding of the economic ideas covered in a module, students must do more than learn how to reproduce these ideas in the form in which they have been presented in a lecture or a textbook. They must be able to recognise the extent to which:

- an idea is consistent with different types of evidence;
- one idea is consistent with another;
- an idea is relevant to the analysis of a problem.

A key purpose of a seminar is, therefore, to encourage students to engage in the learning process, developing their grasp of new ideas and applying these ideas in different contexts.

This has important implications for student motivation, in so far as the latter is determined by understanding, achievement and relevance. When students begin to understand concepts that previously they saw as beyond their realm of comprehension, their fear of the subject diminishes and they tend to become more motivated to achieve. This achievement builds confidence and students are more able to take time to explore the subject. Whilst a student may be able to work through a problem or explain an economic concept, it is only when they fully understand the concept that they dare to consider how it might be applied to broader economic issues.

How is this achieved? Seminars are more likely to encourage this kind of student involvement if they are focused on the problems and issues in which students can recognise the relevance and applicability of key economic ideas. For example, using a case study to help students understand the issue of opportunity cost can be very effective. Divide students into small groups and provide them with details of four or five projects (in any area of economics). Have the students identify the principal costs and benefits associated with each project. Students should then explain to the class which of the projects they would choose to fund, and why. In addition to encouraging students to improve their teamwork, discussion and presentational skills, you will have helped them to understand the issue of opportunity cost – that is, the opportunity cost of selecting project A is the benefits that are forgone by rejecting projects B, C and D.

Similarly, a quantitative concept such as probability will be made more relevant to students if they are encouraged to work through a series of exercises that require them to calculate the probability that they will graduate from university, gain employment or win the lottery. Suggestions for seminar organisation that can promote this kind of learning may be found in Race (2000, 2001) and Jacques (2000).

2.5 The role of seminars in a programme of learning and teaching

The most important first step in planning a seminar programme is to ensure that activities complement the lecture programme. In contrast to lectures, seminars offer good opportunities for interaction between the tutor and students, and the key function of a seminar is to exploit these opportunities. Tutors are able to diagnose students' difficulties and present challenges that should focus students' efforts on the more critical ideas to understand and techniques to master. Students are able to check their understanding and seek advice when they recognise that their understanding is incomplete. Through these interactions, students should be able to deepen their understanding, recognise the relevance of ideas introduced in the lecture and make connections between ideas and evidence presented in different lectures. If a seminar begins to resemble a mini-lecture, it has completely lost its way.

3 Evaluating the effectiveness of seminars

Seminars may be evaluated according to their objectives or according to whether the processes in the seminar might be expected to achieve the objectives. Evaluating a seminar according to whether it has achieved its stated objectives is perfectly sensible in principle, but there are limitations to carrying out this out in practice. First, many objectives cannot be achieved in a single session. Second, it may be difficult fully to assess within the session whether the objectives have been achieved. Evaluation is, therefore, unlikely to rely solely on assessing outcomes. Evaluating the way in which the seminar was conducted is, in any case, central to developing practice.

Evaluation may also be conducted by the seminar leader, an academic colleague, an external evaluator or the students. In principle, the criteria for evaluation ought to be the same whoever is carrying out the evaluation. The usefulness to lecturers of evaluations carried out by external agencies and by students will depend in large part on the measure to which there is agreement about the criteria used in the evaluation. For example, students may judge that a session is uninteresting even if it has contributed to longer-term goals of the programme. However, other things being equal, we would expect the level of students' interest to contribute to the quality of their learning.

3.1 Criteria for evaluation

The QAA (2001) *Subject Review Handbook* requires observers to summarise each session's 'overall quality in relation to the learning objectives' and to evaluate the processes of a seminar according to: clarity of objectives; planning and organisation; methods/approach; delivery and pace; content (currency, accuracy, relevance, use of examples, level, match to student needs); student participation; and use of accommodation and learning resources. This provides a starting point for a review of the criteria that might be used in self-evaluation. Given the discussion in section 2, objectives should be clear in terms of the description of what students will know, understand or be able to do. Objectives that are written in terms of the content that will be covered are not compatible with an intention to encourage 'deep learning'. Examples of objectives that might encourage deep learning include:

- to understand the problems associated with the quantitative evaluation of the development experiences of different countries;
- to understand the relation of Marxian perspective to political, social and philosophical assumptions;
- to synthesise and analyse key developments in the monetary sector.

The criterion 'clarity of objectives' is ambiguous with regard to 'clarity to whom?' – the seminar leader, an academic peer, the students? The implication from section 2 is that objectives should be clear to students and, to that end, it is a good idea to state objectives explicitly at the beginning of the session. It is often useful to give a short explanation of the format of the seminar and how that format is expected to help students' learning. This practice should help students to understand the purpose of the activity and should increase their ability to participate

effectively. It should also help students to draw together the different aspects of the session and this, in turn, should promote greater understanding.

Other criteria in the QAA list (planning, organisation and methods, and student participation) might be judged according to the nature and variety of activity for students. Does the organisation of the seminar provide appropriate stimulus to students' thinking and does it provide sufficient space for them to develop their ideas? Does it allow the seminar leader to meet the needs of students who are working at different levels of understanding? Does it allow for different modes of student participation? In evaluating student participation, it is useful to bear in mind the discussion of learning styles in section 2. The willingness of students to participate will depend on the match between the style of activity and their 'preferred learning style'. The degree of students' participation can be evaluated only alongside the opportunities that have been provided for different types of participation.

3.2 Student evaluations

It is usual for students to be asked to evaluate their experience by completing a questionnaire at the end of each module. Questions may solicit students' judgements on the clarity of the unit description, the style of teaching, the quality of handouts and the level of interest that they maintained throughout the unit. The collation of such evaluations may provide award leaders and university administrators with an overall sense of whether students tend to be happy or unhappy with the teaching on a module. However, they provide limited information for a lecturer seeking to use students' evaluations as a means of improving teaching and learning. It is more useful to spend part of one seminar discussing one of the evaluation criteria with students. In general, higher-quality information will be gathered through dialogue with students.

This dialogue can be a routine part of weekly seminars, particularly when the seminar leader is working with small groups of students as they are engaged on a seminar task. Students may be asked whether they find the exercise helpful to their learning needs, whether they have any suggestions about how the exercises could be changed to provide greater benefit, and whether they feel that the accumulation of exercises has helped them to gain further understanding of the material and its application. Alternatively, evaluation of individual sessions can be gathered from brief questions at the end of a seminar (e.g. 'Was this a useful exercise?', 'Did this exercise help you to enhance your understanding of the subject matter?', 'What changes would make this exercise more useful in the future?').

3.3 Formal module evaluations

University policy at most institutions requires staff to critically evaluate unit delivery, student response and assessment strategy as a matter of course at the end of each semester. In addition to this process, it is very useful to incorporate a system of personal reflective practice into seminar programmes in order to keep a continuous record of successful teaching practices and the changes that need to be made to individual sessions. When introducing a new approach or technique in teaching, it is useful to draw up a session plan that outlines objectives for the session, how the session will be organised and what you are expecting the students to do in each part of the session. This kind of plan is useful for future reference and also provides a good starting point for personal evaluation of whether the new approach is worth continuing and whether there are improvements that could be made.

It may be useful to focus personal evaluation around some leading questions that provide a structure for reflecting on the value of the session and why the session worked in the way it did. Some questions to consider are:

- Did I meet my objectives?
- Did I deviate from my original lesson plan and, if so, why?
- What were the strong points of the session?
- What were the weak points of the session?
- What modifications should I make to the session for future delivery?
- What does the feedback from students tell me?
- How did I assess student understanding?

4 Organising seminars

This section deals with five aspects of seminar organisation:

- developing mutual understanding;
- encouraging students to prepare for seminars;
- presenting in a seminar format;
- choosing whether students work individually, in small groups or as a whole group;
- working with colleagues in a team.

4.1 Developing mutual understanding

The quality of learning in a seminar programme depends, among other things, on the quality of the relationships between the seminar leader and the students. Successful seminars are usually relaxed, interactive and inclusive. In part, a good relationship is built on the confidence that students have in the seminar leader. This confidence is influenced by the quality of the seminar leader's preparation, organisation and promptness. The quality of the interaction in the seminar will depend on how well the students understand why the seminar is organised in a particular way. It also makes sense to put time and effort into getting to know the students, even though the module may only last a semester. Students who believe that the seminar leader is genuinely interested in them will treat guidance they receive in a much more serious manner. It is also worth spending time helping students to work together, as this will be important to the success of small-group activities during the seminar programme.

Each group of students has a particular dynamic and an activity that works very well with one group may not work at all with another. Thus, an important objective in the first few weeks of any seminar programme is to find out what works best with any particular group. It is advisable to make the planning for the first few sessions fairly flexible in order to provide scope for adjustments according to the character of the group.

4.2 Encouraging students to prepare for seminars

Arguably, students who attend and participate in seminars on average perform significantly better than those who do not. So how can students be encouraged to prepare and attend, and what can be done when students arrive without preparation? It is more likely that students will attend and prepare if they are clear about the purpose of the seminars and if seminars offer opportunities that are not available elsewhere. These conditions may be met if the assessment demands are clarified through the seminars and if students are sure that they will get useful feedback on their work in seminars.

Nevertheless, the impact of these tactics on some students will be marginal and this has led some lecturers to make attendance and preparation integral to the assessment of the module. For example, passing a module could be made conditional on the achievement of at least a minimum level of attendance. This practice is almost impossible to justify, however, when a student demonstrates that they are quite capable of achieving at least a pass standard even though their attendance has been below the acceptable minimum. It is more feasible to make attendance and preparation integral to the assessment process. For example, students could be required to make brief notes on topics that are the focus of five seminars in a series. Each student could be required to make a short presentation on the basis of their preparation on one of the five occasions. All students in the group could then be required to submit a portfolio of work that includes their preparation notes and a critical commentary on the brief presentations by other students.

Seminar leaders also face a difficult situation when some students have prepared for a seminar whilst others have not. In these circumstances it is critical that students who have prepared for the seminar are rewarded. If it is not obvious to students that there are benefits to preparation then the incentives to prepare are weak. A natural way to reward students who have prepared is for the seminar leader to devote the majority of their time to providing useful feedback to those students. This may be more easily accomplished on an individual or small-group basis whilst students are working on a set of problems. Examples of preparation tasks for economics seminars include the following:

- Requiring students to complete a specified reading and prepare two relevant questions to contribute to a small-group discussion during the seminar.
- Requiring students to find a relevant newspaper or magazine article that illustrates the application of an economic concept presented in the lecture. Students then present their article to the other students in their small group. This helps students to understand the application of economic concepts to a variety of real world issues.
- Requiring students to design and solve a quantitative problem related to a topic covered in the lecture. Each student brings a question (and solution) of their own devising to the seminar, where it is used as part of the seminar activity. They are organised into small groups, pool their questions and solve them. Where students have trouble with a particular problem, the student who designed that question is able to provide further explanation. This exercise is very useful because a student's understanding of a topic tends to be enhanced when they are required to teach the concept to others.

Alternatively, the seminar leader could devote their initial time to those who have not prepared, getting them properly acquainted with the ideas and information they should have considered in their preparation. During this time the students who have prepared can proceed straight to the seminar tasks. However, this procedure effectively rewards those who have not prepared rather than those who have, and this is inherently problematic.

4.3 Presenting in a seminar format

A seminar leader is likely to spend a certain amount of time presenting to students, and the qualities pertinent to good lecturing (see the chapter on lectures in this book) are equally relevant here. In seminars, the time spent in presentation should be short and there should be an emphasis on enabling considerable interaction between the seminar leader and the students. This provides the focus for this section.

The board or an overhead projector (OHP) can be used to help students to keep track of the session and this may be done in two ways. First, an outline of the session can be presented at the outset and this may be linked with an explanation of the purpose of the session. Clear instructions can often be responsible for the success of an activity. Second, the board can be used to keep track of a discussion of a topic. When the seminar leader is directing a group discussion, they keep track of the discussion in their minds, noting alternative points of view, chains of cause and effect, and references to assumptions that underpin strands of reasoning. However, much of this may be opaque to students in the group, especially if it is built up from a series of exchanges between the seminar leader and a small number of the students. Many students in the group will find it easier to follow the structure of an unfolding discussion if it is visually, as well as orally, presented and the seminar leader can provide this by showing diagrammatically how points are related.

TOP TIPS

Always use more than one resource for seminar delivery – keep the delivery and the learning resources varied to maintain student interest and understanding.

When trying to help students keep track of a line of reasoning, it is tempting for the seminar leader to restrict the visual display to their 'correct' version of the reasoning. In this case, the 'correct' version is gradually revealed as the discussion proceeds, and when students offer suggestions that conflict with, are non-essential to or are simply different from the seminar leader's reasoning, they are ignored and do not appear on the board or OHP. The interaction between seminar leader and students is likely to be stifled by this procedure, as it conveys the message that the purpose of the discussion is to prompt the gradual revelation of the seminar leader's 'correct view'. Some students will naturally infer that the less they speak, the quicker the seminar leader will get on with telling them what they are expected to know.

Alternatively, the board or OHP can be used to keep track of a discussion in a more complete way. That is, non-essential points, conflicting points and weak expressions can be added to the display alongside key ideas, consistent reasoning and powerful ways of expressing ideas. If this is done, students can be invited to make the kind of judgements (such as whether two ideas are consistent or which out of two expressions is more powerful) that the seminar leader would be making in controlling the discussion. Inevitably this takes longer, but it does make the interaction between seminar leader and students more profound and, therefore, makes greater use of the time spent in the seminar.

It is useful to prepare a handout for more difficult concepts to accompany an activity, as it provides students with an additional resource in an environment where they feel more free to ask questions and consider the relevance of the material. If the seminar requires students to work through mathematically based questions, it is useful to incorporate a quick review of the mathematical techniques presented in the lecture. This ensures that students understand the concepts and can then apply them to specific questions. If the activity uses discussion questions, it is sometimes helpful to hand out a tree diagram showing the main issues and how they link together. This enables students to revisit the lecture material in a different format, and helps them to organise the material into a structure that they find clear and that they can then use to apply the material to a broader discussion or exercise. A useful handout might include:

- the objectives of the session;
- a full written explanation of a difficult concept covered in the lecture;

- a diagram with an accompanying explanation;
- a formula with a worked example;
- a few short scenarios that illustrate different ways in which a particular theory can be applied;
- a tree diagram that shows how different concepts are related;
- advice about preparing for the test/essay/exam;
- sample test/essay/exam questions with model answers;
- information about how to work through and solve mathematical and statistical problems in specific computer software packages;
- a list of keywords and definitions;

4.4 Choosing whether students work individually, in small groups or as a whole group

It is helpful to organise seminars so that some time is spent with students working individually, some of the time working in pairs or small groups and some of the time as a whole group. Varying between these options within the seminar helps to reduce the weariness that sets in when students are asked to participate in the same way throughout a session.

Working individually

One reason for asking students to work individually on a task is so that they can prepare their personal ideas, views or arguments in response to a problem or a piece of stimulus material. It makes sense for this kind of preparation to be undertaken before the session, but there may also be times within a seminar when it is helpful to give students an opportunity to work alone. If students are given time to prepare an answer rather than being obliged to provide immediate responses, they are more likely to produce a considered response and likely to benefit from the time spent working out an appropriate answer. A second reason for asking students to work on their own is to provide an opportunity for the seminar leader to talk with individuals to gauge and respond to students' understanding.

Individual work may take the form of silent reading activities, problems or case studies. For example, you might ask students to read through an article and identify the application of economic theory, or to consider the answers to a series of related questions that can be used for a small-group discussion in the latter part of the seminar. Alternatively, you might have students complete a worksheet that covers a number of concepts from the previous lectures. This enables you to discuss progress with students on an individual basis, and, if the students are required to submit the worksheets at the end of the seminar period, it will provide you with more information about overall student understanding of the different topics studied. As a rule, individual work creates lower levels of interaction between the seminar leader and students (because attention is focused on one individual at a time) than other formats. For this reason it makes sense to use individual work sparingly.

Working in pairs and small groups

When students work together in pairs or small groups, the quantity of interaction is increased, and evidence from research reviewed by Springer *et al.* (1999) suggests that achievement is promoted, attitude towards learning is improved and willingness to work hard is increased.

Students can be asked to work together in pairs or small groups to consider the answers to specific problems, discuss ideas, prepare for whole-class discussions, compare their answers or mark each other's work.

If you include an in-class test as part of your unit assessment, you can incorporate this into a subsequent seminar activity. When you mark each test paper, identify the one or two questions that caused the student most difficulty. Identify these questions on the test paper. Pair each student in the seminar group with a student who had difficulty with different questions and ask them to work through, with their partner, those questions that you have identified at the top of each of their papers. This exercise requires students to revisit material that they did not understand and pairs them with a student who demonstrated a stronger understanding of that same material. Working through these questions again with a partner, and discussing the areas that created the most difficulty, helps both students to gain a deeper understanding of the subject.

Encouraging students to learn from each other is a prime objective in organising students in small groups. It is therefore important to consider the way in which students are grouped. Less confident students can learn from the understanding of more confident students, and students with a higher level of understanding can consolidate their thinking through explaining ideas to others. Pairing quiet or less confident students with more outgoing students can often be beneficial to both parties, whereas putting all the outgoing, confident students into one group may lead to conflict and a less than successful outcome to the whole activity.

It is important to monitor small-group activity to make sure that groups are not diverted from the task or taken over by one individual. Monitoring is quite demanding, as the seminar leader needs to be aware of how other groups are progressing at the same time as interacting with one group. There is also a danger that the seminar leader will get drawn into 'taking over' groups, stifling their discussion. Students need space to initiate and develop their ideas before they are ready to engage with the seminar leader.

During the first part of small-group work, the seminar leader's time is best spent listening to the ideas being put forward by students as they discuss with each other. This creates opportunities to identify misconceptions, emphases and omissions. Some misconceptions may be shared by several groups, and it is more efficient to interrupt the group work and address these on a whole-class basis. In other cases there will be questions that the seminar leader will want to pose to a particular group, along the lines of 'Why do you think that?', so that the onus is put on the students to articulate and expose their reasoning.

TOP TIPS

It is important that all seminar activities are treated as evolving processes – adopting a very rigid approach does not allow for the flexibility often necessary to make an activity a success. If the dynamics of a group are detrimental to the success of an activity, change either the size of the groups or the particular pairings that were originally chosen. This can often revive a flailing activity and might be the only change necessary to turn the activity into a valuable learning experience for the students.

Box 1 outlines different types of activity that may be used with small groups in seminars. Different styles of small-group teaching in seminars are discussed in great depth by Brown and Atkins (1990). Chapter 4 provides an excellent review of the possible pitfalls that a seminar leader may encounter and discusses student expectations, group sizes, group dynamics, types of small group activity, and tactics for questioning. Further suggestions may be found in Tiberius (1999), and Light and Cox (2001). The LTSN website also offers valuable examples and a discussion of important issues in small-group work.

Working with the whole group

The start and end of each seminar will typically involve the seminar leader in working with the whole group. At the beginning of the seminar, it makes sense to work with the whole group in introducing the purpose and structure of the seminar. At the end of the session, the seminar leader can consolidate the learning of the students and highlight key points. However, it may be best to work with the whole group during the main part of the session as well.

Box 1 Activities for individual or small-group work

The following list provides some ideas for tasks to set individuals or pairs of students in a seminar. These exercises could be followed in the second half of the session with a larger group activity.

- Ask the students to construct a model or create a diagram relating to a technique or topic covered in the lecture.
- Provide students with a case study to read and discuss; they can identify the main issues, jot down some key questions, write a proposal, take some notes, make decisions/proposals about a case, read and note some ideas for discussion.
- Ask students to make choices between various questions/scenarios, e.g. true/false, possible/impossible, discuss whether different scenarios are realistic/unrealistic etc.
- Provide some text for students to read and analyse.
- Suggest a thesis/proposition and ask students to prepare a case for or against it.
- Ask students to choose between alternative solutions to solve a problem.
- Ask students to work through written mathematical proofs/calculations/problems and spot deliberate mistakes in the problems given.
- Ask students to develop a presentation together and then present to the whole class.
- Give students a scenario, ask them to discuss the arguments for and against a proposal and then ask them to present their views to the whole class.
- Ask students to work through old test questions – or essay questions – and discuss the answers.
- Ask students to solve problems in small groups (each group working through a different problem) and then rearrange the groups so that each student can explain their particular problem (with solution) to the other students in their new group.
- Ask students to devise a map or solve a puzzle: for example, in a seminar about coordinates and finding the equation of a line, create a map on some graph paper and ask students to find the location of a specific object by plotting a series of intersecting lines.
- Ask students to match key concepts introduced in the lecture to sentences in a newspaper article.
- Give each pair of students an answer and ask them to devise an appropriate question drawing on the content of the most recent lecture.
- Use quick-fire questions, quizzes or team games to test knowledge and understanding.
- Select a series of quotes about a topic (preferably some that express conflicting views on an issue, e.g. the health service, trade relations, foreign direct investment, economic development programmes) and ask students to discuss their quote with reference to material presented in the associated lecture.
- Show 5–10 minutes of a video, ask students to prepare answers to a variety of questions and then have them present their work to the class.
- Show 5–10 minutes of a video and then give students a short quiz that relates some of the video material to the lecture material. This could be followed by a group discussion about the answers, which will enable students to see the relationship between the lecture material and the video material.
- Ask students to prepare presentations in small groups, taking opposite views on a specified topic.
- Ask students to work through exercises and compare answers with a partner or group.
- Ask students to compare essay plans that are clearly different in quality.
- Provide students with two pieces of text (each about 150–200 words long) which present different views of a topic or situation. Ask students to produce a new piece of text, no more than 100 words in total, which combines the two sources.

Whole-group work is well suited to formal debate, review discussions, role-play, having members of each group circulate to inject new ideas into other groups, having students from one group teach other groups how to solve different problems, and organising a formal debate. You can also use a fishbowl approach, whereby a small group of students are given a topic to discuss while other students observe. This gives students a chance to listen to a discussion about a specific economic issue and to hear how other students present differing views and opinions on a topic. Larger groups (4+) can be productive, but these activities tend to be useful only to very specialist seminar activities. More often than not, the group is too large to focus on individual learning. The quieter and weaker students become sidelined and the larger group sub-divides into unproductive cliques.

TOP TIPS

Get students actively involved. Get them to debate, deliver and present individual or group arguments and ideas. This type of activity gets students away from their 'comfort zones' and encourages them to stay actively involved in the activity for the duration of the session.

Keep activities to a maximum of 20 minutes then move on to another topic/method. Continually introducing additional elements to the exercise/activity will keep students interested.

4.5 Working with colleagues in a team

Many seminar programmes are given by a team of people. Such programmes require careful co-ordination and this is facilitated by the following actions:

- Meet with the group of tutors on a regular basis to discuss how activities should be run and the procedures that should be followed.
- Ensure that each tutor understands the purpose of each activity and knows what problems to look out for. Also explain how tutors should interact with the students throughout the exercise.
- Meet with the tutors to review their experience with the seminars in order to identify problems, good practice and ways in which the seminars could be improved. It is also useful to have a short review meeting 2–3 weeks after the beginning of a seminar programme to identify problems at an early stage.
- Encourage tutors to observe another member of the teaching team. This will encourage consistency of practice and develop the confidence of tutors who are less familiar with the types of activity being used in the programme.

5 Case studies of seminar organisation

5.1 Activities for quantitative economics

Purpose

As part of a drive to ensure that students are given a stimulating learning environment I have tried to develop an interactive approach for level 1 mathematics and statistics units. This captures the interest of students who would not traditionally be able to cope with the rigorous mathematical content in the undergraduate suite of economics degrees. Students are organised into small sub-groups and set tasks to complete that will enhance their understanding of the material being covered. In order to maintain student interest, the tasks vary on a weekly basis and include activities. The feedback from these and other activities used has been excellent. Students feel engaged in the process of learning and consistently state that the activities help them to understand the topics covered.

A key feature of these activities is that they place students in the role of teacher, having to explain to other students how to work out answers to problems. This idea is strongly associated with the work of Palincsar and Brown (1984) who termed it 'reciprocal teaching'. In a long-running programme of research with younger students, they identified key roles in teaching (clarifying, questioning, predicting) and demonstrated the benefits for learning if these roles are undertaken by students. These activities apply this principle in higher education. It should be noted that the activities could be adapted for use in teaching other aspects of economics.

Activity 1 for quantitative methods seminar

Each group receives a set of four questions on topics covered in the previous lecture. In the first half of the seminar, students work through the questions in groups of four. The seminar leader provides advice and further explanation as necessary. Each group is then asked to prepare an overhead projector transparency that shows how they worked out their answer to one of the questions.

In the second half of the seminar, one nominated student from each group teaches their method of answering the question to the whole class. All students are free to ask questions following each presentation. Answers to all questions are provided at the end of the seminar. This exercise encourages students to become involved and ensures that all students have worked through every type of question relevant from the lecture material. This exercise is repeated in four seminars throughout the semester in order that all students have the opportunity to participate in the teaching process.

Activity 2 for quantitative methods seminar

Each student receives a cue card with the equation of a line written on one side and two sets of coordinates written on the other side. Students spend the first 15 minutes of the seminar plotting their line on a graph. Using the graph and the equation, students are then asked to find a student

who has a line that intersects with their line. This person becomes their partner for the rest of the seminar. The pairs of students must then find the intersection between their two lines using three different methods. At this point the students are working together and can gain from each other's understanding of the subject. This activity also encourages students to work with different people in the class, creating greater interaction and a more integrated and cohesive learning environment.

Once the students have found the point at which their two lines intersect, they are asked to turn the cue cards over. Using the two sets of coordinates on each card, students are then asked to find the equation of the line that passes through these two points. Thus each student will find the equation of a new line. Finally, students are asked to find the point at which these two new lines intersect.

Activity 3 for quantitative methods seminar

Students are asked to form groups of 4–5 and each group member is assigned a letter between A and E. Each group is given one question to solve that relates to a technique or topic in quantitative economics. Each group focuses on a different technique or topic. Students are given 15 minutes to work through their problem and to ensure that each member of the group understands all aspects of the assigned problem.

The groups are then rearranged so that all the students labelled A are working together, all the students labelled B are working together and so forth. As a result there are now five new groups and each student is working with others who have been answering different questions. Students are required to spend the remaining seminar teaching the other students in the group how to successfully solve their assigned problem.

By the end of the seminar students have worked with two different groups, have worked through a new mathematical technique, have taught this technique to other students, and have learned from other students how to answer other questions in quantitative economics.

5.2 Presentations

Presentations are a useful way in which to combine the learning and assessment of subject-specific knowledge and the key skills that students are required to learn as part of the undergraduate degree programme. Thus the processes involved in a presentation – gathering information, editing material, looking for relevant sources, working in a team and communicating ideas effectively to others – are all skills that can be developed through a presentation exercise. Also, requiring students to work through subject-specific topics in the form of a presentation leads to greater understanding of a given topic.

Seminar presentations can be student-led or lecturer-led; the content and structure of the presentation can be decided on by the group or influenced by the seminar leader (in terms of topics, format, structure, visual aids, etc.). Either way it is best if the seminar co-ordinators engage in the process of seminar presentation preparation with the students and offer guidance throughout the session. Where the presentation forms part of the unit assessment, the seminar co-ordinators then need to provide feedback that will enable students to improve on their presentation skills when they repeat the exercise in another module.

Presentations linked to examination questions

Students give a presentation in the seminar session which is not assessed but which links directly to a question in the final examination. The case study below is used in an international trade policy module, but could be adapted for use in any undergraduate economics unit/module.

What is the purpose of the exercise? The purpose of this exercise is to encourage students to develop subject-specific and transferable skills through the organisation, writing and presenting of a presentation on a subject-specific topic. It is also the intention of the exercise to motivate students by linking the presentation topic to a final examination question that is worth 25 per cent of the student's final grade for that unit.

How is it integrated into the curriculum? Students are provided with a common piece of reading, generally a document from an official organisation, although a relevant journal article or a series of newspaper articles would serve the same purpose. Students are then asked to select a country, collect some data on economic indicators for that country during a specified period, and develop, with a partner, a presentation that:

- identifies specific trade policies in a particular country during a specified period;
- provides a critical analysis of the economic indicators relating to that country during the specified period;
- identifies changes to trade policies that occurred during the specified period;
- identifies the changes to certain economic indicators following the period of study;
- explores the degree to which there is a link between given trade policies and changes in economic indicators for that country.

Students prepare this material and then present their findings with the use of appropriate visual aids. Following the presentation, other students in the group are encouraged to ask questions and provide feedback on the work that has been presented and the presentation style. Feedback is also given by the seminar leader, and students take this very seriously as they are aware that a question on the presentation topic will appear in the final exam. Students are therefore eager to receive feedback that will enhance the quality of their discussion.

TOP TIPS

Prepare a feedback sheet for each session with details of all areas of the activity that are to be assessed. Students also appreciate some information about what would earn a low, medium and high grade in the assessed activity.

Feedback. The feedback on this exercise is excellent for two specific reasons. First, all students are using the same source material (in addition to independently collected data). Students tend to find the project interesting in and of itself, but they often comment that seeing how other students have interpreted literature and data, and presented information, is interesting because it is directly relevant to their own work. Thus they relate particularly well to the material being presented, as they have been working with similar data and the same literature and have generally encountered the same types of problem in their attempt to reach logical conclusions. Ensure that you provide helpful feedback to students, and perhaps encourage them to evaluate their own performance for a given exercise. This helps them to engage in the process and feel positive about the learning activity used.

Secondly, students comment that the link between the presentation and the final exam question motivates them to give a strong and well-researched presentation. Thus the students know that the more work they put into the presentation, the better they will do on that particular examination question, and the lecturer feels satisfied that a high level of preparation has gone into at least one exam question that will be answered by all students. Students also feel that the feedback on the presentation from the seminar leader is invaluable in adding strength to a question that will later count towards their final unit/module mark.

5.3 Case studies and group debates

Case studies and debates are additional activities that can be used in seminars to keep students motivated and encourage them to engage with the material learned. These exercises also encourage students to develop further key skills in the areas of communication, critical analysis and teamwork. Case studies and debates come in many forms and can be adapted to suit any type of seminar topic.

One possible example of a case study format might involve a description of an organisation or task group that has enough money to fund one project. Students are provided with information about each of the possible projects that could be funded by the organisation and they have to decide, in groups, which of these projects would be the most appropriate. Students might also be required to rank all projects in order of their acceptability. This encourages debate and reasoning amongst the members of each group. Students might also be required to write some notes explaining the criteria that have allowed them to accept/reject/rank each of the projects. One of the group members might then be expected to present their decisions to the whole class and field questions from the other groups about their decision.

Again the process of each group presenting their decision creates debate and requires students to consider carefully the reasoning behind their choices. Overall, the case study and debate seminar format introduces students to the concept of group work and enables students to express opinions and, through discussion, reach a consensus on the most appropriate courses of action within a relatively short time period. The exercise also serves to introduce students to the economic problem of selecting a 'correct' answer given competing ends, and encourages students to evaluate the opportunity costs of making particular decisions.

Students generally respond well to the case study and debate format for seminars. Occasionally, the seminar leader needs to redress the balance of a particular group where one member is significantly more opinionated or domineering than other group members. In addition, where there is no 'right' answer to the exercise, students can sometimes become despondent as they don't feel that they can work through the process and necessarily reach a natural end. These points are minor, though, and can be tackled by the seminar leader encouraging the students to work through a given scenario in a different way if and when it is felt that the motivation of any given group is waning.

6 Where next?

6.1 Suggested reading

The journals *Journal of Economic Education* and *Active Learning in Higher Education* frequently suggest useful ideas and new approaches in using seminars.

6.2 Websites

The most valuable information about specific activities inevitably comes from case studies that explain the activity used and discuss feedback that has been received for that particular session. A number of these are available from LTSN Economics (website: www.economics.ltsn.ac.uk). Examples include 'Undergraduate seminars for year 2' by Morgan and Humphrey, which covers the issue of presentations, 'Targeting the median student in seminars' by Farre, and 'Motivating students in small classes' by Petropoulou. This website is continually being updated with new and relevant materials, which provide valuable information to any seminar co-ordinator who is looking to incorporate a more varied selection of activities into their seminar programme.

The LTSN website also provides a list of all other relevant websites that discuss issues of teaching and learning, small-group activities, key skill development, assessment and evaluation. *The Journal of Economic Education* has a very useful section entitled 'Economic instruction', which gives examples of different teaching practices, and *Active Learning in Higher Education* includes a number of articles that highlight good practice in the area of teaching and learning.

Other useful information can be found at:
http://netec.mcc.ac.uk/WebEc/WebEc.html
http://netec.mcc.ac.uk/EconFAQ/EconFAQ.html
www.sosig.ac.uk
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