

LTSN Teaching Development Project

Integrating large-group seminar teaching techniques with on-line course materials to enhance the student learning experience

Project Report by Craig Spence

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This project commenced in September 2001 and ended in April 2002 when project results were presented to the 'Annual Conference for Developing Learning and Teaching in History' at Oxford. Craig Spence supervised the project with support from Dr Philip Broadhead and Mr John Shaw.

PROJECT OUTLINE

The project involved a review of student and staff attitudes toward the seminar as a learning experience, especially in the difficult situation of large groups (this was interpreted as 15-25 students). The main focus of the work concerned the use of on-line resources, which were deployed in an attempt to overcome some of the problems inherently found within large-group seminars in the hope of enhancing the student learning experience.

Three level 2 undergraduate courses were selected:

- State and Society in Early Modern England (which made use of dedicated on-line resources) – Craig Spence
- Reform and Renewal: Reformation in Early Modern Europe (which used the TLTP reformation tutorial package) – Dr Philip Broadhead
- Revolutionary Britain (which made partial use of a TLTP package – French Revolution – and various internet resources) – John Shaw.

RATIONALE

A number of issues drove this project, mainly associated with apparent student dissatisfaction with the seminar as a teaching activity. Routine summative course evaluations had been presenting a poor student response to seminars for some time, however such institutionally based evaluations did not provide detailed information. One difficulty that was recognised, however, was the relatively large size of seminar groups on some popular courses; seminar groups could be as large as 25 students or more. At the same time there was a range of developments taking place within the institution to promote, or at least explore, ICT within the learning and teaching context. It was considered that there were three possible ways in which seminars could be made more effective: First, reduce the size of seminar groups, however this would have lead to an increase in staff work-loads that was not considered acceptable. Second, review seminar teaching methods in order to improve large group seminars as an effective learning activity. Third, make appropriate use of on-line resources to support seminar activities. The project was consequently formulated to address the latter two of these options.

METHODOLOGY

The initial stages of the project involved the structured provision of on-line resources through the department's web-based virtual learning environment (VLE). For the 'State and Society' course this involved the assembling of web-based materials including: administrative information, bibliographies, seminar guidance briefings, seminar readings – both primary and secondary – and some moderated external links. For 'Reform and Renewal' the TLTP tutorial package was made available through the VLE together with some guidance information. For 'Revolutionary Britain' the TLTP tutorial was made available and an extensive listing of internet links – related to specific course topics – was constructed.

Formative evaluation was based upon questionnaires issued simultaneously to both staff and students, discussion of key issues was undertaken with smaller focus groups. This stage of the project (undertaken during October and November 2001) provided valuable information on existing attitudes to learning situations and resources. A further student questionnaire-based evaluation was undertaken in December 2001 that focused mainly on learning resources including those on-line materials used to support seminars. The results were used to inform the staff involved of areas of student concern, helped to improve access and guidance in relation to such materials during the remainder of the courses, and provided some insights into areas of possible future development. A final summative questionnaire-based evaluation, together with focus group discussion, was undertaken in March 2002.

RESULTS

The initial questionnaire was aimed at establishing pre-existing attitudes toward both ICT in education and other traditional learning and teaching activities, it was also used to highlight any issues that might arise in relation to the use of ICT for learning purposes. The questionnaire, suitably worded, was simultaneously issued to students taking the three chosen courses and to all regular teaching staff in the department during October 2001. All questionnaires allowed for anonymous response.

Questionnaire 1 for staff asked the following questions:

- General level of their computing experience
- Experience of using the internet/web in their teaching
- Concerns that respondents had about using ICT in their teaching
- Usefulness – for students – of a range of learning activities/resources

(See below table 1.a. for full range of responses)

Questionnaire 1 for students asked the following questions:

- General student profiling information
- General level of their computing experience
- Experience of using the internet/web in their learning
- Concerns that respondents had about using ICT in their learning
- Usefulness of a range of learning activities/resources

(See below table 1.b. for full range of responses)

One of the most notable findings at this first stage of formative evaluation was the divergent view of staff and students on the worth of lectures and seminars as useful learning activities. While only 58 per cent of staff felt that lectures were a 'very useful' learning experience for students, 78 per cent of students considered the lecture as being 'very useful'. The disparaging view by lecturers of the lecture as a learning

activity was further reinforced by the low value they placed upon students own lecture notes; nearly a quarter of staff considered such notes as being 'not very useful' to the student, whereas some three-quarters of students rated them as very or moderately useful. An even greater divide separated staff and student views on the value of seminars; only 34 per cent of students considered seminars to be a 'very useful' learning experience compared to 82 per cent of staff.

With regard to concerns about using ICT in either teaching or learning students expressed far greater confidence in ICT than did staff; a little surprising given the generally low rating of 'general computing experience' that students applied to themselves. The only area in which students had greater unease than staff was in relation to the 'relevance of materials' where 62 per cent of students had concerns (compared to 41 per cent of staff). The greatest worry for staff in their use of ICT related to their need for suitable training and technical support (59 per cent). Amongst those staff who had 'experience of using the internet/web' in their teaching a small minority had used ICT based tutorial materials, most however relied upon general internet resources. In several cases internet resources were used by tutors to support their own teaching preparation but were not then presented directly to students.

Note: As certain respondents failed to answer all the questions there are some slight variations within the percentages given below.

TABLE 1.a. Staff Questionnaire 1 Responses

[Questionnaires issued = 26; Questionnaires returned = 17]

General computing experience

Nil = 7 % Minimal = 14 % Moderate = 72 % Substantial = 7 %

Experience of using the internet/web in your teaching

Yes = 41 % No = 59 %

Concerns about using ICT in your teaching

Training needs = 59 %
 Support for teaching = 41 %
 Access to IT facilities = 53 %
 Relevance of materials = 41 %
 Workload issues = 35 %

How useful do you think students find the following learning resources (%):

Activity	Very useful	Moderately useful	Occasionally useful	Not very useful
Lectures	58	35	7	0
Books	82	12	6	0
ICT materials	12	29	41	18
Primary sources	59	18	18	5
Course readers	41	24	24	11
Students lectures notes	0	59	18	23
Informal discussion amongst students	53	20	27	0
Student presentations	47	35	6	12
Seminars	82	6	6	6
Visits	21	58	21	0
Videos	29	24	35	12
Journal articles	50	25	19	6

TABLE 1.b. Student Questionnaire 1 Responses (does not include profiling information)

[Questionnaires issued = 90; Questionnaires returned = 58]

General computing experience

Nil = 7 % Minimal = 35 % Moderate = 47 % Substantial = 11 %

Experience of using the internet/web in your learning

Yes = 78 % No = 22 %

Concerns about using ICT to support your learning

Training needs = 22 %
 Support for learning = 24 %
 Access to IT facilities = 36 %
 Relevance of materials = 62 %
 Assessment issues = 25 %

How useful do you find the following learning resources (%):

Activity	Very useful	Moderately useful	Occasionally useful	Not very useful
Lectures	78	19	3	0
Books	72	26	2	0
ICT materials	10	24	54	12
Primary sources	40	38	22	0
Course readers	38	41	16	5
Students lectures notes	36	43	19	2
Informal discussion amongst students	16	45	29	10
Student presentations	7	34	43	16
Seminars	34	50	12	4
Visits	20	44	29	7
Videos	20	45	12	4
Journal articles	28	42	28	2

The second formative evaluation took place in December 2001, comprising a student questionnaire and informal discussion with tutors. On this occasion questions were focused upon the usefulness of on-line resources made available through the department's VLE. Additionally questions were structured to shed light upon the way in which students prepared for seminars and on the relationship between on-line materials and other forms of learning activities and resources.

One of the more interesting pieces of information to arise during this phase of the project was that while students very strongly supported the notion that some specific form of preparation should be undertaken before attending a seminar – most usually by completing any set reading – this is something that students frequently, and by their own admission, fail to achieve. Given this expectation among students of the relatively high degree of preparation required for their successful participation in a seminar, it is possible that absence from a seminar may reflect a fear of under-preparedness rather than any specific desire to avoid a learning opportunity.

Students seemed to indicate that they would like any extended use of on-line resources to include materials that would directly, and in an unmediated manner,

contribute to their learning activities; students were keen to see self-test resources, model essays or specific essay writing guidance made available on-line.

Among those students who had enjoyed dedicated on-line resources there was a strong response indicating that resources associated with seminar preparation were of greatest value. In particular those resources that comprised on-line seminar readings, whether primary or secondary, received a strongly positive response (noted as 'very useful' by 73 and 84 per cent of respondents, respectively). This was not simply an indication that on-line readings were helping to overcome certain practical problems of access related to library stock limitations, but there was in a sense an exponentially positive resolution of these sorts of problems by allowing students unlimited access to most of the relevant readings at any computer, in any place, at any time. Further to this students appreciated the linking of seminar preparation guidance notes to the texts encouraging a more critical approach to reading (there was a very strong response in favour of such guidance materials with 92 per cent of students rating such guidance as either 'very' or 'moderately useful'). Those items considered of less value, though still classed as 'moderately useful', were of a more administrative nature, such as; lecture schedules, bibliographies and essay and past-examination questions.

When asked to compare on-line resources to other forms of learning resources or activities students uniformly favoured more traditional forms of delivery, especially so in the case of lectures (their favoured learning activity), and to a lesser extent library holdings. On-line resources were thought to be at least 'as useful as' other materials in the case of purchased textbooks, seminars (which may reflect the close association between the on-line materials provided and planned seminar activities), and visits (this may indicate that on-line resources consulted in advance of a visit can be used to enhance the activity, or that students find equal learning attainment in 'visiting' the content of a website as they do in an actual visit). Although these particular responses were a little disappointing at this stage in the project they were to be countered to some degree by the responses given during the final phase of evaluation.

TABLE 2. Student Questionnaire 2 Responses

[Questionnaires issued = 78; Questionnaires returned = 42]

How much use have you made of the department's VLE this term

None = 0 % Minimal = 19 % Moderate = 44 % Substantial = 38 %

How strongly do you agree or disagree with the following statements (%):

"Before attending a seminar it is important too ..."	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Read the suggested text(s)	60	30	0	10	0
Review previous lecture notes	7	14	54	25	0
Work through on-line preparation notes	38	25	31	6	0
There is no need to prepare	0	0	6	16	78
Read something related to the topic	43	50	7	0	0

Do you think model essays should be made available on-line (on the VLE)

Yes = 75 % No = 25 %

If one of your essays achieved a high mark would you be happy for it to be made available on-line (on the VLE)

Yes = 58 % No = 25 % 'Yes with conditions' = 17 %

Would on-line quizzes or other self-tests help your learning on this course

Yes = 92 % No = 0 % Don't know = 8 %

Students on the 'State & Society' course, which made substantial use of dedicated on-line resources, were asked the following additional questions:

How useful have you found the following on-line (VLE) resources for this course (%):

Activity	Very useful	Moderately useful	Occasionally useful	Not very useful
Lecture schedule	23	53	14	10
General bibliography	0	67	23	10
Essay & exam questions	25	50	17	8
Seminar reading list	50	33	17	0
Seminar preparation notes	67	25	8	0
Seminar reading – articles	84	8	8	0
Seminar reading – primary sources	73	18	9	0
Student generated materials	36	10	18	36
Links to other internet resources	36	27	27	10

How does using the on-line resources of the VLE compare to other forms of learning activity/resource (%):

"Are on-line materials more or less useful than ..."	More useful	As useful	Less useful
Lectures	0	44	56
Printed primary texts (library)	27	27	46
Printed secondary texts (library)	20	33	47
Textbooks (purchased)	6	50	44
Seminars	16	52	32
Visits	6	47	47

The final summative evaluation took the form of a questionnaire and focus group discussion during March 2002 at the end of the spring term. The questionnaire attempted to review student use of ICT throughout the year generally and to identify what types of activity were undertaken using it. For those students taking the 'State and Society' course a further group of questions were aimed at measuring the degree with which students had used the various resources provided.

The primary findings from the questionnaire element of the evaluation were that regardless of the particular course the students were taking they used ICT-based resources on a fortnightly or more frequent basis, and that they used it to access

course learning resources (94%) or to support the preparation of essays or other course work (83%). Among those students taking the 'state and society' course the on-line resources were mainly used to aid seminar preparation, less use was made of administrative materials such as lecture schedules and bibliographies (although these were made available at the beginning of the course in a paper-based format). It was significant that these students showed a marked reluctance to explore other non-dedicated internet resources, even when presented as a list of links to 'approved' sites (47% 'never used'). The slightly wider use of non-VLE linked internet resources may represent general use of information-based sites such as on-line dictionaries etc. (41 % 'occasional use').

TABLE 3. Student Questionnaire 3 Responses

[Questionnaires issued = 70; Questionnaires returned = 36]

Have you had to ask anyone to help you access the on-line resources (VLE)

No = 39% IS helpdesk = 0% Fellow student = 33% Friend = 11% Tutor = 17%

How useful would a formal technical introduction to the on-line resources for this course have been

Very useful = 22% Moderately useful = 50% Not needed = 28%

How much use have you made of on-line resources this year

None = 0 %
 Rarely used it = 6 %
 Used it once every 2-3 weeks = 50 %
 Used it once a week = 38 %
 Used it more than once a week = 6 %

How have you used ICT in your learning [each as a percentage of all responses]

To access course materials = 94 % To access administrative materials = 22 %
 To access internet/web resources = 56 % For word-processing essays etc. = 83 %

Students on the 'State & Society' course, which made substantial use of dedicated on-line resources, were asked the following additional questions:

How much use have you made of the dedicated on-line (VLE) materials for this course (%):

On-line materials	Frequent use	Moderate use	Occasional use	Never used
Lecture schedule	25	13	56	6
General bibliography	11	6	58	25
Essay & exam questions	6	58	24	12
Seminar reading list	53	35	6	6
Seminar preparation notes	52	18	18	12
Seminar reading – articles	53	12	29	6
Seminar reading – primary sources	41	18	29	12
Student generated materials	0	12	53	35
Links to other internet resources	0	29	24	47
Other non-VLE internet resources	24	6	41	29

How have you used the on-line (VLE materials) to support your learning on this course [each as a percentage of all responses]

For general course information	= 65 %
To prepare for seminars	= 94 %
To help write my essays	= 18 %
For revision purposes	= 29 %

Do you feel that the provision of on-line materials for this course have helped you learn more about the subject

Yes = 81 % No = 19 %

Would you recommend a course with supporting on-line resources to a fellow student

Definitely = 50% Probably = 33% Possibly = 17% No = 0%

Within the final focus group meeting students were asked to consider the value of on-line resources with reference to seminar work. They generally felt that the TLTP tutorials were only occasionally useful; it is likely that this view relates to the 'misalignments' that can occur in integrating pre-authored materials into the seminar activities formulated by the local course tutor. Students found external internet resources to be occasionally useful but often confusing and/or irrelevant; this seems to relate both to insufficient local guidance as to their use and the migration of students' internet-based study away from moderated sources, through hyper-linking, to other internet-based materials of unknown validity. Overall, students preferred dedicated on-line materials, which not only supported their seminar work but could also be used post-session to provide feedback and as a basis for revision activity. It is significant that students did not simply value the ease of access that such on-line materials provided but also the 'ownership' that they felt they had in the dedicated materials, an attitude which furthered their engagement.

From the tutor perspective on-line resources when properly integrated into seminar work were felt to greatly boost active participation and, to a lesser degree, attendance by most students. The principal drawback with such materials was perceived to be in the preparation time required, however it was recognised that this was obviously greatest during the first time of delivery. Such effort should however be balanced against the amount of preparation time required to establish a well-designed course of paper-based format; a degree of activity that has traditionally been under-estimated and frequently unsupported by teaching managers. Finally, it is encouraging to note that in the summative evaluation 81 per cent of students felt that the provision of on-line materials had positively improved their learning experience.

During the focus group discussions students expressed a range of views on why seminars either succeeded or failed as a learning experience. Among these views two stood out: first that seminars should be well focused both in the way they related to parallel teaching activities, such as lectures, and also to the resources they used – essentially a call for greater preparation and clarity of objectives on the part of tutors. Secondly, that teaching staff should lower their expectations with regard to the time and complexity required for successful pre-seminar preparation by students. This was not simply a cry for less work by the students but a genuine feeling that their learning was being hampered by participation in seminars that failed because it was not practically possible to prepare to the extents required by the seminar leader; such a high level of expectation on the part of both tutors and students with regard to preparation might contribute toward an increased level of absenteeism amongst

some students. There was some indication that students felt that readily available on-line materials helped to extend the time they had available for seminar preparation by allowing the focus to be on understanding rather than obtaining and organising materials. On a more positive note students felt that the creative use of small groups, varying activities, and primary sources often helped to make seminars successful and interesting.

CONCLUSIONS

Overall the project was considered successful in that it highlighted pre-existing attitudes toward the seminar as a learning experience, further it identified a number of issues related to both seminars and on-line resources that could be incorporated into future teaching development plans, especially with regard to seminar enhancement.

From the learning and teaching perspective a number of key points can be indicated with regard to improving large-group seminars as a learning activity:

- There should be a very clear and detailed schedule of lecture and seminar topics, and the links between these topics and the learning activities should be made explicit.
- That clear preparation guidance, in the form of questions to consider and activities to undertake *prior* to each seminar, should be provided.
- The students *want* to be sufficiently prepared for seminars and therefore the provision of alternative seminar readings (in both digital and paper formats) can help to overcome problems of access, this also helps to widen discussion.
- That, wherever possible, primary sources are used to support seminar preparation and activities.
- That, beyond breaking down large groups into smaller concurrent groups, seminars should be based upon a range of activities and formats, for example:
 - Small group discussion with reporting back to the larger group, either on the same issue or applying differing source materials to the same topic.
 - Carefully organised student presentations; although issues of assessment and participation can be a problem. (Incidentally only 7 per cent of students thought such presentations were a useful learning experience compared to 47 per cent of staff).
 - Carefully structured role-play activities that help to establish differing or opposing points of view.
 - Where technically possible the on-line resources should be available during seminars; this is especially useful when referring to primary sources or to refer to passages in set readings. (This need not mean using IS labs as a venue as resources could be presented to a seminar using a tutor laptop connected to a digital projector or to TV monitors which are a widely available in teaching rooms).
- Finally, for teaching with on-line resources to be successful it is necessary that such work should receive strong and positive support from academic managers, it is also desirable – especially from the student perspective – that such resources are provided across a significant number of courses within any given programme.