

HEFCE 01/50

**August**

Report

# FDTL phase three: funded projects

**HEFCE and DEL awards under phase  
three of the Fund for the Development  
of Teaching and Learning**

## **Foreword**

The development of excellence in learning and teaching is a strategic goal for universities and colleges in England. In order to support the sustained development of good practice and innovation, the HEFCE has funded a further 33 projects under phase three of the Fund for the Development of Teaching and Learning (FDTL) programme. The diverse and pioneering nature of these projects ensures that teachers in universities and colleges continue to have access to useful and innovative tools to help them operate successfully in an increasingly complex environment. The FDTL programme is a key part of the subject strand of our Teaching Quality Enhancement Fund (TQEF), which has been established to help deliver our learning and teaching strategy.

This report describes the goals, outcomes and programmes of work of each of the FDTL phase three projects. These, together with the 63 projects funded under phases one and two, provide an impressive range of methods and resources to stimulate and support effective learning, teaching and assessment. Projects within the FDTL programme are developed and carried out by subject specialists who have demonstrated the high quality of their teaching. Additionally, for FDTL phase three we are realising the benefits from the enhanced dissemination framework provided by the 24 Subject Centres of the Learning and Teaching Support Network (LTSN).

There are contact details for all FDTL phase three projects within this report. I encourage institutions to make contact with any project that interests them, with which they may want to get involved, or from which they may want to seek advice when considering applying for future phases of FDTL funding.

I am sure that institutions will find the work of the FDTL programme both interesting and stimulating. To maximise the effects of the projects, I encourage institutions to spread the messages of good practice by disseminating this report around the organisation to stimulate discussion of the work of the FDTL projects in appropriate settings.

Brian Fender  
Chief Executive

## **FDTL phase three: funded projects**

### **HEFCE and DEL awards under the Fund for the Development of Teaching and Learning**

To Heads of HEFCE-funded higher education institutions  
Heads of universities in Northern Ireland  
Heads of further education colleges in receipt of HEFCE funds

Of interest to those responsible for Quality assessment, quality enhancement,  
subjects assessed between April 1995 and September 1996

Reference 01/50  
Publication date August 2001

Enquiries to Sarah Howls  
tel 0117 931 7446  
e-mail s.howls@hefce.ac.uk

#### **Executive summary**

##### Purpose

1. This report provides summaries of the projects funded under phase three of the Fund for the Development of Teaching and Learning (FDTL).

##### Key points

2. FDTL aims to stimulate developments in teaching and learning, and to involve institutions in implementing good practice.
3. A total of 33 projects were funded under phase three, at a total cost of £6.8 million over three years.

##### Action required

4. This report is for information: the summaries provide contact names for further details.

## Background

5. The FDTL was launched by the HEFCE and the Department of Education, Northern Ireland (DENI) in December 1995. DENI has since been renamed the Department for Employment and Learning (DEL).

6. The aims of the FDTL are to:

- stimulate developments in learning and teaching
- secure the widest possible involvement of institutions in the take-up and implementation of good practice.

7. Funds are awarded to projects that show the potential to make a contribution to the development and improvement of learning and teaching through the transfer of information and ideas. This is the first time that the HEFCE and DEL have linked the results of the quality assessment process to the allocation of funds in the higher education (HE) sector. Bids can only be made by those institutions that have demonstrated, through quality assessment, high quality in their educational provision.

## Phase one

8. In December 1995 bids were invited under phase one of the FDTL programme. Phase one covered the 15 subjects assessed under the quality assessment method used between February 1993 and June 1995: anthropology, applied social work, architecture, business and management studies, chemistry, computer sciences/studies, English, environmental studies, geography, geology, history, law, mechanical engineering, music, and social policy and administration.

9. Forty-four projects at a cost of £8.5 million were funded under phase one.

## Phase two

10. Bids under phase two were invited in December 1996. This phase covered the eight subjects assessed between April 1995 and September 1996: chemical engineering, sociology, linguistics, French, German and related languages, Italian, Iberian languages and studies, and Russian and Eastern European languages and studies.

11. Nineteen projects were funded at a cost of £4 million over three years. These projects started in October 1997.

## Phase three

12. Projects in phase three include 16 subjects assessed between autumn 1996 and autumn 1998: agriculture, forestry and agricultural sciences; food science; mechanical, aeronautical and manufacturing engineering; civil engineering; electrical and electronic engineering; general engineering; materials technology; building; town and country planning and landscape; land and property management; American studies; Middle Eastern and African studies; East and South Asian studies; history of art, architecture and design; communication and media studies; and drama, dance and cinematics.

13. The FDTL projects are engaged in a range of activities related to teaching and learning. Dissemination of the outcomes of the projects takes many forms: for example training events, workshops, production of training materials including text and CD-ROM web-sites, e-mail discussion groups, conferences and newsletters.

14. There is a natural link between many of the projects working in the same subject area, and many projects have come together because they are working on similar educational themes such as:

- lifelong learning
- peer assessment and observation
- transferable skills
- student group work.

### **Programme management**

15. The programme is guided by an advisory group on behalf of the HEFCE and DEL. The TQEF National Co-ordination Team (NCT) undertakes day to day management of the programme. The NCT is based at the Centre for Higher Education Practice at the Open University, and its role can be summarised as follows:

- to promote the TQEF on behalf of the HEFCE
- to support and monitor the projects funded through FDTL and the Teaching and Learning Technology Programme (TLTP)
- to support institutions in developing and implementing their learning and teaching strategies
- to support the projects being carried out through the National Teaching Fellowships scheme
- to advise the HEFCE on running components of the TQEF
- to facilitate the management of change in learning and teaching through the work of the TQEF.

16. The NCT performs this role by: visiting projects; running workshops and publishing briefs on common themes such as project management, dissemination and evaluation; sharing information across projects through a newsletter and web-site; and organising an annual FDTL conference for all projects. Further details about the NCT can be found at [www.ncteam.ac.uk](http://www.ncteam.ac.uk)

### **Evaluation**

17. Within the portfolio of FDTL projects, a range of evaluation strategies are in operation, including detailed arrangements for internal and external evaluation. The continued funding for projects is subject to satisfactory and sustainable progress, and each project has to submit an annual progress report. The NCT also has to submit an annual report to the advisory group detailing the next year's activities and the budget required to support those activities.

**Further information**

18. All enquiries about FDTL projects should be addressed to the Policy Officer, Sarah Howls on 0117 931 7446, e-mail [s.howls@hefce.ac.uk](mailto:s.howls@hefce.ac.uk)

## Project summaries

The following section summarises the 33 projects funded under phase three of the FDTL programme. They are listed by project number, which – with the exception of the three projects led by Oxford Brookes University (64/99, 65/99 and 66/99) – also means they are in alphabetical order by lead institution.

	Page
<b>Bournemouth University</b>	10
Promoting Peer Assisted Learning to Implement Good Practice in Student Support and Guidance – PAL (2/99)	
<b>Bournemouth University</b>	12
Group Working Assessment in Media Production – GWAMP (3/99)	
<b>University of Bradford</b>	14
Project Squared (4/99)	
<b>University of Cambridge</b>	16
Dissemination of IT for the Promotion of Materials Science – DOITPOMS (8/99)	
<b>University of Central Lancashire</b>	18
Fire Support Programme for Assisted Resources and Knowledge – FIRESPARK (9/99)	
<b>University of Central Lancashire</b>	20
Americanisation, Cultural Theory and the Teaching of American Studies – AMATAS (10/99)	
<b>Central School of Speech and Drama</b>	22
Assessing Group Practice (12/99)	
<b>Coventry University</b>	25
Best Practice in Building Education (14/99)	
<b>De Montfort University</b>	27
Developing Business Skills within Land and Property Management Courses – DEBS (15/99)	
<b>De Montfort University</b>	29
The Performance Reflective Practice Project – ReP (16/99)	

<b>Harper Adams University College</b>	31
Developing a Professional Scholarship Programme for the Land-based Industries (23/99)	
<b>University of Hull</b>	33
Improving Student Progression and Achievement in Electrical and Electronic Engineering – PROGRESS (24/99)	
<b>Imperial College of Science, Technology and Medicine</b>	36
Tutoring Materials (26/99)	
<b>Kingston University</b>	38
Learning to Work: Working to Learn (28/99)	
<b>Loughborough University</b>	40
An Inclusive Approach to Address the Balance of Women in Manufacturing Engineering – BALANCE (33/99)	
<b>Loughborough University</b>	42
Promoting Skill Development on Undergraduate Programmes in Civil and Building Engineering: a Strategic Approach based on Professional Development Needs – RAPID 2000 (34/99)	
<b>University of Luton</b>	44
The Use of the Construction Site as a Learning Environment (35/99)	
<b>University of Newcastle upon Tyne</b>	46
Integrating Work-Related Learning into the Curriculum: Conceptual Framework and Good Practice Guide (39/99)	
<b>Nottingham Trent University</b>	48
The Keynote Project (41/99)	
<b>Nottingham Trent University</b>	51
Embedding 'Matching Sections' in Engineering – EMSIE (42/99)	
<b>University of Nottingham</b>	53
Project Based Learning in Engineering – PBLE (43/99)	
<b>University of Oxford</b>	55
Chinese Language Skills for Britain: Disseminating Best Practice (46/99)	
<b>University of Plymouth</b>	57
Student Centred Learning in Construction Education – SLICE (47/99)	
<b>University of Plymouth</b>	59
Promoting Effective Student Transfer and Progression Through Partnership – SPAT (48/99)	

<b>Sheffield Hallam University</b>	61
Inter-Professional Collaboration: Simulating Partnership Working in the Built Environment (51/99)	
<b>University of Southampton</b>	63
Electrical and Electronic Engineering Assessment Network – E3AN (53/99)	
<b>University of Sunderland</b>	65
Employability and the Media Studies Curriculum (54/99)	
<b>University of Sussex</b>	67
Globalising Art, Architecture and Design History – GLAADH (55/99)	
<b>UMIST</b>	69
Specialist Graduate Support Programme – W3-SGSP (58/99)	
<b>University of Warwick</b>	71
Accessing and Networking with National and International Expertise – ANNIE (60/99)	
<b>Oxford Brookes University</b>	73
Disseminating and Extending an Audio Visual Aid Library of Food Processing Operations and Food Factories – FoodVidLib (64/99)	
<b>Oxford Brookes University</b>	75
Linking Teaching with Research and Consultancy in Planning, Land and Property Management, and Building (65/99)	
<b>Oxford Brookes University</b>	77
Progress Files in an Integrated Tool for Student Management of Study Programmes (66/99)	

Bournemouth University

**Promoting Peer Assisted Learning to Implement Good Practice in Student Support and Guidance – (PAL)**

Subject area	Interdisciplinary
Theme	To promote and disseminate best practice in peer assisted learning in UK higher education
Partner institutions	None
Project number	2/99
Duration	3 years
Funding	£150,000
Contact	Hugh Fleming
Role in project	Project Manager
Tel	01202 595480
Fax	01202 595314
e-mail	hfleming@bournemouth.ac.uk
Address	PAL Project Academic Services Bournemouth University Talbot Campus Fern Barrow POOLE BH12 5BB

**Goals**

The overall aims of the project are:

- to identify and collate good practice in peer assisted learning (PAL)
- to involve experienced PAL practitioners in reviewing, revising and updating existing PAL training materials
- to design, implement and evaluate peer assisted learning within different courses in different discipline areas at Bournemouth University
- to work with the UK Supplemental Instruction Network to help members embed peer assisted learning within their contexts

- to disseminate information via a web-site; computer mediated discussion groups, workshops and conferences to raise awareness of peer assisted learning and enhance best practice.

### **Project outcomes**

The outcomes will be:

- a web-site
- a web-based computer conferencing discussion forum
- a database of good practice providers in the field of peer assisted learning
- case studies of student use of peer assisted learning
- project dissemination workshops and conferences organised in conjunction with the UK Supplemental Instruction Network
- a PAL trainers manual (both in print and web-based)
- a PAL leaders advice booklet (both in print and web-based)
- publications.

### **Programme of work**

The project will take over leadership of the UK Supplemental Instruction (SI) Network and will work closely with its members.

Phase one of the project will concentrate on identifying and collating good practice in peer assisted learning, leading to the production of the PAL trainers manual and PAL leaders advice booklet. Work on the web-site will commence, including the creation of web-based computer conferences and information for the database of case studies. The project will organise and deliver a national residential PAL leaders' conference.

Phase two of the project will see the pilot implementation of Peer Assisted Learning at Bournemouth University. This core phase will involve the close monitoring of the pilot study to observe progress and formatively evaluate results. Phase two will include the revision of the PAL trainers manual, PAL materials and the PAL leaders advice booklet, and the creation of a complete database of case studies.

Finally, phase three of the project will see further implementation of PAL at Bournemouth University, alongside the implementation and testing of materials at SI Network members' institutions. This phase will include a summative evaluation and dissemination of final results via conferences, workshops, web-site and publications.

Bournemouth University

**Group Working Assessment in Media Production (GWAMP)**

Subject area	Media Production
Theme	Effective assessment of students in groups
Partner institutions	Cheltenham and Gloucester College of HE, Liverpool John Moores University, London Guildhall University
Project number	3/99
Duration	3 years
Funding	£218,420
Contact	Andrew Ireland
Role in project	Project Manager
Tel	01202 595340
Fax	01202 595530
e-mail	aireland@bournemouth.ac.uk
Address	Bournemouth University PG117 Poole House Talbot Campus POOLE BH12 5BB

**Goals**

This project seeks to develop and embed good practice in assessment of groupwork in Media Production curricula throughout higher education.

**Project outcomes**

The outcomes will be:

- the production of 10 (two per partner institution) video case studies showing group working assessment in practice
- a programme of workshops in individual institutions, at which the video case studies will provide the focal point for discussion and dissemination of good practice
- creation of a web-site with provision for an e-mail discussion 'helpline' for academics

- an interdisciplinary conference in the final year of the project to disseminate findings throughout the sector.

### **Programme of work**

The first year of the project will establish the current position with regard to the percentage of assessed, practical groupwork in media production courses in the UK.

Each of the partner institutions will then prepare and produce two video case studies of assessment in practice. These will be used as the basis for workshops in individual institutions in the second year. The workshops will encourage media production academics to evaluate their own group assessment practices and discuss ways of improving and building upon them.

The final phase of the project will include a conference, at which the results of the project will be disseminated to other disciplines in higher education.

University of Bradford  
**Project Squared**

Subject area	Electrical and electronic engineering
Theme	The development of project work as one of the most important teaching and learning methods in electrical and electronic engineering
Partner institutions	Nottingham Trent University, University of Warwick
Project number	4/99
Duration	2 years 6 months
Funding	£250,000
Contact	Dr Oliver J. Downing
Role in project	Project Director
Tel	01274 234025
Fax	01274 391521
e-mail	<a href="mailto:o.j.downing@bradford.ac.uk">o.j.downing@bradford.ac.uk</a>
Address	Department of Electronics and Telecommunications University of Bradford BRADFORD BD7 1DP

### **Goals**

The project aims to identify and disseminate best practice in the development and delivery of project work as a core learning and teaching method in electrical and electronic engineering.

### **Project outcomes**

The outcomes will be:

- identification of learning outcomes of project work
- derivation of best-practice models for project work
- development of the Virtual Project scheme
- delivery of best-practice case studies of project work
- dissemination of project outcomes
- integration of key and related skills plus development of a student Progress File.

## **Programme of work**

The project will open with visits to up to 20 institutions in order to gather data for the draft project learning outcomes. At the same time, development of the web-site will begin. Six institutions will be selected for collaborative working, leading to the collation of existing good practice in key skills and project work.

The next phase will see the development of the Virtual Project, with the piloting process taking place within the partner institutions. This phase will also include dissemination at national conferences.

The final stage will include devising guidelines, seeking authors and piloting the case study materials. A draft progress file will be prepared, tested and produced. Final dissemination of the project outcomes will involve a report, regional workshops and circulation of all materials to electrical and electronic engineering departments throughout higher education.

University of Cambridge

**Dissemination of IT for the Promotion of Materials Science (DOITPOMS)**

Subject area	Materials science and metallurgy
Theme	The use of information technology to enhance student learning experience within materials science
Partner institutions	University of Manchester and UMIST, Oxford Brookes University, University of Sheffield, University of North London, University of Leeds
Project number	8/99
Duration	3 years
Funding	£243,312
Contact	Dr Samantha Burke
Role in project	IT Resources Manager
Tel	01223 762964
Fax	01223 762836
e-mail	sb375@cam.ac.uk
Address	Department of Materials Science and Metallurgy University of Cambridge Pembroke Street CAMBRIDGE CB2 3QZ

**Goals**

The aim of the project is to build upon recognised expertise in the use of information technology (IT) to enhance the student learning experience within materials science. The project will develop a substantial set of teaching resources including video clips and micrographs, and create a model of electronic information exchange within the materials education community in the UK.

**Project outcomes**

The outcomes will be:

- to develop and provide a comprehensive set of teaching resources which are easily accessible and available to all via the web

- to create a model of electronic information exchange within a distributed student community, and a structure within which teaching staff can update, access and link teaching material
- to disseminate project achievements and findings within the materials education community on a regular basis, providing a rich teaching resource as well as promoting awareness of materials science
- to produce a final report for circulation to all heads of departments in materials science and related disciplines in engineering and physical sciences.

### **Programme of work**

In year one, the project will:

- seek to optimise access to available teaching resources within Cambridge and build on the current resource set
- collaborate with partner institutions to share current good practice and identify resources
- begin development of collaborative/joint resources
- develop 'showcase' example sets for dissemination and to encourage wider project participation.

In year two, it is anticipated that the project will see:

- continued resource development
- distribution of resources to partner institutions for student trials
- action on feedback from trials
- action to showcase resources and collaborative methodologies.

In year three, the project will see:

- continued resource development
- the evaluation of new and developed resources
- a final project workshop for dissemination, in conjunction with the Materials Science Subject Centre.

University of Central Lancashire

**Fire Support Programme for Assisted Resources and Knowledge (FIRES PARK)**

Subject area	Built environment – fire
Theme	Developing student support mechanisms within the built environment, particularly for those students studying remotely from the campus
Partner institutions	Fire Service College, Eastleigh College
Project number	9/99
Duration	2 years
Funding	£74,995
Contact	James Flannery
Role in project	Project Manager
Role in institution	Lecturer in fire safety and its influence within the built environment
Tel	01772 893225
Fax	01772 892916
e-mail	j.flannery@uclan.ac.uk
Address	Dept of Built Environment University of Central Lancashire PRESTON PR1 2HE

**Goals**

This project seeks to improve upon the delivery of study skills to students at a distance from the campus. It will develop strategies to support students at a distance, and create a flexible and immediate point of access to support for learning materials, demonstrations of principles, and modes of assessment.

**Project outcomes**

The outcomes will be:

- the encouragement of teaching staff to develop their tutoring skills in the relay of study skills information to students and in the provision of guidance and comment to students at a distance from the campus

- the development of strategies for the support of students at a distance in receiving the curriculum, teaching, learning and assessment
- the improvement of support to students in collaboration with partners, including other education providers, industrial training facilities and employers
- the creation of a flexible and immediate point of access to support for learning materials, demonstrations of principle and modes of assessment
- the enabling of students to receive appropriate guidance in applying their learning experiences in case study scenarios in the context of fire safety for the built environment.

### **Programme of work**

In year one, the project team will commence field studies in order to gather material for staff development workshops. These workshops will involve staff from the lead university, together with other participating colleges and invited institutions. Learner profiles will be established through student questionnaires and the results from the pilot study. Throughout this phase, development of the project web-site will continue.

Year two will see the project presenting at conferences and disseminating to the Chartered Institute of Building (CIOB). During this year, teaching materials will be trialled and evaluated by students. Recommendations from this evaluative exercise will help to refine the teaching materials. The project will end with an open dissemination event at the University of Central Lancashire, which will be open to all relevant higher education institutions and associated organisations.

University of Central Lancashire

**Americanisation, Cultural Theory and the Teaching of American Studies (AMATAS)**

Subject area	American studies
Theme	Developing the curriculum of American studies within a transatlantic framework
Partner institutions	University of Derby, King Alfred's College, Winchester
Project number	10/99
Duration	2 years
Funding	£148,785
Contact	Dr Alan Rice
Role in project	Project Manager
Tel	01772 893020
Fax	01772 892924
e-mail	a.rice@uclan.ac.uk
Web-site	www.amatas.org
Address	Department of Cultural Studies University of Central Lancashire PRESTON PR1 2HE

**Goals**

The aim of the project is to develop teaching condensed from the study of cultural theory to interrogate the impact of the United States on Britain and the wider world.

**Project outcomes**

The outcomes will be:

- workshops for cultural studies teaching staff in the consortium, aimed at further developing critical approaches towards Americanisation
- dedicated workshops in Americanisation to be developed at each institution and made available to the wider American studies community
- the further development and introduction at each institution of dedicated teaching blocks addressing the local impact of America on regions of the UK. This may include: students undertaking fieldwork at a local 'site of Americanisation'; working on an independent

research project with supervisory support; and presenting written or oral work as a case study for assessment

- the design of a web-site to provide resources to help the teaching of Americanisation, exchange good practice, and provide information links to other relevant sites
- the production of an on-line and possibly print newsletter for the cultural theory community
- the organisation of a conference on the theme of 'Teaching and learning: the case of Americanisation in American studies'.

### **Programme of work**

Year one of the project will include the launch of workshops involving staff from the three consortium institutions. Development of the project web-site will begin, with the project staff working closely with the LTSN subject centre to produce a site that will enable the dissemination of material on Americanisation and the teaching of cultural theory. In April 2001, project staff will attend the BAAS Conference (British Association for American Studies) at Keele University. At this conference, project members will explain the project, and outline the approaches to teaching and learning that will be explored.

Year two of the project will involve students of American studies in a dedicated block of study. This block of study is aimed at building upon an understanding of the process of Americanisation, and encouraging understanding of the importance of informed and critical methodology in the interpretation and analysis of cultural texts and practices.

Finally, the project will organise a national conference at the University of Central Lancashire. This conference, entitled 'Teaching and learning: the case of Americanisation in American studies' will seek to disseminate the findings of the project to the wider cultural theory and American studies community.

Central School of Speech and Drama  
**Assessing Group Practice**

Subject area	Performance and creative arts
Theme	The assessment of collaborative practice in the performance and creative arts
Partner institutions	Goldsmiths College, Bretton Hall, University of Salford, Dartington College of Art, University of Ulster
Project number	12/99
Duration	3 years
Funding	£249,161
Contact	Cordelia Bryan
Role in project	Project Manager
Tel	020 7559 3994
Fax	020 7559 3982
e-mail	c.bryan@cssd.ac.uk
Address	Central School of Speech and Drama Embassy Theatre Eton Avenue LONDON NW3 3HY

### **Goals**

The over-arching aim of this project is to ensure that the assessment of collaborative activity can be demonstrated to be fair, robust and practicable across the sector. The identifying and sharing of good practice is seen as a key means to this end.

### **Project outcomes**

#### Year one: Identification of issues

The outcomes will be:

- a survey and analysis of staff and student understandings of existing good practice across institutions

- a co-ordinated programme of targeted inter-institutional visits and/or exchanges from which case studies may be developed
- the establishment of a web-site dedicated to the project.

#### Year two: Outreach activity

The outcomes will be:

- the co-ordination of a series of practical regional workshops involving the active engagement of participants, including students
- identification of desired project outcomes, on the basis of year one activity, for example, a CD-ROM/video and/or a written guide to good practice.

#### Year three: Further dissemination of outcomes

The outcomes will be:

- facilitation of a consultancy network enabling institutions and departments beyond project teams to access expertise to assist with in-house staff development and training
- contribution of papers or case studies in national or international conferences/journals on the topic of assessment in collaboration with the subject centre
- the production/dissemination of outcomes
- a national conference.

#### **Programme of work**

In year one, the project will:

- design and launch a web-site
- co-ordinate a programme of visits to and/or contacts with local institutions (36 one-day visits)
- present the project aims/review at conferences held at Easter 2001 by the Standing Conference of University Drama Departments (SCUDD) and the Council for Higher Education in Art and Design (CHEAD)
- hold one or two day follow-up visits to six local institutions (one per region) to undertake case study work
- prepare the case study material
- hold a working seminar at the subject centre open to all institutions.

In year two, the project will

- deliver a presentation at the Innovations in Teaching and Learning Conference
- deliver 12 one-day regional workshops (two per project team)

- deliver 12 follow-up workshops on specified topics (two per project team)
- deliver a presentation/review of activity at CHEAD and SCUDD conferences (Easter 2002)
- produce and trial product outcomes across project teams.

In year three, the project will:

- continue with the development of the web-site
- develop products
- contribute to relevant conferences/journals
- deliver a presentation at the Innovations in Teaching and Learning conference
- set up and advertise the consultancy network
- conduct 12 consultancy visits to institutions and subject groups beyond the project
- deliver a presentation/review of activity at CHEAD and SCUDD conferences (Easter 2003)
- publish the project outcomes
- hold a national conference at the LTSN subject centre.

Coventry University  
**Best Practice in Building Education**

Subject area	Built environment
Theme	Identifying and enhancing best practice in the teaching and learning of building education
Partner institutions	Loughborough University, Nottingham Trent University
Project number	14/99
Duration	3 years
Funding	£248,877
Contact	Ray Hulse
Role in project	Project Manager
Tel	024 7688 8345
Fax	01203 838485
e-mail	R.Hulse@coventry.ac.uk
Address	School of the Built Environment Coventry University Priory Street COVENTRY CV1 5FB

### **Goals**

This three-year project aims to promote and enhance the quality of learning and teaching in the subject discipline of building, by disseminating best practice as identified in the QAA Subject Overview Report.

### **Project outcomes**

The outcomes will be:

- six 'best practice' guides developed within and disseminated among 42 departments of building
- four forums each attended by 50 participants
- one major conference attended by 100 participants
- six standing conferences attended by 100 participants

- 42 two-day institutional visits
- a network of some 300 building lecturers (intended to facilitate ongoing uptake and development of best practice)
- a 50-page web-site used as a vehicle for dissemination and communication.

### **Programme of work**

The first year of the project (starting September 2000) will largely involve visits to, and discussions with, the providers of building education. Forums will be held where the project team will engage providers in discussion and debate about the aims and purpose of the project. A web-site will be developed as part of the dissemination strategy. The guides will be written and developed in the second year, with the aim of launching them at a major conference towards the end of that year. In the third year, the guides will be updated and amended as necessary, and a series of bi-annual standing conferences will be established with the aim of providing a continuing forum for the sharing of best practice.

De Montfort University

**Developing Business Skills within Land and Property Management Courses (DEBS)**

Subject area	Land and property management
Theme	Reviewing land and property management courses to ensure that in addition to the skills of surveying, graduates have the opportunity to develop business skills relevant to the profession
Partner institutions	University of the West of England, Bristol
Project number	15/99
Duration	2 years
Funding	£162,213
Contact	Sue Martin
Role in project	Project Manager
Tel	0116 257 7448
Fax	0116 250 6264
e-mail	smartin@dmu.ac.uk
Address	Department of Land Management De Montfort University Bosworth House The Gateway LEICESTER LE1 9BH

**Goals**

This collaborative project seeks to ensure that the needs of employers are met in producing graduates and other professionals able to demonstrate an understanding of core business skills, in addition to those of surveying.

**Project outcomes**

Communication and dissemination (including materials, case studies and guidelines for new courses) will take place through a project web-site, the Centre for Education in the Built Environment (CEBE), and direct contact with land and property management departments expressing interest in the work. It is also anticipated that project members will provide advice to other universities wishing to implement changes as a result of developments arising from the project.

## **Programme of work**

In year one, the project will:

- undertake a review of existing practice and complete a survey (comprising questionnaire and focus meetings), which will enable the project team to develop a specification of business skills appropriate to the new demands of the surveying profession
- develop appropriate teaching, learning and assessment strategies, materials and curriculum changes to test the attainment of these skills.

In year two, the project will:

- test and evaluate strategies, materials and potential changes with current students
- evaluate their effectiveness.

Other universities with an interest in the project, members of the profession and the Royal Institute of Chartered Surveyors (RICS), will be involved from an early stage and will be encouraged to provide input.

De Montfort University  
**The Performance Reflective Practice Project (ReP)**

Subject area	Performing arts
Theme	Developing and disseminating methods of teaching, learning and assessment, to enhance analytical, critical and reflective approaches to the practice of dance and drama
Project number	16/99
Duration	2 years 6 months
Funding	£149,760
Contact	Judy Birkenhead
Role in project	Project Officer
Tel	0116 257 7395
Fax	0116 257 7825
e-mail	jbirkenhead@dmu.ac.uk
Address	Department of Performing Arts De Montfort University Scraptoft Campus LEICESTER LE7 9SU

### **Goals**

The nature of much activity in dance, drama and performance requires observation, reflection, experiment and revision. ReP will work with HE providers to investigate ways students in these disciplines may be enabled to learn more effectively from their practice by engaging with it in a critically reflective way. The ways learners engage in practice and the ways their learning can be identified, articulated and developed as a result are core concerns of the project.

### **Project outcomes**

The outcomes will be:

- an interactive roadshow with a team of project workers working alongside end users
- institution-based follow-up visits to embed change
- a web-based resource and discussion group and a directory of networked consultants
- publications, including journal articles, conference papers and a final report.

### **Programme of work**

The project will be developed over a period of 30 months. An initial period of research and establishment will allow consideration of existing reflective practice in order to establish theoretical and educational parameters and enable the project to introduce itself to the subject community.

A significant period of time will be devoted to the formation of the project team and the developing, piloting, launch and implementation of a Reflective Practitioner Interactive Roadshow. The roadshow will be followed up by visits to departmental teams. The establishment of a web-based resource and discussion group will be ongoing. A directory of networked consultants linked to the LTSN subject centre for the performing arts, and accessible by HE teaching staff, will be both developmental and a key feature of long-term implementation of the project.

Harper Adams University College

**Developing a Professional Scholarship Programme for the Land-based Industries**

Subject area	Land-based industries
Theme	The development of key skills teaching in agriculture, forestry and agricultural science
Partner institutions	Writtle College
Project number	23/99
Duration	3 years
Funding	£147,850
Contact	Dr Abigail Hind
Role in project	Project Manager
Tel	01952 820280
Fax	01952 814783
e-mail	amhind@harper-adams.ac.uk
Address	Harper Adams University College NEWPORT TF10 8JD

**Goals**

The overall aims are:

- to develop the key skills required for successful learning in both undergraduate courses and in subsequent careers
- to develop the knowledge, understanding, attributes and skills required to obtain appropriate employment, and manage their careers
- to develop the professional scholarship required by autonomous individuals in a learning society.

**Project outcomes**

The outcomes will be:

- teaching packs provided for each of the taught modules, including on-line materials

- key teaching staff engaging in the development and review of the programme, the personal progress files, the teaching packs and student evaluation
- students making effective use of the personal progress files (in either hard-copy or on-line versions)
- personal tutors engaging in reflective evaluation of personal progress with students
- programme elements evaluated by clients and feedback acknowledged
- candidates successfully completing the programme to be awarded the Certificate of Professional Skills
- other higher education institutions (HEIs) encouraged to adopt the Professional Scholarship programme within their courses.

### **Programme of work**

The Professional Scholarship Programme is based upon a strand of modules which run throughout undergraduate programmes from years one to four. These modules include: effective communication; introductory, intermediate and advanced research methods; career development; and an individual major project (dissertation or investigation), as well as the placement period which incorporates work-based learning and assessment.

Completion of the programme will provide tangible evidence that students have attained the six key skills (communication, numeracy, IT, team work, problem solving and learner autonomy) through the award of the Certificate of Professional Skills. A profiling system will be developed to encourage students to take personal ownership of the development of these skills.

University of Hull

**Improving Student Progression and Achievement in Electrical and Electronic Engineering (PROGRESS)**

Subject area	Electronic engineering
Theme	Seeks to improve student progression and achievement across the range of HE provision from HNC/HND to MEng degrees.
Partner institutions	Brunel University, University of Huddersfield, University of East Anglia
Project number	24/99
Duration	3 years
Funding	£247,000
Contact	Gavin Cutler
Role in project	Project Officer
Tel	01482 466072
Fax	01482 466072
e-mail	g.l.cutler@eng.hull.ac.uk
Address	Department of Engineering University of Hull Cottingham Road HULL HU6 7RX

**Goals**

PROGRESS seeks to improve student progression and achievement by investigating the nature and extent of problems systematically, establishing and disseminating current good practice, improving current best practice and facilitating its implementation across the range of electrical and electronic engineering HE programmes, from HNC/HND to accredited BEng and MEng degrees. Attention will be paid to the progression, achievement and employability of students accessing HE from a variety of backgrounds, to mature students, and to disabled students.

**Project outcomes**

The outcomes will be:

- heightened awareness of issues relating to student progression and achievement

- availability of strategies for improvement together with a methodology for implementation
- the existence of a network of consultants to provide ongoing support
- contributions to conferences and journals
- production of a document summarising relevant literature
- production of a document describing existing strategies
- national conferences
- booklets describing enhanced strategies and test results
- methodology booklet
- on-site workshops
- regional workshops
- consultancy support
- national workshop.

### **Programme of work**

In year one, the project will:

- put together a database of all heads of department and directors of studies involved with the teaching of electrical and electronic engineering in Britain and Northern Ireland
- design, distribute and analyse a telephone/web questionnaire to identify progression strategies
- conduct site visits to institutions showing innovative/effective strategies, then produce case studies
- undertake a review of current literature on progression problems and improvement strategies
- establish a PROGRESS web-site with links to other relevant sites. The web-site will be updated monthly
- hold a national conference at the end of year one to disseminate good practice and to highlight issues.

In year two, the project will:

- test strategies for improvement in institutions (likely to take at least six months)
- make the documented test results available.

In year three, the project will:

- identify 15 institutions for workshops and subsequent evaluation

- hold a second national workshop to which all members of the database will be invited. Case studies will be presented, and representatives of institutions having received workshops and subsequent support will be encouraged to share experiences.

**Tutoring Materials**

Subject area	Materials technology
Theme	Identifying good practice in materials tutoring and the encouragement and provision of support for lecturers and tutors who seek to improve their practice
Partner institutions	University of Wolverhampton, Queen Mary University of London, University of Bath, University of Birmingham, University of Cambridge, University of Liverpool, Sheffield Hallam University, University of Surrey, University of Southampton
Project number	26/99
Duration	3 years
Funding	£249,535
Contact	Caroline Baillie
Role in project	Project Director
Tel	0151 794 4462
Fax	0151 794 4466
e-mail	c.baillie@ic.ac.uk
Address	Department of Materials Imperial College Prince Consort Road LONDON SW7 2BP

**Goals**

The overall aim of this project is to identify good practice in materials technology tutoring, and the encouragement and provision of support for lecturers and tutors who are enthusiastic about improving their practice.

## Project outcomes

The outcomes will be:

- evaluation of the effectiveness of optimal tutoring conditions in at least 10 sites around the UK, for the development of key skills, active learning and employability of materials technology students
- publication of two booklets containing five case studies and guidelines for best practice in materials tutorials
- production of a video to complement the booklets
- distribution of these videos and booklets to all materials departments in the UK
- establishment of an Enthusiasts Network
- design, facilitation and evaluation of 10 regional workshops on tutoring in materials
- publication of findings in regard to best practice through presentations.

As a result of this project, it is anticipated that the community of lecturers and tutors in materials will:

- develop an increased interest in teaching and learning
- have an increased awareness of developments and good practices
- understand and be aware of their use
- be able to identify appropriate practice for themselves and their context and improve their practice.

## Programme of work

The initial stages of the project will see the establishment of the project team and the Enthusiasts Network. Visits to partner teams will be arranged to establish criteria for good practice in tutorials. Five case studies will be made at partner institutions as action research projects. They will last for one year, and will provide full examples of some of the principles explored in the booklets and videos. Observation and filming of groupwork *in situ* within industry will be carried out for later use in video and booklets. Focus group discussions with students will take place, and tutorials will be observed.

A booklet and video will be produced at the end of the case studies. Drafts will be sent out to the Enthusiasts Network for trials and tutor/student feedback.

An expert facilitator will be employed to deliver at least 10 half-day workshops at different locations nationally. The purpose of the workshops will be to explore the use and suitability of the materials produced, and to elicit further discussion on good practice in tutorials. Final editing of the video and booklets will take place, and then will be made available to all those working within materials technology.

Kingston University  
**Learning to Work: Working to Learn**

Subject area	Architecture, landscape, planning and surveying
Theme	To enhance work-based learning skills among graduates from urban design and landscape courses
Project number	28/99
Duration	2 years
Funding	£149,193
Contact	Paul Swann
Role in project	Project Manager
Tel	020 8547 2000 ext. 4203
Fax	020 8547 7186
e-mail	p.swann@kingston.ac.uk
Address	School of Architecture and Landscape Knights Park Kingston University KINGSTON UPON THAMES KT1 2QJ

### **Goals**

The aims of the project are to:

- provide guidance to professional staff on how to support and assist students working within their offices to train and successfully pass professional exams and assessments
- allow academic staff to experience professional practice in order for them to develop a better understanding of the needs and requirements of the current market in relation to its demands for student skills
- improve the employment prospects of students by ensuring curriculum content is relevant and geared towards the demands of the profession
- enhance student life-long learning skills
- set up and establish a series of mentoring schemes for the future.

### **Project outcomes**

The outcomes will be:

- the publication of an audit of current methods of work-based learning and student assessment in existence in higher educational establishments and the relevant employer base
- the creation of an interactive database of good practice initiatives, research developments and innovations. Access will be through the project web-site
- the development of a work shadow/mentor training scheme for relevant academic staff in built environment departments of HEIs and relevant members of employer organisations
- the development and dissemination of a best practice model for teaching and learning to ensure professional competence across the relevant built environment disciplines
- the production of web-based support information to students, practitioners and academic staff, complementing that already produced by professional bodies.

### **Programme of work**

The project programme runs for two years and will commence with an audit of current work-based learning methods, before preparing documentation for staff to use during periods of fieldwork which are planned for summer and autumn 2001. Evaluation and dissemination will follow, including the development of the web-site and teaching support materials for architecture and landscape practices.

Loughborough University  
**An Inclusive Approach to Address the Balance of Women in Manufacturing Engineering (BALANCE)**

Subject area	Manufacturing engineering
Theme	Improving the balance of women within manufacturing engineering
Partner institutions	Coventry University, University of Birmingham
Project number	33/99
Duration	3 years
Funding	£249,650
Contact	Lesley Davis
Role in project	Project Manager
Tel	01509 227669
Fax	01509 267725
e-mail	l.davis@lboro.ac.uk
Address	Wolfson School of Manufacturing and Mechanical Engineering Loughborough University LOUGHBOROUGH LE11 3TU

### **Goals**

This project will gather, disseminate and embed existing good practice in developing methodologies to generate an engineering community to which more balanced numbers of women and men are attracted, recruited and retained. Drawing from and building upon existing initiatives and studies, it will engender an environment in which staff, students and employers will both be aware of and understand the attitudes and perceptions specific to women in engineering.

### **Project outcomes**

The outcomes will include:

- expansion of involvement to include approximately 15 departments external to the consortium
- report of good practice across the UK

- resource packs, containing models of good practice based upon the case studies, updated on an annual basis during the project's lifetime
- web-site to provide additional dissemination channels for project materials
- electronic discussion board for building people networks accessible via the project site
- working group with LTSN subject centre for Engineering
- regional workshops to roll out project outcomes to the rest of the community.

### **Programme of work**

The first year activities have a dual focus – gathering and documenting existing good practice in promoting opportunities for women in manufacturing engineering, and developing case studies from the existing work of the consortium.

The second year activities will build upon those of the first year, disseminating good practice more widely, developing the case studies and documenting experiences.

The third year of activities will consolidate the changes engendered and build upon the activities of the first two years. In addition, it will develop further the networks to facilitate self-sustaining maintenance of the embedded good practice.

Loughborough University

**Promoting Skill Development on Undergraduate Programmes in Civil and Building Engineering: a Strategic Approach based upon Professional Development Needs (RAPID 2000)**

Subject area	Civil and building engineering
Theme	To promote generic, transferable and professional skills on undergraduate programmes in civil and building engineering
Partner institutions	University of Central England
Project number	34/99
Duration	3 years
Funding	£249,972
Contact	Alan Maddocks
Role in project	Project Manager
Tel	01509 227192
Fax	01509 223981
e-mail	A.P.Maddocks@lboro.ac.uk
Address	Department of Civil and Building Engineering Loughborough University LOUGHBOROUGH LE11 3TU

**Goals**

The RAPID 2000 project is designed to enhance the skills of future professionals throughout the construction industry. The project will see the extension of the web-based RAPID Progress File to assist in the skills development of students on degree programmes accredited by professional institutions within the construction industry.

**Project outcomes**

The RAPID Progress File is a mechanism designed to build and maintain a record of achievement, to audit and develop skills compatible with the competence requirements of professional institutions, and to store evidence of such competence. It was developed as part of a DfEE funded project, 'Recording Achievement in Construction' (1998-2000).

This project will continue this process of significantly enhancing the skill development of undergraduates in civil and building engineering by:

- designing a minimum of five customised web-based versions of the RAPID Progress File in line with the competencies required for membership of leading professional institutions within the construction industry
- producing a user guide for each student, tutor and industrial mentor involved in the project
- producing a project web-site (<http://rapid2k.lboro.ac.uk/>)
- arranging six seminars to assist the processes of sharing experience of best practice
- producing annual evaluation reports
- producing academic papers, conference presentations and technical presentations.

The project team intends to make full use of both the LTSN centre for the built environment and the LTSN centre for engineering, to assist in the dissemination process. The project team will make regular contributions to newsletters provided by the LTSN centres and will support their events.

### **Programme of work**

In year one, the project will:

- develop customised versions of the RAPID Progress File
- implement the customised versions of the File at Loughborough and the University of Central England.

In year two, the project will:

- implement all customised versions in a minimum of five higher education institutions
- monitor and evaluate student progress.

In year three, the project will:

- implement all customised versions in a further five higher education institutions
- monitor and evaluate student progress.

University of Luton

## **The Use of the Construction Site as a Learning Environment**

Subject area	Built environment
Theme	Preparation of learning and teaching materials, using web-cam footage and video images taken from a construction site
Partner institutions	Not yet appointed
Project number	35/99
Duration	3 years
Funding	£238,870
Contact	Matthew Fletcher
Role in project	Project Manager
Tel	01582 489273
Fax	01582 489212
e-mail	matthew.fletcher@luton.ac.uk
Address	Department of Technology University of Luton Park Square LUTON LU1 3JU

### **Goals**

The aim of this project is to enhance the learning experience and employability of all students through the observation of activities and interaction within the workplace.

### **Project outcomes**

The outcomes of the project and any related findings will be disseminated as widely as possible using the following mechanisms:

- articles in trade journals and publications
- seminars
- presentations at conferences by the Staff and Educational Development Association (SEDA) and the Society for Teaching and Learning in Higher Education (STLHE)
- creation and maintenance of a web page

- strong links with the Centre for Education in the Built Environment (CEBE)
- production of teaching packages on CD-ROM and intranet.

### **Programme of work**

The project will:

- identify a suitable site for study and negotiate access with contractor
- purchase and install remote controlled web-cam
- test and refine web-cam output
- identify specific topics relevant to study
- plan web-cam/video coverage
- record images and store
- edit and produce teaching packages
- obtain contractor's approval of material to be published
- trial material with collaborating institutions
- market and distribute teaching packages.

University of Newcastle upon Tyne

## **Integrating Work-Related Learning into the Curriculum: Conceptual Framework and Good Practice Guide**

Subject area	Agriculture, forestry, agricultural sciences and organismal biosciences
Theme	Enhancing student employability through the integration of work-related learning into the curriculum
Partner institutions	Faculty of Agriculture and Biological Sciences at the University of Newcastle, School of Sciences at the University of Sunderland, University of Newcastle Careers Service
Project number	39/99
Duration	3 years
Funding	£249,345
Contact	Robert Walker
Role in project	Project Manager
Tel	0191 222 8491
Fax	0191 222 7780
e-mail	r.g.walker@ncl.ac.uk
Address	Academic Development Unit University of Newcastle Careers Service NEWCASTLE UPON TYNE NE1 7RU

### **Goals**

The principal aim of the project is to support students in preparing for, and making the transition into employment, by improving work-related learning within the curriculum of courses in agriculture, forestry, agricultural sciences and organismal biosciences. Implicit in this is the need to integrate such learning in the curriculum in a way that is transparent to stakeholders and allows curriculum developers to ensure appropriate progression.

### **Project outcomes**

The outcomes will be:

- development of a practitioner or special interest network to facilitate the sharing and uptake of good practice in work-related learning
- production in hard-copy and electronic form of a guide for practitioners on how to introduce work-related learning which details case studies and good practice

- organisation of two workshops and a web-based conference for practitioners, educational developers and employers to gather information, disseminate good practice and encourage uptake
- establishment of an interactive web page that will enable practitioners to search a database of good practice and access support materials
- development of a methodology for evaluating the effectiveness of work-related learning activities from the student perspective for the appropriate subject centre.

### **Programme of work**

In year one, the project will:

- establish a conceptual framework, which identifies criteria against which good practice can be mapped
- present findings to a range of institutions to test the framework and encourage feedback and suggestions
- conduct a detailed survey to identify examples of good practice
- analyse data and establish a good practice database in conjunction with the appropriate subject centres.

In year two, the project will:

- prepare and implement two new approaches to work-related learning in the partner institutions based on the good practice database
- encourage a wider range of institutions to implement work-related learning activities and to build links with employers
- provide support and assistance, which includes a funding element, to aid departments in developing and delivering new approaches to work-related learning
- develop the good practice database in light of the continuing developments and activities.

Nottingham Trent University

**The Keynote Project**

Subject area	Textiles, fashion and printing
Theme	Developing and enhancing the key skills of graduates through the dissemination and embedding of existing good practice.
Partner institutions	The London Institute, University of Leeds
Project number	41/99
Duration	27 months
Funding	£250,000
Contact	David Allen
Role in project	Project Director
Tel	0115 848 2279
Fax	0115 948 6092
e-mail	david.allen@ntu.ac.uk
Address	Department of Fashion Textiles Nottingham Trent University Burton Street NOTTINGHAM NG1 4BU

**Goals**

To embed and disseminate good practice in key skill development as a way of enhancing graduate employability and developing the skills of lifelong learning.

**Project outcomes**

The outcomes will be:

- staff resource pack on key skills
- tutor, employer and student guide on 'Preparing for a Work Placement'
- five good practice guides
- student progress file
- publications
- two national conferences
- nine institutional workshops

- web-site.

### **Programme of work**

The Keynote Project has seven key stages:

In stage one, the project will:

- ensure all project staff are in place and develop team skills
- produce project brochure to obtain high visibility
- produce an evaluation strategy
- design a template for the institutional visits
- conduct a pilot of the audit template with the three consortium partners and refine
- hold three internal awareness workshops (one per partner).

In stage two, the project will:

- visit 16 institutions to collate and record existing good practice
- select six institutions for future collaboration
- visit employers to identify their existing good practice
- begin staff resource pack in key skills
- develop a web-site.

In stage three, the project will:

- conduct three workshops (one per partner) for understanding and disseminating outcomes from the audit in order to produce action plans
- hold the first national conference
- produce guidelines for the case studies
- develop the web-site
- develop formats for a student progress file.

In stage four, the project will:

- produce materials.

In stage five, the project will:

- pilot and refine materials.

In stage six, the project will:

- collate feedback
- revise materials
- produce progress file.

In stage seven, the project will:

- hold workshops within the three consortium partners
- hold the second national conference
- launch all materials
- establish a continuation strategy
- produce a final report.

Nottingham Trent University  
**Embedding 'Matching Sections' in Engineering  
(EMSIE)**

Subject area	Civil, structural and building services in engineering
Theme	To develop a best practice handbook for 'Matching Section' provision for BEng and HND/C graduates to meet requirements for Chartered and Incorporated Engineers
Project number	42/99
Duration	2 years
Funding	£74,300
Contact	Professor RK Hawkins
Role in project	Project Director
Role in institution	Dean of Construction and the Environment
Tel	0115 848 6007
Fax	0115 848 6450
e-mail	roger.hawkins@ntu.ac.uk
Address	Nottingham Trent University Burton Street NOTTINGHAM NG1 4BU

**Goals**

To develop a definitive guidance handbook as a benchmark standard for Matching Section further learning for all civil/structural/building services engineering organisations in both HE and industry, and to disseminate this widely.

Matching Section

Students who have an HNC or HND-level qualification are required to extend their learning to BSc level if they wish to satisfy the base requirements for Incorporated Engineer status. Similarly, students who have a BEng (Hons) degree are required to extend their education to MEng (or equivalent MSc) to satisfy the educational requirements for Chartered Engineer.

## Project outcomes

The outcomes will be:

- a print and web-based guidance handbook for providers of and participants in Matching Section provision, detailing process requirements and standards
- presentations to interested parties on a regional basis
- a database of providers and their detailed provision for continual use and consultation.

## Programme of work

In year one, the project will:

- clarify the principles of Matching Sections and interpret these in an implementable format
- define the administrative and processing structure required to run Matching Sections
- survey the potential learning element provision offered by universities and colleges
- survey the potential workplace-learning provision
- develop guidance for education-led elements and for sandwich placement elements.

In year two, the project will:

- assess the key skill requirements of Matching Sections
- provide interim guidance to providers and possibly conduct pilot schemes
- provide guidance on assessment
- prepare and distribute a handbook and web-based guidance
- disseminate information by regional seminar presentations
- ensure long-term guardianship of the information.

University of Nottingham  
**Project Based Learning in Engineering (PBLE)**

Subject area	Engineering
Theme	Project-based learning in engineering education in UK higher education institutions
Partner institutions	Loughborough University, De Montfort University, Nottingham Trent University
Project number	43/99
Duration	3 years
Funding	£250,000
Contact	Dr Ban Seng Choo
Role in project	Project Director
Tel	0115 951 3893
Fax	0115 931 3898
e-mail	ban.choo@nottingham.ac.uk
Address	Civil Engineering Department University of Nottingham University Park NOTTINGHAM NG7 2RD

### **Goals**

The overall aim of this project is to improve the quality of project-based learning (PBL) in engineering education in UK HEIs. Through ensuring such learning is used effectively to a consistent standard in engineering education, the project will help ensure that UK engineering graduates develop the transferable skills required for employment.

### **Project outcomes**

The outcomes will be:

- to expand the involvement of the engineering community in the project by at least a further eight departments external to the consortium
- provision of evidence of the dissemination and embedding of good practice in PBL
- a report on the current state of PBL in engineering in UK HEIs

- development of six frameworks for implementing good practice into the curriculum (generic across engineering)
- provision of supporting materials for staff developers
- development of 20 case studies of framework use (six consortium and two non-consortium case studies in year two, six consortium and six non-consortium case studies in year three). There is a target of three case studies per framework, with a different discipline for each case study
- development of a web-based Forum Gateway (the 'activity hub' of the project) containing all research information, electronic versions of reports, frameworks, supporting materials and case studies.

### **Programme of work**

The first year of the project will focus on surveying the use of PBL in the community and the identification of existing good practice. The survey will mainly be carried out through questionnaire and interviews and by utilising existing engineering networks such as the LTSN subject centres for engineering and for the built environment, and Sharing Experience in Engineering Design (SEED), all of which have expressed support for this project. Towards the end of the survey period, a focus group will discuss preliminary results and inform the topic and content for the frameworks.

Results will be disseminated to the community in the form of a written report and frameworks. The frameworks will be a key deliverable of the project; in years two and three they will be used to disseminate and embed good practice in PBL into the community. They will cover:

- developing a project to meet required learning outcomes
- implementing a successful project
- assessing projects
- supporting students on project work
- obtaining industrial involvement
- developing multi-disciplinary work.

University of Oxford

**Chinese Language Skills for Britain: Disseminating Best Practice**

Subject area	Chinese language skills
Theme	Promoting best practice in Chinese language teaching by adapting skill-based course material originating in China for dissemination around departments specialising in Chinese
Project number	46/99
Duration	2 years
Funding	£66,234
Contact	Mr Shio-yun Kan
Role in project	Academic Adviser
Tel	01865 280393
Fax	01865 280431
e-mail	Kan@server.orient.ox.ac.uk
Address	Institute for Chinese Studies Walton Street OXFORD OX1 2HG

**Goals**

The overall aim of this project is to disseminate within the UK the most efficient way of teaching Chinese language skills in a non-intensive way. The project will initially seek to support the seven UK universities currently preparing to launch postgraduate China-related courses with special grants from the HEFCE. Beyond this, the project results will be of value to other universities which offer Chinese language teaching as subsidiary courses in non-language departments.

**Project outcomes**

A report on the best practice programme and on the materials for teaching and learning involved will be composed at the end of each session (see programme of work). These reports and materials will be assessed by the existing network for Chinese language teaching in UK universities through seminars and workshops held every six months (early April and late September). The seminars and workshops will also take note of how the lessons learned from previous sessions have been tested and implemented at other university departments. The results, once formulated, will be disseminated via the network's web-site.

### **Programme of work**

The project will be divided into four sessions of six months, covering the five language skills of listening, speaking, reading, writing and translation (including interpreting). In each period, best practice will be established in one of the four main language skills (listening, speaking, reading and writing). These will be taught as efficiently as possible in a non-intensive environment, allowing students to establish the language skill by the end of that session. The skills of translation and interpreting will be covered in the course of teaching the four main skills. The results of each session's work will then be disseminated through the UK.

University of Plymouth  
**Student Centred Learning in Construction Education (SLICE)**

Subject area	Building and civil engineering
Theme	Enhancing student learning in building and civil engineering. Will benefit related subject disciplines such as land and property management and architecture
Partner institutions	University of Salford, University of Greenwich, University of Birmingham, University of Brighton
Project number	47/99
Duration	3 years
Funding	£249,990
Contact	Paul Murray
Role in project	Project Manager
Tel	01752 233 6655
Fax	01752 233658
e-mail	Pmurray@plymouth.ac.uk
Address	SLICE Project University of Plymouth Palace Court Palace Street PLYMOUTH PL1 2DE

### **Goals**

This project seeks to stimulate the adoption of best practice surrounding student-centred flexible learning (SCFL) in building and civil engineering.

### **Project outcomes**

The outcomes will include:

- nine staff development guides/toolkits. These will include a generic guide on flexible/student-centred learning (aiming to motivate and inform staff)
- eight subject toolkits giving worked examples of good SCFL, templates, resource guides, detailed guidance on SCFL applicable to specific subject areas. These toolkits will relate to studies relevant to subjects that are generic to building and civil engineering at levels one and two. Outputs are likely to be in a variety of formats, including hard copy and CD.

## **Programme of work**

In year one, the project will:

- conduct baseline surveys
- develop a generic guide.

In year two, the project will:

- collate information on SCFL and flexible learning practices in building and civil engineering
- develop an on-line database of student-centred learning practices and examples being considered.

In year three, the project will:

- produce subject-specific toolkits on SCFL.

University of Plymouth

**Promoting Effective Student Progression and Transfer through Partnership (SPAT)**

Subject area	Interdisciplinary
Theme	Facilitating effective student progression and transfer into higher education
Partner institutions	University of Ulster
Project number	48/99
Duration	3 years
Funding	£249,000
Contact	Chris Smart
Role in project	Project Administrator
Tel	01626 325645
Fax	01626 325657
e-mail	cjsmart@spat.ac.uk
Web-site	www.spat.ac.uk
Address	Seale-Hayne Faculty Agriculture Food & Land Use University of Plymouth NEWTON ABBOT TQ12 6NQ

**Goals**

The main objective is to produce materials on student progression and transfer which our end users (mainly students, staff and departments) will find of use in making the process of transfer more acceptable and more transparent, and to identify the progression of transferable skills.

The project will seek to identify good practice in developing partnerships with further and higher education colleges. It will focus on the experience of HND students in transferring and progressing into higher education. The project will explore the issues involved in embedding these elements of best practice into other institutions.

**Project outcomes**

The outcomes will be:

- a dedicated and extensive web-site of resources and materials related to student progression and transfer
- the production of an extensive range of leaflets, guides and workbooks for staff and students in further and higher education.

### **Programme of work**

The project will run in three phases. Phase one involves the collection of best practice into dissemination materials. Phase two involves the embedding and contextualising of best practice. Phase three will roll out into a national dissemination campaign.

Sheffield Hallam University

**Inter-Professional Collaboration: Simulating Partnership Working in the Built Environment**

Subject area	Built environment
Theme	Effective practice in developing an inter-personal curriculum in the built environment
Partner institutions	Kingston University, Oxford Brookes University
Project number	51/99
Duration	3 years
Funding	£248,185
Contact	Anne Oxley
Role in project	Project Manager
Tel	0114 225 2976
Fax	0114 225 4755
e-mail	A.Oxley@shu.ac.uk
Address	Learning and Teaching Institute Sheffield Hallam University City Campus Howard Street SHEFFIELD S1 1WB

**Goals**

An increasing proportion of staff from the built environment sector (building, housing, planning, surveying and architecture) are being drawn into inter-professional collaboration, notably in the field of urban regeneration. This project seeks to stimulate the development of an inter-professional curriculum and appropriate teaching, learning and assessment strategies to equip students for effective reflective practice in employment.

## **Project outcomes**

The outcomes will be:

- a report to consolidate findings of project teams' investigation of external users' priorities in inter-professional education
- publication of a catalogue of nine working examples of inter-professional teaching materials for evaluation and reference by user and producer groups
- a survey of operational problems and suggested solutions in delivering and sustaining an inter-professional curriculum
- publication of a full catalogue of inter-professional teaching materials
- a report on the professional accreditation of inter-professional education
- a report on achieving 'inter-professionalism' in urban practice
- a series of academic papers on related topics.

## **Programme of work**

The project will commence with a report from the three centres, based on focus group meetings and consultation with user groups (the professions, students and recent alumni, employers and community organisations). This report will identify the specific educational implications of growing inter-professionalism in the built environment. Academic institutions will then be questioned to identify both the obstacles and some solutions to the problem of delivering and sustaining an inter-professional curriculum.

Each partner and other interested institutions will contribute working examples of effective inter-professional educational practice. These examples will be used to stimulate consultation and development activity in other institutions. An on-line discussion group and web-site will be developed to disseminate the project outputs to the widest possible audience.

University of Southampton

**Electrical and Electronic Engineering Assessment Network (E3AN)**

Subject area	Electrical and electronic engineering
Theme	Developing student learning through the integration of effective assessment practices into the electrical and electronic engineering curriculum
Partner institutions	University of Bournemouth, University of Portsmouth, The Southampton Institute
Project number	53/99
Duration	3 years
Funding	£250,000
Contact	Su White
Role in project	Project Co-ordinator
Tel	023 8059 4471
Fax	023 8059 2865
e-mail	s.a.white@ecs.soton.ac.uk
Web-site	<a href="http://ecs.soton.ac.uk/E3AN/">http://ecs.soton.ac.uk/E3AN/</a>
Address	ECS Room 4229 Zepler Building University of Southampton SOUTHAMPTON SO17 1BJ

**Goals**

This project will develop student learning by integrating effective assessment practices into the electrical and electronic engineering (EEE) curriculum with a focus on developing peer reviewed testbanks and the use of automated methods for both formative and summative assessment. The project will address some of the areas for improvement identified in the QAA subject overview report for electrical and electronic engineering, and developments will take account of the emerging benchmarking standards for engineering.

**Project outcomes**

The outcomes will be:

- a set of electronic and paper guides and case studies on assessment strategies in the EEE curriculum
- technical reports on question bank formats and copyright and distribution issues
- a question bank of at least 3,000 questions covering 10 subject themes
- web-site and electronic newsletter on assessment in the EEE curriculum.

### **Programme of work**

The first six months of the project were used to establish working models and make initial contact with the target community. Themes for the initial testbanks are digital and micro-electronics, analogue electronics, signal processing and circuits. Future themes will be identified in consultation with the wider community. Each theme can be categorised into a set of sub-themes to be taught in a more advanced or specialised manner. The testbank will be stored electronically, with data held in a secure format, and output will be available in a range of human and machine-readable formats.

The project team is recruiting and training the testbank consultants who will collate and review the questions, design and deliver dissemination consultancies, and contribute to a series of guides to assessment issues. The first consultants have been drawn from the partner institutions. This process of topic selection and question review will continue until 3,000 questions are stored in the testbank.

The final phase of the project will involve the publication of guides and case studies, and participation in final dissemination events.

University of Sunderland  
**Employability and the Media Studies Curriculum**

Subject area	Media studies
Theme	Identifying those elements of the media studies curriculum which enhance graduate employability
Partner institutions	University of Central England, De Montfort University, Sheffield Hallam University
Project number	54/99
Duration	3 years
Funding	£211,745
Contact	Vicky Ball
Role in project	Project Administrator
Tel	0191 515 2101
Fax	0191 515 2101
e-mail	vicky.ball@sunderland.ac.uk
Address	FDTL Media Employability Project School of Arts Design and Media University of Sunderland Forster Building Chester Road SUNDERLAND SR1 3SD

### **Goals**

This project will focus on the employability of media studies graduates. The project will produce and disseminate criteria for models of good practice in the design, content and organisation of curriculum and pedagogic practice within a broad-based undergraduate media studies curriculum.

### **Project outcomes**

The outcomes will be:

- skills matrix of the skills perceived as enhancing the employability of media studies graduates (web-based)

- workshops to discuss and disseminate findings (institutional and regional), staff development workshops, workshops in 'second tier' organisations. In year three there will be dissemination workshops for HEIs, employers and subject-specific groups
- web-based models and case studies of good practice (curriculum design, learning outcomes, student activities)
- reports of findings (at different stages in project)
- conference papers to be delivered at relevant media studies and educational/vocationally oriented conferences
- national conference.

### **Programme of work**

In year one, the project team will design and carry out the survey, conduct focus groups and interview students, graduates, lecturers and employers. Once the findings have been analysed, the project will produce a first report and hold workshops to examine and evaluate findings.

In year two, the project will identify relevant curriculum elements and will explore curriculum modification and development through institutional and regional workshops.

Year three will reveal development of agreed models of good practice, and will focus on embedding these ideals in institutions. The final months will see wide dissemination of the project outcomes, case studies and conference papers.

University of Sussex  
**Globalising Art, Architecture and Design History  
(GLAADH)**

Subject area	Art, architecture and design history
Theme	To encourage, enable and embed cultural diversity in the art, architecture and design history curriculum
Partner institutions	The Open University, Middlesex University
Project number	55/99
Duration	3 years
Funding	£249,875
Contact	Norma Rosso
Role in project	Project Research Manager
Tel	01273 606755 ext. 2155
Fax	01273 678644
e-mail	N.Rosso@sussex.ac.uk
Address	Essex House, 210 University of Sussex Falmer BRIGHTON BN1 9RQ

### **Goals**

The project will highlight, promote and support emerging teaching and learning strategies in the art, architecture and design history curricula, appropriate to a multicultural society within a global context. The aim is to launch relevant staff development initiatives to help teachers in higher education institutions across the UK integrate into the curriculum the arts of less traditionally studied regions, including Asia, Africa and the Americas.

### **Project outcomes**

The project will supply advice and practical resources, including new teaching and learning materials to broaden the curriculum in art, architecture and design history. Information about the project will be available through a web-site and a newsletter, which will disseminate examples of good practice and issues and debates related to cultural diversity, as well as providing support in curriculum development.

## **Programme of work**

In year one, the project will:

- carry out a survey of existing provision
- support the plenary session at the Association of Art Historians conference to stimulate discussion
- launch a web-site and newsletter
- hold a workshop/conference for teachers of art, architecture and design history from UK higher education institutions assessed in the last QAA subject overview.

In year two, the project will:

- develop a web-site with case studies of teaching and learning materials
- publish and distribute newsletter
- develop 15 sub-projects with universities, which will include site visits, intensive workshops and mentoring by subject specialists.

In year three, the project will:

- hold a series of regional workshops and a summer school
- develop a resources guide
- develop web-based teaching materials.

UMIST  
**Specialist Graduate Support Programme (W3-SGSP)**

Subject area	Graduate support programmes
Theme	Using the web to improve access to, and development of, graduate support programmes
Project number	58/99
Duration	3 years
Funding	£250,000
Contact	Dr CL Paul Thomas
Role in project	Project Leader
Tel	0161 200 4910
Fax	0161 200 8903
e-mail	paul.thomas@umist.ac.uk
Web-site	www.glow.ac.uk
Address	Department of Instrumentation and Analytical Science UMIST PO Box 88 MANCHESTER M60 1QD

### **Goals**

Throughout the UK, there are islands of excellence in postgraduate training. This project seeks to provide the tools to make the worldwide dissemination of such excellence routine. In this context the acronym WWW takes on a much deeper meaning: *whoever, wherever* and *whenever* (W3).

### **Project outcomes**

This project will disseminate proven authoring tools, operating procedures and processes that enable specialist information, and effective self-assessment packages to be delivered in a straightforward way, to a high standard, via the web. This will be achieved through the use of a demonstration programme in the measurement sciences. It is called the Specialist Graduate Support Programme and has the acronym W3-SGSP. Outcomes include:

- web-site for W3-SGSP
- publication of quality and training manuals that detail the processes and procedures for delivering W3-SGSP materials to the web.

## **Programme of work**

The project has five work packages (phases) over the three years:

- phase one – listening to users, planning, information gathering and evaluation (year one)
- phase two – listening to users, establishing self-assessment protocols and procedures (year one)
- phase three – listening to users, protocols and procedures for getting teaching materials onto the web (year two)
- phase four – listening to users, web interface and evaluation (year two)
- phase five – listening to users, raising awareness of W3-SGSP and dissemination (year three).

University of Warwick

**Accessing and Networking with National and International Expertise (ANNIE)**

Subject area	Student learning, distance learning
Theme	Promoting student engagement in creative and collaborative learning through interaction with remote experts
Partner institutions	University of Kent at Canterbury
Project number	60/99
Duration	2 years
Funding	£149,963
Contact	Dr Jay Dempster
Role in project	Project Manager
Tel	024 7652 4670
Fax	024 7657 2736
e-mail	<a href="mailto:jay.dempster@warwick.ac.uk">jay.dempster@warwick.ac.uk</a>
Web-site	<a href="http://www.ukc.ac.uk/sdfva/ANNIE">www.ukc.ac.uk/sdfva/ANNIE</a>
Address	Centre for Academic Practice Gibbet Hill Road University of Warwick COVENTRY CV4 7AL

**Goals**

The project aims to enhance student engagement in creative and collaborative learning in the discipline of theatre studies by augmenting access to teaching and workshops led by scholars and practitioners of national and international standing from distant locations. It will establish best practice in delivering teaching from distant locations, explore ways students may interact creatively with distant experts and practitioners, and produce guidelines for the design and delivery of distance-taught courses and workshops.

**Project outcomes**

The outcomes will be:

- learning frameworks and course design methodology derived from detailed case studies
- guidelines for the design and teaching of courses taught by scholars and practitioners from distant locations

- advice on appropriate quality assurance mechanisms for such courses
- guidelines on the application of communication and information technology (C&IT) in distance learning
- advice on how to facilitate creative and interactive approaches to distance learning
- training and advice (including a national conference) to be offered in collaboration with the LTSN.

### **Programme of work**

In year one, the project will

- identify and evaluate innovative approaches to distance learning in other disciplines
- liaise with the LTSN subject centre for the performing arts to establish a framework for the integration of the project within the general objectives of the subject centre. This will include the development of a web-site and discussion group, together with plans for the dissemination of project outcomes
- establish forms of student guidance and training, and establish advice on best practice for each case study.

In year two, the project will:

- undertake a series of 10 case studies, five in Warwick and five in Kent
- pilot approaches and materials in departments at three other universities – De Montfort University, Lancaster University and the University of Manchester
- evaluate case studies to extract good pedagogical practice from them
- write up and design packages of dissemination material to be tested in five further named departments.

In year three, the project will:

- undertake dissemination through trial of materials by: using the discussion forum on the web-site; conducting a training workshop with the performing arts LTSN centre; holding a final conference; and publishing papers through electronic and conventional means.

Oxford Brookes University

**Disseminating and Extending an Audio Visual Aid Library of Food Processing Operations and Food Factories (FoodVidLib)**

Subject area	Food science
Theme	Extending and distributing an audio-visual aid library to assist in curriculum design, content and organisation
Partner institutions	Sheffield Hallam University, University of Leeds
Project number	64/99
Duration	3 years
Funding	£136,326
Contact	Andrew Rosenthal
Role in project	Project Director
Tel	01865 483258
Fax	01865 484446
e-mail	FoodVidLib@brookes.ac.uk
Web-site	<a href="http://www.brookes.ac.uk/FoodVidLib">www.brookes.ac.uk/FoodVidLib</a>
Address	School of Biological & Molecular Sciences Oxford Brookes University Gypsy Lane OXFORD OX3 0BP

**Goals**

This project aims to produce audio-visual aids to support the teaching of industrial aspects of food science and careers guidance.

**Project outcomes**

During the project, nine teaching packs will be produced, with one audio-visual aid (AVA) in each.

**Programme of work**

In year one, the project will:

- design questionnaire for participating colleges

- set up AVA database
- create a web-site
- produce first video – ‘Unit Operation’
- arrange visits with participating colleges
- set up focus groups with A-level teachers of food science
- evaluate the first video
- produce a ‘Manufacturing Process’ video.

In year two, the project will:

- produce an electronic newsletter
- evaluate the second video
- update the web page
- complete the second ‘Unit Operation’ video
- evaluate the third video
- complete the second ‘Manufacturing Process’ video
- evaluate the fourth video
- complete the third ‘Unit Operation’ video.

In year three, the project will:

- update web page
- produce an electronic newsletter
- evaluate the fifth video
- complete the third ‘Manufacturing Process’ video
- update web page
- conduct external evaluation of AVA
- evaluate the sixth video
- complete the fourth ‘Unit Operation’ video
- update web page
- evaluate the seventh video
- complete the first ‘Career’ video
- update web page
- hold a workshop on the use of video in food science teaching
- produce an electronic newsletter
- evaluate the eighth video
- complete the second ‘Career’ video.

Oxford Brookes University

**Linking Teaching with Research and Consultancy in Planning, Land and Property Management, and Building**

Subject area	Built environment
Theme	Linking teaching with research and consultancy in the three disciplines of town and country planning, land and property management, and building
Partner institutions	Sheffield Hallam University, University of the West of England, University of Westminster
Project number	65/99
Duration	3 years
Funding	£249,925
Contact	Bridget Durning
Role in project	Project Manager
Tel	01865 483430
Fax	01865 483559
e-mail	<a href="mailto:bdurning@brookes.ac.uk/link">bdurning@brookes.ac.uk/link</a>
Web-site	<a href="http://www.brookes.ac.uk/schools/planning/LTRC.html">www.brookes.ac.uk/schools/planning/LTRC.html</a>
Address	School of Planning Oxford Brookes University Headington Campus Gypsy Lane OXFORD OX3 0BP

**Goals**

The project is about identifying, developing and disseminating good practice in linking teaching with research and consultancy in the three closely related disciplines of town and county planning, land and property management and building.

**Project outcomes**

The deliverables of the project will be the production of the good practice guidelines to the linking of teaching with research and consultancy, and a teaching resources portfolio which will include: successful examples of teaching materials; staff and project manuals; and guidance on teaching, learning modes and delivery. These will be established on a dedicated

web-site. There will also be extended partnerships with other HE institutions to embed project resources, and an international network, conferences and related publications to aid dissemination.

### **Programme of work**

In year one, the project will:

- undertake a survey of good practice
- develop guidelines and teaching resources portfolio
- establish the web-site and begin preparation of institutional project groups and international network.

In year two, the project will:

- implement good practice in partner institutions through project groups
- hold workshops, seminars and a national conference
- develop a network of extended partners to further disseminate and embed good practice.

In year three, the project will:

- commence publication output
- hold a second national conference
- make presentations to cognate subject areas, departments in consortium and partner institutions and other generic institutions.

Oxford Brookes University

**Progress Files in an Integrated Tool for Student Management of Study Programmes**

Subject area	Student study skills
Theme	Web-based technology (personal information pages) to support student study programmes
Partner institutions	Thames Valley University
Project number	66/99
Duration	2 years
Funding	£249,798
Contact	Diane Dean
Role in project	Project Administrator
Tel	01865 484652
Fax	01865 484684
e-mail	didean@brookes.ac.uk
Address	Oxford Brookes University Gypsy Lane OXFORD OX3 0BP

**Goals**

This project seeks to combine web-based tools that students can use for practical day-to-day management of their study programmes with one or more web-based tools that support students' reflection upon their overall personal development. This will provide an integrated tool through which students can manage, reflect upon and record the content of academic programmes and the learning outcomes, together with details of their personal and skills development.

**Project outcomes**

The outcomes will be:

- integrated tools in each of the partner institutions to facilitate students' management of their programmes of study in conjunction with the management of their Progress Files
- tested arrangements in place in each of the partner institutions to provide students with support and guidance in the reflective process that is an essential element in the construction of Progress Files

- a methodology (available in print and electronic form) to guide HEIs in all aspects of introducing electronic Progress Files as a component of their academic and administrative data management systems and systems for student support and guidance
- establishment of a network of universities with extensive expertise and experience in the electronic management of Progress Files that will be available as a resource to the LTSN Generic Learning and Teaching Centre (and other agencies) to support the implementation of a national policy on Progress Files
- a target of five papers published in professional journals.

### **Programme of work**

The project will comprise the following stages:

- stage one – project set-up. Product evaluation, presentations for residential workshop, planning for stage two
- stage two – product assessment and selection. Briefing strategy, tools assessment and recommendations, presentations for residential workshop, detailed planning for stage three, plus the communication and dissemination strategy
- stage three – system development. Requirements specification, interface designs, test plans, evaluation strategy, detailed planning for stage four
- stage four – test and evaluation. Test results, user evaluation, specification changes, dissemination strategy, detailed planning for stage five, published papers
- stage five – live runs and dissemination. Progress Files development methodology, published papers, project end report.