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ABSTRACT

The Insuring Information Technology Competence project explored ways to improve skills and retrain individuals to exploit information technology (IT) for more effective delivery of financial services. Seven organizations working in the financial services sector in Britain participated. The project was dependent on the organizations' ability to manage change of three areas of practice in the financial services sector: change of training approach and practice, improvement of IT skills through training, and training through IT for IT and customer service skills. The companies found it difficult to appreciate the project's concepts and approach as shown by change in their perceptions of the project over time. Views were more optimistic at the start. The project's attempt to conceptualize national standards for competence in using IT and customer service to the needs of the organizations was not successful in retaining the validity of the national standards. It adopted and presented the IT National Training Organization (ITNTO) learning model to organizations at a mentor workshop. The project used information and communication technologies in three ways: Performance Enhancement and Recording Tool software was developed to assist organizations in assessment; multimedia was used to deliver training distributed on CD-ROM; and the Internet was used to deliver training materials and information. (Appendixes include the questionnaire, overview of the ITNTO learning model, and example of ITNTO standards contextualization.) (YLB)

THE TELEMATICS CENTRE

Project Evaluation Report for 'Insuring IT Competence within the Financial Services Sector'

Professor Niki Davis

UNIVERSITY of EXETER

Published in 1998 by the Telematics Centre,

School of Education, University of Exeter, Exeter, Devon EX1 2LU

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THE TELEMATICS CENTRE

UNIVERSITY of EXETER

Project Evaluation Report for 'Insuring IT Competence within the Financial Services Sector'

Contract Reference No: 908 BN 336

From: National Training Organisations Division, DfEE, Sheffield
Lead: IT National Training Organisation (ITNTO)
Evaluation: Professor Niki Davis, University of Exeter Telematics Centre

Background

The Foresight Programme identifies the financial services sector as one of the key areas of the UK economy with potential for internal and international growth. The 'Insuring IT Competence within the Financial Services Sector' project was undertaken in the recognition that the servicing of financial services markets is intimately bound with the use and exploitation of IT. The project built upon a prior Technology Foresight project to help small and medium-sized enterprises (SMEs) to compete in the marketplace more effectively.

The financial services sector is divided into four sub-sectors: building societies, insurance companies, estate agents and banks. There is an indication that legislation will be forthcoming which will bring training and development issues to the fore. The Financial Services Authority (FSA) came into existence on 1 June 1998 and training and competence regimes are among its chief priorities. The FSA are responsible for the regulation of a large part of the sector.

The project embraced three criteria in particular:

a) up-skilling and retraining individuals to exploit IT to deliver financial services more effectively;

b) acknowledgement of the wider information revolution allowing mass customisation of new products and services;

c) inclusion of customer service because better client relations are now seen as part of contemporary business conduct.

The project started in the autumn of 1997 and finished in May 1998.

The Evaluation

The evaluation process and report were undertaken as a separate complementary activity by the Telematics Centre at the University of Exeter, led by Professor Niki Davis. The data was gathered over five months through attending meetings, reviewing documents and software, extracting information from questionnaires and interviews and holding a Focus Group meeting. The questionnaires were designed through analysis of the specification of the project. One is provided in Appendix 2. An overview of the data set is provided in Table I:

Table 1. Information analysed for the evaluation report from February to June 1998.

Meetings attended	3 steering groups
Focus Group	5 organisations 3 project staff, 1 observer
Documents	10 documents (listed in Appendix 2)
Software evaluated	PEMT, NETG training materials, Web Site
Questionnaire (provided in Appendix 1)	6 organisations (7 sent) 2 project staff (3 sent)
Structured interviews of trainees (using same questionnaire)	2 trainees in 1 organisation*

* The two trainees are the only two who undertook training as a result of the project. Data from an additional seventy-five trainees were recorded by another organisation by copying it across from the existing system of records. This strategy was not retained.

At the Steering Group meetings held during the first phase of the evaluation, it became apparent that there were several processes at work and that the organisations were at different stages of development. The evaluation strategy therefore drew upon 'The Management in the 1990s research programme' (MIT'90s). The four important enabling conditions identified for companies to benefit from the findings of MIT'90s are listed below:

- The provision of leadership, with a shared vision of the way ahead in the organisation as a whole;
- Flexible human resource practices, for example creating appropriate incentives to encourage managers to focus on the long term and providing effective rewards for accepting risk;
- The willingness to invest in education and training, both extensively and intensively, equip workers to accept change and utilise the new capabilities that are becoming available;
- The existence of a readily available IT infrastructure.

(ICL, 1995, p. 7)

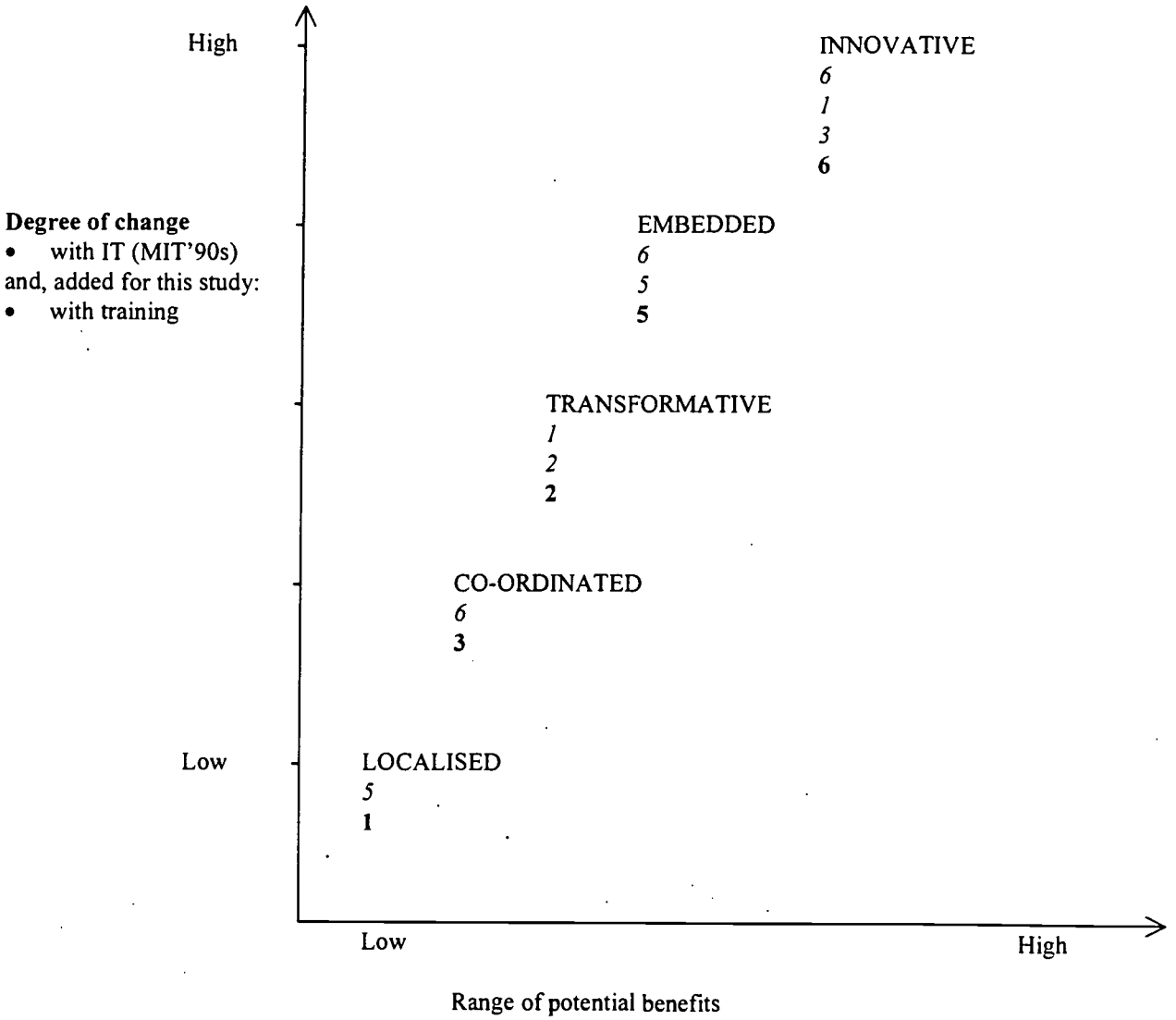
This framework was used within the Focus Group meeting.

The levels of business transformation were shared with the organisations attending the focus group, in relation to:

- change with IT;
- change with training;
- change with training through IT.

MIT'90s research framework is shown in Figure 1 with a small modification which recognised that change with IT could be independent from change with training.

Figure 1. The stages of organisational change with IT and training (adapted from ICL, 1995)



KEY TO THE NUMBERS

Organisations are referred to by numbers and are placed according to *training* and **IT.** Thus *1* is organisation 1's current perception of training and **1** is the same organisation's current perception of IT. This will be discussed later.

Project Development

The project was led by the National Training Organisation for IT with the close cooperation of REATEA (The Residential Estate Agency Training and Education Association). The majority of the project work was undertaken by Brian Kelvin (BSK Consultants) and Stephen Hayter (REATEA). Together with Gordon Ewan of ITNTO, this project team 'signed up' seven organisations working in the financial services sector during 1997. A brief description of each organisation is provided in Table II. Each organisation committed itself to participation through the contact person and that person

welcomed the opportunity to improve or initialise training. In most cases, the contact was the training manager or in smaller firms their equivalent such as the office manager or a partner.

It should be noted that this sample does not provide a complete picture of the financial services sector because banks and larger organisations are under-represented. Furthermore, the estate agency sub-sector is currently polarised into very large and very small organisations, and this project involved only very small estate agencies. However, the sample is valid bearing in mind the fact that training issues are most difficult for smaller organisations, and their need for training and IT is widely recognised.

Table II. An overview of the seven organisations involved in the Insuring IT Project.

Organisation	Approx. No. of Employees	Position of Contact Person (and mentor)	Attended Focus Group
Life Insurance Company	2000	Training Team Leader	Yes
Building Society	150	Business Systems & Training Manager	Yes
Building Society	130	Training Manager	Yes
General Insurance Brokers	30	Officer Manager	Yes
Estate Agents	14	Partner	Yes
Estate Agents	20	Partner	No
Estate Agents	8	Principal	No

All six organisations answering the questionnaire participated in the project to varying degrees as shown in Table III. All contact staff (listed above) participated, many examining the opportunities and materials in some detail.

A Focus Group meeting, led by the evaluation team, took place at the end of the project in early June. It was designed to be phenomenological in nature (Morgan & Spanish, 1984). It provided an important source of data concerning participants' common sense perceptions and everyday explanations of the use of IT in their organisations and related training, as well as the activities of the project. A chart from the MIT'90s project showing the development of organisations with increasing use of IT was used in the second half of the Focus Group meeting. It will be explained in more detail later.

Table III. Extent to which organisations participated in the project.

Q4. How many of your organisation engaged in this project as a *Manager, Assessor or Mentor:*						
Organisations	**1**	**2**	**3**	**4**	**5**	**6**
a) Awareness for management purposes:	1	1	1	1	2	1*
b) Participation as a mentor or assessor considered:	1	1	2	0	2	0
c) Did participate as mentor or assessor:	1	0	1	0	1	0
d) Undertook training:	0	0	6	0	1	0
* Just myself. I introduced it to a small selection of staff but with little result.						
Q5. How many of your organisation engaged in this project as *Potential Trainees or Trainees:*						
a) Awareness of the project only:	6	6	6	0	0	9
b) Considered, but made no Personal Learning Plan:	4	0	0	0	0	0
c) Made a Personal Learning Plan:	0	0	2	0	0	0
d) Undertook some training:	0	0	2	0	75*	0
e) Still engaged in training:	0	0	0	0	0	0
f) Has a record within the PEMT software:	0	0	2	0	75*	0
* Package used by Training Department as a recording system.						

Business Benefits

This project was dependant on the organisations' ability to manage change of three areas of practice in the financial services sector:

- change of training approach and practice;
- improvement of IT skills through training;
- training through IT for IT and customer service skills.

The companies themselves found it difficult to appreciate the concepts and approach of the project and this is shown by the change in their perception of the project over time. Views were more optimistic at the start. In addition, the project did indeed adapt its approach over time, attempting to adjust to the practical difficulties which it encountered. The change in perception of the potential benefits provided by the project at the start, now and in future, are provided in Table IV for ten participants. The participants were the contact person for six of the organisations, two project staff and two trainees.

Table IV. Change in the ways participating organisations perceived project's potential benefits.

Q1. What potential benefits did you envisage that this project might bring to your organisation?						
	Organisations					
	1	**2**	**3**	**4**	**5**	**6**
At the start:	Improved skills to enhance business	Help us develop an IT Skills & Competence Scheme	Help identify staff IT training needs	Improved IT Competence	Assessment tool	Assessment model for staff development
Now:	Highlight IT weaknesses which need to be addressed	None	Delivery of Needs	Improved IT Competence	(left blank)	Little practical value
In future:	Not sure	None	Ongoing Delivery	Improved IT Competence	Basis for assessment throughout staff development programmes	Little practical value

	Project Staff 1	**Project Staff 2**	**Trainee 1**	**Trainee 2**
At the start:	(for participating orgs) Means of providing relevant IT skills at least 'cost' to the org.	Model to help us at ITNTO, help orgs to exploit IT	Increase competence in IT skills	Training for various software packages
Now:	Still believe it can be done, but real employer/ Employee commitment essential.	Need to segment business against maturity	Identify training needs	Means of appraisal
In future:	See real potential for some IT delivery.	Match guidance to readiness to accept it.	Would identify training needs but would not help training.	We can do an appraisal on a Word package, so not a lot of use.

The project description had noted that there was likely to be pressure on organisations within the financial services sector to change due to a number of factors. The participants' perceptions of these pressures were therefore surveyed and the results, shown in Table V, verified the expectation. One organisation did not answer each part but noted 'IT is a tool which we need and use but is not an end in itself. Our customer service continually requires updating and improving.'

Table V. Pressures to change as perceived by participants.

Q3. Do you expect to see pressure to upskill in relation to IT or customer services in future from:

	Organisations						Project Staff		Trainees	
	1	2	3	4	5	6	1	2	1	2
a) Larger companies 'leaning' on you?	N	N	Y	-	N	N	Y	Y	N	N
b) European or international legislation?	N	N	N	-	N	N	N	Y	N	N
c) UK Government initiatives or legislation?	Y	N	N	-	N	Maybe	Y	Y	Y	N
d) Competitive forces? *	Y	Y	Y	-	Y	Y	Y	Y	Y	N
e) The impact of new technologies? *	Y	Y	Y	-	Y	Y	Y	Y	Y	N
f) Mass customisation of products?	N	N	Y	-	Y	Y	N	Y	Y	N
g) The need to retain reliable employees? *	Y	Y	Y	-	N	Always there	Y	Y	Y	Y

- shows no response

* Factors underlying the project's specification – competitive forces, impact of new technologies and the need to retain reliable employees - are consistent. This confirmed the original expectation underlying the project.

Contextualisation of National Standards

During an early stage of the project in the autumn of 1997, the project team attempted to contextualise the national standards for competence in Using IT and Customer Service to the needs of these organisations. An example of one page from a sixteen-page document of customised standards for Estate Agents is provided in Appendix 4 with the parallel national standard. This attempt was made in order to assist the organisations to understand and value the process. However, the attempt was not successful in retaining the validity of the national standards. Some organisations already use the national standards of NVQ Level 3. The training managers also developed their own contextualised version (criteria) derived from national standards. Table VI shows that opinions on the value of this process to the six organisations were varied but only one organisation felt they were valuable, although the standards did not add value. Two did not answer the question possibly because as one noted, 'it was not applicable'. This could also imply that the contextualisation of standards was not appropriate.

A related question on the use of Performance Indicators Matrices (PIMs) showed that some companies did find it 'difficult to grasp the jargon, especially as other systems use different terms for the same processes.' One project officer noted that 'a good cross section of indicators proved valuable as a starter choice' in a small organisation which employed him for staff training over a longer period of time.

Table VI. Views on contextualising national standards of IT training.

Q7. The project has attempted to contextualise standards of training to your organisation:						
Sub-question:	**1**	**2**	**3**	**4**	**5**	**6**
a) How practical is the process?	Not	Fairly	Not very	-	Very, if required	N/A
b) How useful is it to you?	Not	Not for now	Not very	-	Limited; we couldn't see any added value	-
c) Could it be extended across other standards and job roles?	Not in our org	Yes	Hard. 'Customisation' is the way forward.	-	Yes, potentially throughout org.	-
- indicates no response.						

It was agreed to limit contextualisation by the addition of words to national standards, in contrast to customisation which permitted rewording. However, overall the contextualisation was not successful. There was some indication that the ownership of the standard and its direct relevance to the organisation was important. This may be due either to the pressure on these organisations to maintain profitability with relatively few staff, or their inexperience with training and the generalised language of national standards which were difficult to interpret in relation to organisational benefits and practice. Examples of the customisation given at a Steering Committee by the project staff were:

> Local customised version: 'clear desks and post out by the end of the day'
> National standard: 'working surfaces should be kept in the appropriate manner'.
>
> (Steering Group notes)

There was also recognition that national standards were segmented into different sectors. In the smaller firms, it was clear that job roles were drawn from across a number of sectors, including management, IT and customer services.

It is noted that this difficulty may be expected to increase as organisations experience revolutionary change, so that working across sectors will also become common for individuals in larger organisations. The evaluators noted that use of national standards is, on the whole, an unwieldy process at present.

The Learning Model and Mentor Training

The project adopted a learning model already in use within ITNTO. Appendix 3 provides an overview of the seven stages of the model, taken from the Mentor Training materials. The learning model was presented to the organisations attending the Mentor Workshop along with a list of learning opportunities:

- Multi-media
- CBT
- CD-ROM
- Intranet/Internet
- Interactive
- Audio
- Instructor-led Courses/Workshops
- Distance Learning
- Open Learning

- Reading
- Coaching
- Mentoring
- Special Projects
- On-The-Job
- Qualifications

The full agenda of the Mentor Training workshop is shown in Table VII. Participants were particularly enthusiastic in their response to learning styles (Session 6).

Table VII. Mentor Training Workshop Agenda.

Session	Topic
1.	Introduction & Objectives
2.	So what is Competence?
3.	Competence Standards
4.	Assessing Competence
5.	The Learning Model
6.	Learning Styles
7.	Role of the Mentor
8.	Performance Evaluation & Management Tool
9.	Learning Opportunities
10.	Workshop Review

The questionnaire checked whether the mentors remembered seeing the model and if so, whether they found it valuable. All five of the organisations who answered the question remembered it and one found it helpful, another noted that he was already familiar with it and one of the project staff noted 'it is only common sense'.

Training Workshops

Four workshops were run for participants within the organisations, two by each project officer. A workbook was produced for trainees. The workshops were run on premises belonging to one of the organisations. Several very small organisations attended two workshops run under the auspices of REATEA and found the exchange experience valuable.

The workshops were run using the same content as defined in the Mentor Training Workshop Agenda, except for Session 7 on mentor training. The emphasis of the delivery was changed to make it appropriate for trainees.

Identification of Training Needs

There was some difficulty in stimulating clear identification of the skill patterns and competencies which have to change to support new business practices. During the steering committees, the project team noted the difficulty that the organisations had in identifying these, especially small firms:

> Business at this scale tend to find that NVQ ran into conflict. The organisation has no agreed standards, but is run as the partner likes it. These implied standards are not written down. Introduction of innovation by slow growth or through input from a bought in expert. (Steering group notes from 17/4/98)

Later the Focus Group heard from another small firm of the successive changes led by the partner responsible for IT and described in the case study 3 below. The exceptions were the larger firms where training managers had already set training processes in motion as part of their normal work.

This lack of readiness to identify and develop training and assessment for new skills and competencies pervades the project. It is also notable that the smaller organisations identified key staff as trainers (all four organisations employing less than a hundred identified partners or office managers) and then had practical difficulties in releasing these staff to lead and support training activities.

Training opportunities were sought for each organisation by project staff. A general matrix was not created. The survey and focus group showed that a range of approaches was identified, including software provided on CD-ROM and on-line. Table VIII provides an overview of these, plus the examples given of a training activity.

Table VIII. Overview of training opportunities.

Q9. A choice of training opportunities has been identified for each organisation. Please note which modes of delivery are available for your organisation by indicating below:						
Organisations	**1**	**2**	**3**	**4**	**5**	**6**
a) A person as a resource, e.g. Mentoring by a colleague	N	Y	Y	-	Y	-
b) A training event provided in person, *by your organisation*	Y	Y	Y	-	Y	Y
c) A training event provided in person, *by another organisation*	N	Y	Y	-	N	Y
d) A set of paper-based training materials	N	Y	N	-	Y	-
e) Multimedia on a disk or CD-ROM, e.g. NetG	N	Y	N	-	Y	N
f) Multimedia via an on-line service, e.g. Internet	N	N	N	-	N	N
g) Please describe briefly an example of a training activity that was used:	Self taught training from manuals, discussion amongst staff and trial and error in practice.	None	CD-ROM (NetG), used Powerpoint to overcome a problem	-	Understanding Windows 95 on NetG CD.	We deliver most of our training in-house.
- indicates no response.						

However, such a table does not give a true picture of the training opportunities which were closely linked to the culture of the organisation. Three case studies which were extracted from the Focus Group provide contrasting examples. These are given below, along with the size of the organisation:

1. Large

Staff are not given a new IT application until they have attended a short course lasting from half a day to two days. They may then use training software to provide

specific knowledge as the need for it is perceived. Comprehensive manuals are also available in the library and will be purchased for individuals on request.

2. **Medium**

This organisation recognises that some staff are resistant to using IT. Company has customised software which requires little training beyond familiarity with the computer interface. Customer service training is provided by people who are bought in. No added value was perceived from PEMT software internally and the software did not fit with the training provider's company culture or processes. The focus of attention on a computer screen was perceived as a distracter or, worse, a cause of nervous tension.

3. **Small**

The two major trainers are the partner who leads strategic development of IT and a secretary (a different person in each of the two branch offices), who is capable of using the IT. The secretary is capable of supporting other staff and documented the processes and procedures into a shared manual, as they evolved. The organisation has a culture of teamwork and assistance to solve challenges that the business encounters. Business processes are evolving to make use of new IT applications such as Email and digital photography - but no formal training is planned. One of the two secretaries joined four years ago and her job specification has changed. She has recently started trainer training in her own time and this raises concern that she will move. However, if this happens a similar person would be sought - 'a person with an organised mind who is prepared to play with IT' - not a secretary. This organisation periodically takes one to two days to review their business strategy with the staff as a team.

The Use of IT in Project Delivery

Information and communication technologies were used within the project in three ways:

1. PEMT software was developed to be used by the organisations to assist in assessment;

2. Multimedia was used to deliver training which was distributed on CD-ROM;

3. The Internet was used to deliver training materials and information.

1. **PEMT software was developed to be used by the organisations to assist in assessment**

One objective was 'to develop and validate a Software Application to be used by organisations to allow assessment of individuals' current competencies against Expected Competence Levels as defined by each organisation' (Contract document, 1997). This software was programmed in Visual Basic and is called a Performance Enhancement and Recording Tool (PEMT). It is indeed a framework provided as a database with a comprehensive interface of prompts and passworded access. It can

hold staff training records for companies and produce individual profiles and reports as well as a printed development action plan. It does not do assessment nor was it designed to do so. The scope of the PEMT software is limited as it does not provide advanced features of relational databases, nor the opportunity to add multimedia or training activities. It can be difficult to see what it provides that cannot be undertaken using more traditional media, except for central storage of records. It does not hold the trainees' evidence. None of the companies (or trainees) found the software accessible (see Table IX).

The misconception by several organisations was recognised by the project officers. For example one organisation commented: 'The project did not provide the assessment tool that I had originally expected, and could only be used as an alternative to current assessment recording systems.'

Only one organisation made a new training strategy, which was piloted with two staff.

A second organisation started to change the recording of all staff into the PEMT software, but this company strategy was revised at a higher level. Only the IT staff remained within the trainers' remit for this project. Moreover, because this organisation already worked at NVQ Level 3, the training strategies were not changed. Seventy-five trainee records were copied into PEMT. This organisation noted that PEMT 'was too complicated for our purposes'. This organisation also noted that 'Certain IT tasks were introduced and guidelines produced and staff are now competent in these.'

Other organisations noted little change in personal performance due to the early stage of identification of training or because 'there was not significant change to our current assessment strategy that required use of a PEMT'.

Table IX. Views on the training software used.

Q11. IT was used to deliver the project in three ways: Firstly, PEMT software was used to structure and maintain records of training needs and performance:							
Organisations	**1**	**2**	**3**	**4**	**5**	**6**	**Project Staff**
a) Did you find this software accessible?	N	Y	-	N	N – complicated	N	N
b) Did you use this assessment software?	N	N	-	N	Y	Y	Y
c) Did you find the experience useful?	N	Y	-	N	Y	Y	N
d) Do you know of others who used this IT successfully?	N	N	N	N	Y	N	N

Secondly, Multimedia was used to deliver training materials and information, e.g. NetG software on a CD-ROM:							
Organisations	**1**	**2**	**3**	**4**	**5**	**6**	**Project Staff**
e) Did you find this software accessible?	Y	Y	Y	Y	Y	N	Y
f) Did you use this training software?	N	N	Y	N	Y	Partly	Y
g) Did you find the training exercise useful?	N	N	Y	-	Y	Y	Y
h) Do you know of others who used this IT successfully?	N	N	N	N	Y	N	Y

Thirdly, The Internet was used to deliver training materials and information:							
Organisations	**1**	**2**	**3**	**4**	**5**	**6**	**Project Staff**
i) Did you try to find the Web Site?	Y	Y	Y	Y	Not available	N	Y
j) Did you find the 'down-loadable' software accessible?	N	Y	N	N	Not available	N/A	Y – though 'stalled' a few times
k) Did you use this training software?	N	N	N	N	Not available	N/A	Y
l) Did you find the training exercise useful?	N	N	N	N	Not available	N/A	Y
m) Do you know of others who used this IT successfully?	N	N	N	N	Not available	N/A	N

2. Multimedia was used to deliver training which was distributed on CD-ROM

The project officers found training materials for delivery of IT skills from a well known company. IBM Customer Service Development materials linked to the national standards were also made available on CD-ROM. Although all but one of the companies found the software accessible, few trainees had personal access to a computer with CD-ROM drive and this severely limited its use. The organisations noted that these training materials were useful on a need to know basis but were not suitable for the usual kind of specific course they would use, nor for the problem-solving situation that had evolved in the smallest firm (see case study 3 above). One trainee noted that he had joined the project 'to make me more competent with IT'.

The quality of these training materials was high and they are used by many companies. The difficulty for small organisations is that they are sold as part of a

training service to a large organisation for large numbers of trainees. This business model is profitable, but sales of few modules to firms with few trainees is unlikely to be profitable and could result in significant security problems. During the project the potential of an association or broker to act in the interests of small organisations was recognised. A difficulty then arises of making the materials available to widely distributed trainees who are working under differing management practices. The project started to pilot an appropriate approach in the third use of IT.

3. **The Internet was used to deliver training materials and information**

A web site was created for the project and within it IT training material was available for downloading. The evaluators found the site easily and gained access though a temporary password. It was easy to navigate and to select material according to IT training needs, which were not contextualised to the organisational needs. One training manager had noted that he had used the Powerpoint tutorials and these were also downloaded by the evaluator. The first attempt did not work due to the lack of disk space on that networked computer. Although it is possible to find whether a computer is able to store the relatively large files required for training software, finding and interpreting such information is a relatively sophisticated skill which trainees needing IT skills are unlikely to possess. There is also the issue of storing new software on a shared workstation; trainees may not have the rights to do this. Organisational strategies will need to be developed to overcome these challenges. There could be the advantage of Net stations. Alternatively, trainees may undertake this training from home. However, recognition and support of personal initiative is rare in this sector according to ITNTO information. It is more common in other professions such as teaching and may develop with the implementation of the UK National Grid for Learning (NGFL).

Four of the six organisations who responded tried to find the project web site. It was not available to one, due to lack of Internet access. Only one downloaded software with the help of a project officer and he noted that it 'stalled' the computer a couple of times. No organisation downloaded training software and used it within the relatively short time-scale available for this (two months).

Conclusions and Recommendations

This project has produced important findings which are strategically valuable because they describe the issues underlying the achievement of an aim common to many training projects in the information society:

> The overall aim is to build and validate a **Learning Model** to help organisations within the financial services sector to grow and cultivate the competence/performance of their employees so as to **achieve business objectives**, while at the same time **meeting employees' personal goals**.
>
> The project will seek to enable ITNTO to exploit IT to customise and deliver cost-effective **training** to Financial Services **at the point of need, where and when it will be most appropriate.** (ITNTO contract with DfEE, p. 2, my emphasis in bold)

It is therefore very successful as an exploratory pilot project to provide valuable pointers to the future. The lack of immediate success in providing training has enabled the evaluation to uncover many indicators of potential barriers to the proposed University

for Industry and the achievement of Foresight initiative aims. Therefore this research and development is both timely and important.

The project did validate a learning model, moreover one which was understandable and perceived as 'common sense'. However, such a learning model was not immediately internalised by all participants and the evaluation noted a range in the readiness of organisations to focus on learning and training. Figure 1 shows where the companies felt themselves to be in relation to readiness for training and it was frequently at a different point to their readiness for and extent of exploitation of IT.

These findings link with the conclusions from the Computer Supported Co-operative Work (CSCW) programme, which initially assumed that all business problems could be solved by being able to access expertise outside the organisation, through IT. 'Unfortunately that concept proved to be beyond the scope of the technology - it needed a more sophisticated understanding of knowledge and learning' (Shephard, 1997). This project has also shown that the links between IT and learning with human and organisational factors are complex and change with time. Readiness for training and the application of IT within the organisation are keys to identification of appropriate entry points.

The organisations did recognise potential in the use of IT for delivery of training, particularly training in IT skills. The value of support to be used at the time and point of need was noted, such as use of Microsoft's 'Wizards' within their software. The results show that potential trainees in the financial services sector do not yet have adequate access to appropriate platforms or communication technologies to access such software. However, the barriers which the project uncovered may be overcome and four recommendations are discussed below:

1. **Encourage very small organisations to understand the value of training**

   Very small organisations (between one and ten employees) do not know about the training undertaken by staff outside work hours. There is potential to develop this encouragement provided that it is linked to business benefits, such as through quality control's link with training. Currently training is perceived as a threat with the potential for loss of good staff. Case studies are required to demonstrate the value of training to small firms within each sector, such as to estate agencies within the financial services sector.

2. **Evaluate access to training in IT through IT using a specialist Internet or Intranet service**

   It should not be assumed by developers of training material that CD-ROM drives are easily accessible, at least in work. Neither should it be assumed that training material is easily mounted on a small firm's network server. However, increased access is likely to develop, especially in trainees' homes with the NGFL. A training service may be developed for delivery over an Intranet or as a specialist Internet service suited to the needs of particular sectors. A trial of such a service is recommended once organisations signal that they are willing to use one. Such a project should have increased preliminary research, selection and preparation of participating organisations and their trainees which takes into account their readiness for training and IT.

3. **Encourage very small organisations to join together to purchase access to training materials and services**

Very small organisations are not good customers for training materials because each would only purchase customised materials in small numbers. This may be solved by joining up demand, perhaps through a lead body. Similarly, financial services national training organisations and lead bodies such as REATEA have a major role to play, possibly as a broker. The participating estate agencies did note the value of the project in terms of development of professional practice and acted in support of each other's development. This collaboration becomes problematic when they share sales territory, so the Internet could be valuable for increasing distance collaboration. Training can be seen as neutral ground in some sub-sectors and this is an area where development can be shared.

It was noted that large insurance companies have collaborated on the development of IT within their organisations, such as an international trading trial with IT. It may become possible for very small firms purchasing a common software package to collaborate on the development of associated training and quality assessment (QA). The link between QA and training is clearly recognised as common practice in Business Studies.

4. **Assessment and recording of competence using IT remain problematic and require further development**

The participating organisations expected that IT would assist with both assessment and recording. Assessment and recording of NVQs remains time-consuming and impractical for many small firms. However, the software provided for recording was not perceived as valuable during this project. It is possible that increased use of multimedia to capture good practice and standards of competence within this and other sectors will improve the situation. A very small sample is being created by REATEA and the Telematics Centre, partly as a result of understanding gained during this project.

A brand leader of a software application used by all the estate agents in this sample, does not have any training beyond installation support. The need to increase the efficiency of skills assessment and its value to trainees and their companies should remain a priority. Although it was noted that the alternative informal training mode, as demonstrated by the smallest organisation studied, provides a good example of a learning organisation, that approach may be very dependant on a few of the personalities involved and therefore not easily replicated. It would also remain difficult for staff to demonstrate their competence beyond that one organisation. Therefore, further development is required.

5. **Publish an executive report of this project**

The findings of this evaluation are significant and timely in relation to the University for Industry initiative. Therefore, the Steering Group have decided to publish an executive report with illustrative case studies.

Acknowledgements

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The evaluation team particularly wish to thank the six organisations who participated so fully in the Focus Group and survey; the trainees who were interviewed; and Stephen Hayter of REATEA.

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Appendix 1

Questionnaire used in the Evaluation Process

THE TELEMATICS CENTRE

UNIVERSITY of EXETER

'Insuring IT Competence' Evaluation Questionnaire

The Project

The 'Insuring IT Competence' Project's stated aim is to explore means to upskill and retrain individuals so that they can exploit Information Technology (IT) to deliver financial services more effectively, as part of the wider information revolution which is allowing the mass customisation of products and services. This pilot Foresight project originally focused on specific competence in the 'Use of IT' and 'Customer Service'.

Confidentiality

Your answers to this questionnaire will be confidential to the evaluation team. Where the evaluation report might benefit from your identification, your permission will be sought first. If you provide contact information, you will also receive a copy of the report.

This Questionnaire

Please fill in the answers to the 14 questions below as fully as possible.
This evaluation is extremely important to the project. We thank you for your assistance.

Business benefits

1. What potential benefits did you envisage that this project might bring to your organisation?

   a) At the start: _____

   b) Now: _____

   c) In future: _____

2. Have skill levels in your organisation changed as a result of this project?

   a) Yes, because _____

   b) No, because _____

3. Do you expect to see pressure to upskill in relation to IT or customer services in future from:

a)	Larger companies 'leaning' on you?	Yes/No
b)	European or international legislation?	Yes/No
c)	UK Government initiatives or legislation?	Yes/No
d)	Competitive forces?	Yes/No
e)	The impact of new technologies?	Yes/No
f)	Mass customisation of products?	Yes/No
g)	The need to retain reliable employees?	Yes/No

Please feel free to comment on this: _____

_____

4. How many of your organisation engaged in this project as a ***Manager, Assessor or Mentor:***

   Please estimate number of staff (the same person could be in more than one category)

   a) Awareness for management purposes: ____
   b) Participation as a mentor or assessor considered: ____
   c) Did participate as mentor or assessor: ____
   d) Undertook training: ____

   A blank entry will be interpreted as zero

5. How many of your organisation engaged in this project as ***Potential Trainees or Trainees:***

   Please estimate number of staff (the same person could be in more than one category)

   a) Awareness of the project only: ____
   b) Considered, but made no Personal Learning Plan: ____
   c) Made a Personal Learning Plan: ____
   d) Undertook some training: ____
   e) Still engaged in training: ____
   f) Has a record within the PEMT software: ____

Training Outcomes

6. Have changes improved personal performance?

   a) Yes, because _____

   b) No, because _____

7. The project has attempted to contextualise standards of training to your organisation.

   a) How practical is the process? _____

   b) How useful is it to you? _____

   c) Could it be extended across other standards and job roles?

   _____

8. A number of performance indicators (PIMS) have been developed.

   a) Please cite one, if possible:

   _____

   b) Please comment on their ease of use:

   _____

   c) Please comment on their relevance:

   _____

   d) Are they applicable to other standards? Yes/No

   e) If so, please suggest another relevant standard:

   _____

9. A choice of training opportunities has been identified for each organisation.
Please note which modes of delivery are available for your organisation by indicating below:

a)	A person as a resource, e.g. Mentoring by a colleague	Yes/No
b)	A training event provided in person, *by your organisation*	Yes/No
c)	A training event provided in person, *by another organisation*	Yes/No
d)	A set of paper-based training materials	Yes/No
e)	Multimedia on a disk or CD-ROM, e.g. NetG	Yes/No
f)	Multimedia via an on-line service, e.g. Internet	Yes/No

g) Please describe briefly an example of a training activity that was used:

_____

10. The project provided a ***Learning Model*** to help organisations within the Financial Services Sector to grow and cultivate the performance of employees to achieve business objectives.

a)	Have you seen the model?	Yes/No
b)	If so, was it helpful?	Yes/No

The use of IT in the project

11. IT was used to deliver the project in three ways:

Firstly, PEMT software was used to structure and maintain records of training needs and performance:

a)	Did you find this software accessible?	Yes/No
b)	Did you use this assessment software?	Yes/No
c)	Did you find the experience useful?	Yes/No
d)	Do you know of others who used this IT successfully?	Yes/No

Secondly, Multimedia was used to deliver training materials and information, e.g. NetG software on a CD-ROM:

e)	Did you find the software accessible?	Yes/No
f)	Did you use this training software?	Yes/No
g)	Did you find the training exercise useful?	Yes/No
h)	Do you know of others who used this IT successfully?	Yes/No

Thirdly, The Internet was used to deliver training materials and information:

i)	Did you try to find the Web Site?	Yes/No
j)	Did you find the 'down-loadable' software accessible?	Yes/No
k)	Did you use this training software?	Yes/No
l)	Did you find the training exercise useful?	Yes/No
m)	Do you know of others who used this IT successfully?	Yes/No

Benefits to individuals

12. What do you consider the benefits of the project were for the individuals involved:

a)	Increased level of competence/performance?	Yes/No
b)	Increased motivation?	Yes/No
c)	Recognition of training needs?	Yes/No
d)	Other, please describe: _____	

_____

13. Please comment on the overall success, or otherwise, of defining, implementing, monitoring and evaluating the project itself:

_____

_____

_____

Other comments or remarks:

14. _____

_____

_____

Contact details (optional)

Name: _____

Organisation: _____

Phone number: _____

Many thanks for your contribution
Niki Davis.

Appendix 2

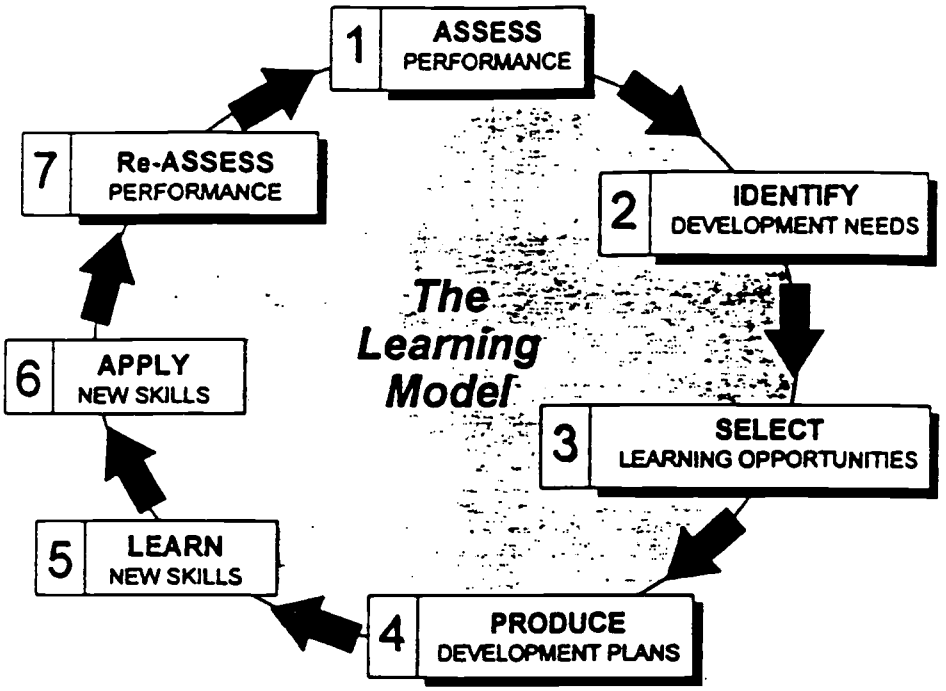
Documents analysed as part of the Project Evaluation

1. Insuring IT Competence: final draft of the proposal put by ITNTO to DfEE for Sector challenge, first round, 1997.
2. Project contract agreed by ITNTO and DfEE
3. Steering Committee minutes (four sets)
4. Steering Committee notes by Prof. Davis (two sets)
5. Focus Group notes by Prof. Davis, accompanying audio tape
6. Annotated chart from the Focus Group, informed by five stages described in MIT'90s project
7. Publicity material including reports on NETg products
8. Table of participating organisations
9. Customisation of standards
10. Mentor Workshop materials

Appendix 3

Overview of the ITNTO Learning Model

The Learning Model



The Learning Model consists of 7 steps which an individual can follow to gain the necessary skills and achieve the required level of competence / performance:

1 **Assess Performance** - using a set of Performance Indicators, individual performance is assessed against pre-defined (expected) levels of competence. This represents the current performance level and the starting point for any development.

2 **Identify Development Needs** - if under performance is indicated as a result of the assessment process, development will be required

3 **Select Learning Opportunities** - individuals select appropriate learning opportunities to suit their Learning Style using information provided.

4 **Development Plans** - individuals produce Development Plans which can then be agreed with their manager

5 **Learn New Skills** - individuals work through the agreed learning opportunities

6 **Apply New Skills** - simply learning new skills does not make an individual competent. Competence results in the application of skills learnt. It is essential, therefore, that individuals apply the skills learnt from the learning opportunities in the workplace.

Appendix 4

Example of ITNTO Standard Contextualisation – Level 2

Element 2.6.2 Producing more choice for buyers by changing price requirements **Performance Criteria** a Establish with the customer their name and decide how you will find their records easiest. b Discuss with buyer the *change that is required* and what advantage it might bring. c Look up the field showing the buyers existing price requirements from existing records and ensure that a change is needed. d Update the field correctly using the *appropriate device* e Check the field, with the buyer if necessary, for accuracy f *Rematch* the new price requirement against the property stock g Print out the match list and / or particulars as required h Compare new properties with buyers requirements and decide whether further adjustment is necessary	**You need to know, or have an understanding of the following :** 1 How to find records on your computer system 2 How to make changes to fields within the system and the effects that this might have in terms of choice for the buyer 3 How to produce material that is of assistance in providing choice for your buyer
Variables It may be to the buyers advantage to consider in detail what *change that is required* e.g. properties tend to fall into " price brackets " and it may be worth considering increasing or decreasing a buyers price requirement to fall into the next bracket. The ***appropriate device*** may be by way of keyboard, number pad or by drop down selection. The new price range could possibly produce more choice for your buyer. *Rematching* may indicate that the *change that is required* could be lowered or raised to produce greater choice.	

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