Trade union use of ICT in support of learning

A report commissioned by the TUC

Linda Creanor and Steve Walker

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Contents

Executive summary			2
1	**Introduction**		4
2	**Case summaries**		5
	2.1	Methods	5
	2.2	CISL, Italy	5
	2.3	DGB Bildungswerk, Germany	7
	2.4	ETUCO – Dialog On	10
	2.5	FNV, the Netherlands	12
	2.6	LO-S, Sweden	13
	2.7	TUC Trade Union Hub	15
	2.8	Other examples	18
3	**Key themes**		20
	3.1	Overview	20
	3.2	ICT skills	20
	3.3	From ICT Skills to e-Learning	20
	3.4	Online Networks	21
	3.5	Emerging roles	22
	3.6	Training trainers	22
	3.7	Learner support	23
	3.8	Technologies	23
	3.9	Sustainability of e-learning initiatives	24
4	**Challenges and recommendations**		26
	4.1	Training	26
	4.2	Learning, technology and organisational change	26
	4.3	Technologies	27
	4.4	Sustainability	27
5	**References & Acknowledgements**		28

Executive summary

This report summarises six case studies of trade union use of information and communication technologies (ICT) in support of learning. There are five national case studies from CISL (Italy), DGB Bildungswerk (Germany), FNV (Netherlands), LO (Sweden) and the TUC (UK) and one transnational case study, ETUCO. These cases illustrate some of the diverse ways in which trade unions are approaching the use of ICT to support formal and informal learning; vocational and trade union training; blended (mixed face to face and computer mediated distance) learning, organisational and self-paced learning; and national and transnational learning.

From this diversity, eight themes or clusters of issues can be identified in the case studies:

1. recognition that the acquisition of basic ICT skills is an essential first step towards empowering trade union members to access a broader range of both trade union training and vocational learning opportunities;
2. there is a range of pedagogies being applied in the context of ICT, though this generally appears to combine elements of face to face and online learning often in ways that enhance rather than replace conventional learning;
3. e-learning is becoming closely involved in organisational innovation in trade unions, and particularly in networked organisational structures;
4. some new roles are evolving in relation to learning and technology, which itself creates a new demand for training in a range of pedagogic, organisational and technical skills;
5. despite these new roles, the role of the tutor remains central and many educators require training in new pedagogies and technologies for learning;
6. the need to prepare and support participants in all forms of e-learning which may require both new technical and study skills;
7. the choice of technologies being used by trade unions in support of learning is pragmatic, and has centred on facilitating text-based communications through conferencing or email. There remains a great potential for

exploration of new technologies to support alternative modes of work and learning;

8. financial sustainability of e-learning is an issue for some, particularly where developments have been project based and reliant on external funding, or where new forms of learning intervention might benefit from a more open-ended support from specialist educators. In the latter case, there is currently a misfit between the support needed and financial organisation of trade union education.

Challenges and Recommendations

Four groups of challenges are identified:

- **Training:** new methods of learning demand training for tutors, learners and those taking on new roles. This involves increased awareness of the wide range of e-learning methodologies which have been developed. Transnational e-learning will become increasingly important and both tutors and learners need to develop the necessary skills;
- **Learning, technology & organisational change:** learning and technology are increasingly involved in new combinations with organisational change in trade unions. This has wide ranging implications for models of learning and training; appropriate technologies; sustainability of training and the relationship of education departments to other elements of trade union organisation;
- **Technologies:** the use of new technologies has stabilised. New technologies, broader spread of existing technologies and some of the emerging roles of learning and education have led to new possibilities for applying technologies. Fresh evaluations of the potential of novel technologies in new contexts, informed primarily by organisational pedgagic concerns, needs to be reprioritised;
- **Sustainability:** in order to sustain innovative types of learning which blur some traditional boundaries, methods need to be developed which can evaluate and demonstrate the value of novel types of educational intervention to stakeholders.

1 Introduction

'The "knowledge society" of the future is creating a new dimension for man [sic], *a dimension in which education and learning will become a cradle-to-the-grave concept of human welfare'* [1]

The concept of lifelong learning is not so new in trade unions. Neither is the use of what we now call information and communications technologies (ICT) to support new ways of learning, perhaps even 'cybernetic pedagogies' (Levinson, 1972, 369). Since the Danish LO, the Swedish LO and the British TUC started experimenting with computer conferencing to support distance learning in 1990 (McAlpine, 1992) there has been a rapid growth in trade union involvement with ICT to support both vocational learning/workforce development and trade union education. Most European confederations and many individual unions now have some level of involvement with technology and learning, and we can start to learn from each others' approaches and experiences.

This report was commissioned by the British Trade Union Congress' Building Opportunities Through Workplace Learning Project, to draw an accurate picture of the scale and types of use of ICT by trade unions in support of learning, either in workforce development or trade union education. The term learning here is understood broadly, to include informal learning as well as more formally organised courses, and whether the learning takes place in workplaces, learning centres or homes. Similarly, the range of ways in which technology might be used is understood broadly, as for example in 'pure' e-learning, blended learning (mixed residential and computer-mediated distance learning) and m-learning (mobile learning).

The report is based on five case studies of trade union use of ICT in support of learning in Germany, Italy, the Netherlands, Sweden and the UK, and one of trade union education at the transnational/European level. The remainder of this report is structured as follows: Section 2 introduces the approach taken to the case studies, and presents summaries of the cases. Section 3 identifies seven themes which have emerged from these cases. Section 4 presents specific issues identified and recommendations.

[1] Levinson, C. (1972) *International Trade Unionism*, 338

2 Case summaries

2.1 Methods

The report is based on six case studies of trade unions using ICT in support of learning. The cases were selected as examples of trade union engagement with ICT to support learning over a sustained period: they should not be taken as a representative sample, but rather as an indication of some of the major trends and issues emerging in the field.

The case studies were conducted between June and October 2004. They relied primarily on key informant telephone interviews and reviews of primary and secondary literatures (primarily as available in English). We used a common case framework, though given the diversity and different levels of the cases examined, this was necessarily rather general. The case study model covered:

- **industrial relations environment:** given the very varied contexts in which European trade unions operate, aspects of the environment (identified primarily from secondary literature) which have particular implications for the organisation of trade union education are provided;
- **technological environment:** the general availability of ICT varies significantly across the European union. The national case studies here tend to be from countries of relatively high levels of ICT access. As broad indicators of national levels of technology use we have used levels of internet use and PC density for 2003 (2004 figures from the International Telecommunications Union);
- **organisational context:** the relationship of the body organising the training to the confederation and sources of funding;
- **objectives:** the strategic objectives of the use of ICT to support learning;
- **learning organisation & pedagogies:** the ways in which the learning activities are organised and the pedagogical approaches used;
- **technologies used:** information and communications technologies used;
- **outcomes:** consequences, where identifiable, of the cases to date and future plans.

Overviews of each of the cases are given below. As well as the case studies we conducted an online survey distributed by ETUCO to affiliated confederations. The aim of the survey was not to generate a representative sample, but rather to identify additional examples of ICT use in trade union learning. The response rate was rather low, and some responses were difficult to interpret. We have also included some very short outlines of other examples of ICT use in support of trade union learning that we are aware of in section 2.8, Other Examples. The case studies are summarised in the remainder of this section. Section 3 identifies and discusses the key issues we have identified as emerging from the cases.

2.2 CISL, Italy

Confederazione Italiana Sindicati Lavoratori (CISL) is the second largest confederation in Italy. It has 14 affiliated unions and represents more than 4.1 million members from a range of sectors including metalworkers, the chemical industry, textile workers and public employees. CISL membership comprises just over 37% of Italy's trade union members, which totals between 70% and 79% of the national workforce (EIRO, 2004). At a local level it operates in districts such as Milan, Rome, Palermo and Florence, as well as within regions such as Lombardy, Latium, Sicily and Tuscany. CISL represents the interests of both the employed and unemployed, and upholds the right of all employees to participate in collective bargaining through their trade union. A long-standing 'unity

of action' agreement ensures close collaboration with the other two main Italian confederations, Confederazione Generale Italiana del Lavoro (CGIL) and Unione Italiana del Lavoro (UIL). Full details are available at **www.cisl.it/english**. Across Italy, 33.7% of the population have access to the internet and PC ownership stands at 23 in every 100.

CISL has a dedicated training centre, Centro Studi, located in Florence, where trade union-related training is provided for trade union officers and executives at both local and national levels. E-learning is now integrated into many of these courses.

The main objectives for e-learning are:

- to create online communities of practice for trade union officers who have the same role in different geographical areas or in different sectors of activity (e.g. metalworkers, chemical, textile workers, public employees, private services, agricultural workers, etc.)
- to help participants to transfer general theories learned in classroom-based training sessions to their own working environment through sustained online support
- to provide participants with an individualised learning experience which is personally meaningful
- to help participants gain the necessary skills for communication using the internet and in particular the use of First Class software, which is the platform of choice for the organisation.

The target audience consists of trade union trainers, officers at local and national level and (occasionally) workplace representatives. Generally, all activities are internally funded, although CISL has also been involved as a partner in e-learning-related European projects with ETUCO and other European confederations. Their experiences in these projects (ETUDE: European Trade Union Distance Education; Dialog On) have influenced their approach to e-learning. They do not currently have a direct involvement with employers in the area of education and training.

E-learning approach

The preferred pedagogical approach is blended learning with a combination of online and face-to-face methods. Fifty percent of all CISL's training courses which have two or more residential sessions (usually three to five days per session) are now delivered in this way. E-learning has allowed extended, more in-depth courses to be developed, one example of which is a recent set of linked courses which ran from March 2003 to November 2004 and consisted of nine five-day sessions interspersed with online, tutor-supported activities and communication. Topics covered included: industrial relations – models, actors and methods of negotiation in Italy & Europe; financial and economic analysis of an organisation and participation of workers at company level; organisational analysis and collective bargaining at company level. The First Class conferencing system (www.softarc.com/) is used to support all these developments. ICT support is provided by CISL's IT department at national level, and there is also a First Class server in Rome.

Learner support is given a high priority. During online phases the tutor is expected to log on and check the online conferences on a daily basis to ensure that participants are engaging with the activities and to provide support and encouragement. Communication may be by e-mail, e-conferencing, phone or fax. In the distance phases, participants are expected to be involved in the various tasks set by the tutor, which may include reading and self-study, putting into practice what they've learned in the face-to-face sessions, or writing reports and other documents

relating to the course content. Courses are unaccredited, although learners do receive a certificate of participation which they may use for internal or external purposes. In some cases, tests and questionnaires are used with participants to verify what has been learned.

Feedback from participants indicates that they are aware of the objectives for the distance learning activities and can see the benefits of a longer, more sustained learning opportunity which allows them to absorb more about a particular topic. They are also made aware that CISL has a very positive attitude towards e-learning methods and accords them a high priority.

Training and future plans

Prospective online trainers are introduced to various aspects of teaching online through attendance at classroom-based sessions which cover both technical and pedagogical aspects of e-learning, along with 'on-the-job' online training. Participants are also prepared for the new learning approaches by a one-day face-to-face First Class training workshop and thereafter by daily support from the tutor for the duration of the course.

At the moment these methods have been adopted primarily at a national level, although some of the regions such as Lombardy and Veneto are also beginning to pilot these approaches. CISL's current plan is to extend this training methodology more widely to the local level and to create a database of pedagogic materials which can be shared and used for e-learning courses elsewhere.

The longer term aim for e-learning is to improve communication among the various levels within the organisation, deliver an increasing number of courses and engage more union members in training activities.

2.3 DGB Bildungswerk, Germany

The DGB Bildungswerk is the training institute of the Deutscher Gewerkschaftsbund (DGB), much the largest of Germany's trade union confederations. The DGB is comprised of eight affiliated unions representing just under 7.5m workers making up about 83% of the estimated 30% of the workforce who are members of a union (EIRO, 2004). German law gives legal rights to employees to be represented on enterprise, and where appropriate, company and group Works Councils (Betriebsrat) which has itself rights to information, consultation and co-determination in a range of areas of the company's operation. This creates a substantial requirement for training in the workplace representation of workers' interests. Under German labour law, the employer pays for the costs of any training as long as it is necessary to the functioning of a particular company works council. In Germany, 43% of people have access to the internet,[2] with a PC density of 43 PCs per 100 people. According to a recent ARD/ZDF study the figure for internet access for those in regular employment is 70 %. Importantly, a recent federal court ruling established for the first time that access to the internet is a necessary requisite to the work of a workers council and thus the employer has to guarantee access, including covering associated subscription, hardware, software and training costs.

At Federal level, the DGB Bildungswerk offers around 4–500 seminars (courses) a year in its four residential training centres. Participants in these courses are primarily workplace representatives, though some union employees also take part. The courses mainly address issues associated with worker representation in enterprises – the greatest demand is for courses on labour law and management issues, and to a lesser extent

[2] More recent figures put this figure at 55%: the ITU figures are used here as the approach is comparable in different countries.

environmental and health and safety issues. The DGB Bildungswerk also offers courses for developing the competencies necessary for acting as and managing a workers council (including social competencies, communication, and management skills). The DGB Bildungswerk has also run an 'e-kademie' in Dusseldorf which offers extensive training in a wide range of information and communications technologies, including Microsoft-accredited courses, for trade unionists, works council members and SME staff and managers. The training is offered at beginner, advanced and specialist levels and includes courses in topics such as Unix, e-commerce and networking. The e-kademie is equipped with IT training labs and offers both full-time short courses and evening classes. The e-kadamie is, however, scheduled to close in 2005.

The DGB Bildungswerk has been exploring the use of ICT to support learning since the mid 1990s, initially piloting an internet version of an environmental auditing course and subsequently in various projects funded by European, Federal and regional bodies. Among these were projects such as the BIKE (Multimediales Bildungs – und Kommunikationsnetz – Multimedia and Communication Network) (1998–2001). Experiences in these projects have caused the DGB Bildungswerk to move away from multimedia materials as a model of e-learning and towards a more communication-centred approach. In this mode, the DGB Bildungwerk currently uses ICT to support learning in two ways: extending residential courses by virtual 'seminarrooms' and supporting 'communities of practice'.

Residential courses

The DGB Bildungswerk has been piloting a form of blended-mode e-learning in six seminars during 2004 which it plans to extend to all seminars by 2006. The model of e-learning aims to build on well-established pre-existing educational practices in two ways:

- Pre-seminar preparation. Traditionally, hardcopy materials are sent to participants before a course to help them to prepare for the residential session. In the blended model, materials are distributed electronically, along with online support for preliminary conference-based discussions. Participation in this online preparation is not mandatory for course participants but is available for those who find it convenient and helpful. Participants are provided with the necessary details to access the online resources, but no specific training for online work is provided in advance.
- Post-seminar follow-up: building on the routine practice of tutors circulating participants' contact details at the end of residential seminars, an online conference is created through which seminar participants can stay in touch with each other. Since tutors report that such communications typically continue for around 3–5 weeks after a seminar, it is currently planned that a conference will ordinarily be available for three months after the residential seminar, though this may be extended where there is a need.

These enhancements to the residential seminars are delivered using the open-source Moodle virtual learning system. To support the extension of this approach, the DGB-Bildungswerk is emphasising the development of e-learning skills by both their own tutors and, as far as is possible and useful, the approximately 300 freelance trainers they work with. The DGB Bildungswerk has collaborated with the Universitat Hagen to develop an e-learning certificate for tutors, to improve both the skills and self-confidence of tutors in supporting e-learning. The curriculum has been adapted to the DGB Bildungswerk tutors' needs and covers four areas: online moderation,

blended learning, the adaptation of existing materials for use in online contexts, and the practice-based, 'learning by doing' development of support for tutors' own online courses. The course has been piloted by five tutors and during 2005 will become mandatory for all tutors.

Communities of practice

The community of practice approach to online learning relies on self-sustaining networks sharing information and knowledge in a particular domain. These networks are based on exchange between participants carrying out similar common functions, with common political mandates witin the framework of German industrial relations. They use the online community as a resource, asking for, providing and receiving help from colleagues dealing with similar issues. This approach is exemplified by a community of practice of approximately 1200 participants (of whom 200-300 are reportedly active members) in the field of labour law. The community operates through a mailing list and is supported by high quality data maintained on a 'knowledge server' by DGB researchers. A research project is currently examining whether this mailing list might usefully be transferred to a web-based conferencing infrastructure. One possibility for a future pedagogic intervention to support the work of the community is to offer moderation/facilitation training to some of the participants in the community of practice to help to improve its functioning. While the tutor skills developed in the e-learning certificate may be transferable to the community of practice context, financing this form of open-ended, open access, intervention by specialist educators does not fit easily into conventional models for funding training and has required the development of alternative sustainable business models, examples of which were found and which will be applied in the beginning of 2005.

In addition to the use of ICT in support of these pedagogic innovations, the internet is used to support learning activities in other ways, including:

- putting the DGB Bildungswerk course catalogue (previously distributed in print) online to allow wider access and with additional information / services / consulting on the formal process of participating at the cost of the employer
- allowing participants to enrol for courses online;
- maintaining updated, highly valued labour law content online (traditionally distributed as loose-leaf printed pages as monthly updates with associated problems of people not keeping their own copies of the documentation up to date) produced by DGB researchers. This informational resource supports the labour law community of practice and is funded by subscription: under German law access to such materials to support participation in Works Councils must be paid by the employer.

Limited internet competence appears to remain a barrier to wider participation in the online elements of learning activities, though perhaps more as an issue of preference and acculturation than as a consequence of limited basic technical skills. This might be associated with the age profile of German trade unions generally, with most participants over 50. A 2001 study carried out by the PSHEPHOS research institute for the DGB Bildungswerk estimated that around 85% of participants either 'definitely' or 'possibly' want online services, and only 16% rejected them. DGB Bildungswerk staff suggest that the figures wanting online education is currently more likely to be 30–35% increasing over the next two to three years.

2.4 ETUCO – Dialog On

The European Trade Union College (ETUCO) is the training agency of the ETUC, based in Brussels. The ETUC comprises 76 national trade union organisations from 34 countries in Western, Central and Eastern Europe, and 11 sectoral European Industry Federations (EIFs). ETUCO offers a portfolio of residential courses to ETUC affiliates. ETUCO's 2004–2005 course programme offers 38 residential courses on a range of topics including leadership, collective bargaining, European Works Councils, EU enlargement, social protection, recruiting and organising, project management and training for trainers. The courses provide a European-level dimension to trade union education, reflecting the increasing significance of the European dimension of industrial relations and policy-making. With a small number of affiliates, ETUCO has explored the relationship between technology and learning through a series of European Commission-supported projects. Starting in the mid-1990s, two projects (ETUE-net and ETUE-net II) addressed the topic of internet training for trade unionists. In the late 1990s, the European Trade Union Distance Education (ETUDE) project more specifically addressed the use of ICT to support trade union education and developed a blended approach to delivering e-learning courses. A central theme in ETUCO's work is the need to overcome barriers to learning posed by differing European cultures (in the widest sense) and by language.

The technological context of these activities is characterised by varying levels of technology access across Europe. Among the countries represented among the ETUC's affiliates, the most technology-rich is Sweden, where 57% of the population have access to the internet and there are 62 PCs for every 100 people. This compares with the least technologically rich countries of Greece (15% and 8PCs/100) and Turkey (8% and 4.5PCs/100). Of the countries represented by partners in the Dialog On project discussed below, technology access was lowest in Portugal, with a 19% internet density and PC density of 13.5 (ITU, 2004).

This case study examines Dialog On, the largest and most recent of ETUCO's e-learning projects. The overall aim of the Dialog On project was to improve the capacity of trade unions to participate in social dialogue in the context of the 'new economy', through e-learning. Dialog On was led by ETUCO, and involved sixteen partner organisations (10 national union confederations and four European Industry Federations and two Universities). Dialog On encompassed two primary work strands with distinct models of e-learning – a 'computer-mediated distance learning' (CMDL) strand and a networking strand. The CMDL strand comprised a series of 'mini-projects' each of which was led by educators from a national confederation working in partnership with educators from a second confederation. Each mini-project delivered a pair of courses. One, national, course was delivered for participants from the lead partner and the second, transnational, course was delivered by tutors from both confederations to participants from both countries. The 'networking' strand aimed to establish eight transnational networks in five industrial sectors to undertake programmes of work defined by the partners. Some of these networks extended the activities of existing sectoral structures (e.g. European-level working committees) while others were attempts to establish entirely novel structures and practices. Several of the networks have survived the project as self-sustaining structures of one form or another. Around 125 network participants were trained directly by the project, with some networks organising additional training for participants. Just under 250 participants were trained in 14 courses in the CMDL strand.

Two approaches to e-learning were used in the project, corresponding to the two strands:

- Courses in the CMDL strand were organised using a blended learning model developed in the earlier ETUDE project, comprising a five-day residential workshop, a distance phase and a second, three-day, residential workshop. Learning activities during the distance phase were organised primarily as collaborative group tasks of varying formats, usually relating to the development of a document or documents for use and discussion in the second residential session. The precise nature of the tasks varied between the courses, but included, for example, building a collection of documents or preparing presentations.
- In the networking strand, training interventions were conceived as contributions to the establishment of innovative networked forms of transnational trade union working and organisation. A core of network participants attended an initial residential workshop which introduced the supporting technologies, and both developed a work programme and established ground rules for participation in the online activities. The term network covers a range of organisational forms, some starting to develop features of an ideal-form community of practice, some looking more like a virtual team or committee. While some networks continued after the projects, not all of them flourished.

Both strands shared a common technological infrastructure of a proprietary (First Class) conferencing platform, which provided a text-based conferencing system with client programs and web interfaces already available in the major European languages. Important to the project was First Class's flexibility in establishing conferences and sub-conferences reflecting the diverse working practices of the networks and courses. The centrality of the conferencing system reflected an orientation to communication-centred learning rather than resource-based learning.

The project identified the roles of course tutors and network 'animateurs' as central to the success of the project activities. Training programmes for both tutors and network 'animateurs' covered technical and pedagogic/organisational issues associated with the two roles. A common core of training materials was produced with additional materials addressing issues specific to each strand. Core materials covered the use of the First Class conferencing system, Communicating Online, Evaluating Online Interaction, Transnational Communication and Using Internet Resources. Networking-specific materials covered Introduction to Networking, and Animating Networks; materials for the CMDL strand covered Activities and Materials for CMDL, Introduction to CMDL, and Developing and Delivering Courses. The materials were produced primarily for use by tutors and animateurs, but some (most notably the materials introducing the First Class system) were designed for use by participants also. The materials were produced as hardcopy booklets and are currently available in up to thirteen European languages.[3]

While the use of ICT offers particular opportunities for supporting transnational activities and organisation, the diversity of linguistic, cultural, organisational and industrial relations contexts of participants forms the backdrop to ETUCO's work on e-learning in general and Dialog On in particular. Within Dialog On, several methods were used to address the issue of language in particular, with varying success. Simultaneous translation by professional interpreters was provided for residential courses and workshops, and key materials (such as the training resources) were made available in multiple languages. During

[3] The materials are available for download as PDF files from the Dialog On project website at: **www.etuc.org/ETUCO/en/projects/Dialog_on/material.cfm**

the online working phase, language issues were addressed less formally, for example through establishing single-language working groups, agreeing common working language(s) and guidelines for use of language in conferences. The project also explored using freely available (via the Web) machine translation (though the standard of these translations is currently too low for many needs) and, to a limited extent, professional translation of key conference contributions.

The project evaluation identified a number of recurrent issues in the project activities:

- the need for clearer distinctions to be made between different types of networking activity, and the types of training intervention and support needed to sustain them;
- the possibility of linking 'conventional' e-learning courses to organisational networking activities;
- the complexity of the role of the networking animateurs;
- the need to define clear objectives and working methods for online activities in both the CMDL and networking activities.

2.5 FNV, the Netherlands

The Federatie Nederlandse Vakbewegingen (FNV) is the largest confederation in the Netherlands with 14 affiliated unions representing 1.2 million members. The two focal areas for FNV are employment and income, (deriving from social benefits as well as employment), and it is concerned with social security areas as well as the negotiation of collective labour agreements with employers. Its membership therefore comprises both employees and social benefit claimants. The affiliated unions each operate in their own specific field, such as manufacturing, construction, transport, health care and education. They enter into collective labour agreements and conduct the negotiations, while the confederation adopts the role of coordinator. Union membership in the Netherlands is approximately 27% of the total working population representing around 1.9 million employees, of which FNV is responsible for 60%. In the Netherlands, 52% of the population have access to the internet, and PC density is 47 PCs/100 people.

ICT Skills

FNV employs approximately 200 staff, most of whom are based in Amsterdam with around 20 in regional areas. It has its own ICT department which provides in-house technical support and regular meetings are held with affiliated unions to discuss ICT issues. There is a strong recognition that trade unions are now working in the information age and the organisation is keen to address the impact this is likely to have on their own organisation. Plans are currently being formulated around the need to conduct a survey of staff ICT skill levels to gauge the level and type of training the organisation will need to provide. They recognise that employees require to have highly developed search and communication skills in order to source relevant, reliable and timely information using email and the internet. A more pro-active approach to ICT skills training for their employees by the organisation is regarded as a necessity and all staff will be expected to participate in training.

A self-study ICT skills package in the form of a CD-ROM, based on MS Office 97, has already been developed by one of the affiliated unions, and their staff upgrade their skills by working through it and completing the integral quizzes and tests. Individuals can choose a basic or advanced level according to the requirements of their role in the organisation. The package was funded and developed internally, although some of the

multimedia elements such as Flash movies were outsourced. Together with the union of origin, Abvakabo FNV, the largest civil servants union, a project has started to upgrade the CD-ROM to MS Office XP and to make it available for the other FNV organisations participating in this project. CD-ROM-based self-study resources which can be used at work or at home are seen to be useful and cost effective for just-in-time training purposes, although FNV will also continue to outsource classroom-based training for the ICT staff to specialised training companies.

Online communities

Another growing area of activity is that of discussion boards with their potential to support online communities and engage members. Currently these are informal, self-selecting groups which are not centrally facilitated or directed. Some are hosted by FNV via their public website (**www.fnv.nl**) while others are supported by the affiliated unions. It is hoped that these online communities will help to give individual members a stronger voice and raise their level of political influence in Europe. However FNV is aware of the potential resource issue for the organisation in formally moderating and managing the groups. There are currently no government funds or other external sources available to support these developments.

FNV Formaat is an independent organisation which works closely with the unions to provide education, documentation and advice for works councils. The focus is on union-related training (collective bargaining, conditions of employment, health and safety, and English language courses) delivered in a traditional way via face-to-face workshops and seminars, with tailored provision offered where required. To complement the classroom-based training, a number of open, unmoderated discussion boards entitled the OR Plaza (Works Council Plaza) to which council members are encouraged to contribute have also been developed. These are hosted on the organisation's website (**www.fnvformaat.nl/OurServices.asp**) and are organised around specific topics, including a more general one in English.

Online Information

Members are encouraged to contact the organisation directly to express their views via online forms and email links from FNV's website at **www.fnv.nl**. An online voting system has been developed to gauge members' responses to important issues (e.g. **www.tijdkrediet.cms.fnv.nl**). There is also a well-developed series of FAQs on a variety of topics, and regularly updated weblogs provide information on the activities of the FNV President and other key figures in the organisation.

Each of FNV's affiliated unions is relatively autonomous in relation to its own education policy and each will deal directly with employees in the workplace using appropriate methods. The current focus is on providing online information, developing the ICT skills of union employees and encouraging online communities. Plans for the future development of e-learning for vocational or union education within the organisation are still developing, with the emphasis at the moment on the information and ICT skills training which will enable members to access wider e-learning opportunities in future. Training and paid time off for learning will be a major focus for FNV and its affiliates over the next few years.

2.6 LO-S, Sweden

The Landsorganisationen i Sverige (LO-S) is the largest of Sweden's three union confederations,

with 18 affiliated unions representing just under 2m (EIRO, 2004) workers, mostly blue-collar, in both the public and private sectors. Most Swedish unions are organised as industrial unions, with a single union organising all of the workers in a workplace. Union density in Sweden is among the highest in the world. Within the LO´s area of organisation, 84 per cent of employees are members of affiliated unions. Historically, industrial relations in Sweden have been centralised, with collective bargaining conducted initially at the national level between the unions and the employers' federation (SAF). Increasingly during the 1990s, collective bargaining has decentralised to the sectoral and firm/branch levels, with the confederations continuing to play a co-ordinating role. In Sweden, trade union officers have legal rights to conduct union business (including training) during paid time. Trade unions have legal rights to information, consultation and participation in advisory bodies within companies. In most companies employing 25 or more people, local unions may appoint two employee representatives to the board of directors of – and three on the board of larger companies. Union representatives have the same rights and responsibilities as other board members, but on certain issues may be excluded from board meetings.

In 2003, 52% of the Swedish population had access to the internet (second in the world only to Iceland). The PC density of just over 62 PCs/100 people was the highest in the world (ITU (2004). In order to start correcting an imbalance of LO members' levels of IT access and skills when compared with other sections of the workforce, the LO has played a major role in promoting computer use. The LO Computer initiative began offering members a packaged PC, printer and internet access lease scheme in late 1997. Over 56,000 PCs have been delivered to members as a result of this scheme. The LO-S also used this initiative to learn more about how the internet might be used in providing an interface between members and their unions.

As the LO Computer scheme was being launched, the LO-S Education Department also undertook a major ICT and learning development project, Distance Learning for Local Knowledge Need' (DLK) in partnership with specialists in adult education and IT at the University of Linköping and the Runo Folk High School. The DLK project ran between 1997 and 2000. In the first, pilot, phase six of the LO's affiliates were involved before the project was expanded to involve 17 of the then 18 affiliated unions in the second phase. Overall, the project, funded by the Swedish Foundation for Knowledge and Competence Development, involved around 3,000 trade unionists in 150 workplaces. It aimed to form a bridge between training and organisational change in unions required by the decentralisation of collective bargaining and industrial change more widely. A central objective of DLK was to raise the competence levels among trade union representatives and leaders at workplace level.

At its core, the project aimed to respond to learning and knowledge needs as they were defined by members at local level. The learning was organised around problems related directly to trade union work and often developed informally rather than being embedded in formal course-based tuition. For example, traditionally where a new wage system was to be negotiated in a company, the local leadership would bring a national union official to conduct negotiations. Now, the need is to prepare the local leadership to conduct the negotiations themselves. This requires, among other things, working with the local leadership to prepare for negotiations; evaluating and drawing lessons after the process, and developing new horizontal linkages with others in similar situations. Another type of

response included developing a central database to allow local dockworkers' representatives to log workplace health and safety accidents and incidents. In a third example, the Industrial Workers' Union used the DLK project to develop better co-ordination of a pre-existing campaign about work organisation.

The training within the project was decentralised, involving trainers and mentors variously from the Runo Folk High School and LO's affiliates. The IT training focussed primarily on using the First Class conferencing system which provided the essential infrastructure for the project. Dedicated project groups explored other technologies however, including other conferencing systems, videoconferencing and handheld computers. Academics from the University of Linkoping worked with local reps to develop a 'general purpose' database emphasising participative approaches to the design of technological development.

Given the innovative nature of the project, it is unsurprising that the success of the individual initiatives varied. A number of lessons were identified, however, to inform future developments:

- The phenomenon of 'mutual waiting', on the one hand by the unions at local level who were waiting for initiatives from the project and affiliated unions centrally, and the centre of the project waiting for needs to be defined locally resulted in lost time;

- A lack of a clear, shared understanding of what was meant by the term 'knowledge' in different contexts;

- while there was good co-operation between trade unionists and the academic information technologists, there were some tensions among academic and union IT staff over the desire to explore technological innovations and the need to maintain the integrity of existing systems.

The project did not achieve as much, in terms of concrete outputs as some had hoped. However, from the perspective of research and education, DLK provided a unique opportunity to promote development and learning among the LO and its affiliates, and provided a fertile source of new ideas. Although the project finished in 2000, its innovative approach has continued to have a major influence on the subsequent approaches to ICT and learning within the LO. It has reduced 'blocking ideas' about the use of computers and led to new understandings of change and competence development with strategic implications. For the first time, a chapter of the LO's report to Congress was dedicated to education, laying out a strategy for decentralised educational practices. This foresees union officials acting as local learning facilitators or 'barefoot pedagogues'. This local delivery will be through a wider network of folk high schools than the three operated by the LO, and local learning IT-equipped centres run by a range of organisations (e.g. NGOs, local authorities, employer/union partnerships). A central LO Information Technology School is being established which will develop skills (for example by running training sessions for local study groups) and tools, such as databases, to support local initiatives.

2.7 TUC Trade Union Hub

The TUC represents the majority of trade union members from both the public and private sectors within the UK with 70 affiliated unions and almost 7 million individual members. As well as drawing up common policies, campaigning and lobbying government, the TUC carries out research on employment-related issues and is involved in supporting union representatives in all regions of the UK through the provision of extensive training and education opportunities. Further details are available on the TUC website at **www.tuc.org.uk**.

Across the UK, around 42% of the general population have internet access, with PC ownership standing at 40.5 in every hundred.

The TUC is firmly committed to supporting the UK Government's lifelong learning agenda with its goal of widening participation in education and training and has invested heavily in the development of flexible workplace and work-based learning opportunities. It has developed an e-learning strategy which details the direction the organisation plans to take over the next few years and which underpins new projects and all e-learning related activities. It is currently involved in several ICT-related projects which are piloting innovative ways of using the internet to engage members in education, encourage involvement in union activities and increase membership.

The TU Hub, the most ambitious of these projects, has built directly on the infrastructure set up by the UK Labour Government in its University for Industry (UfI) initiative. Established in 1998, the main aim of UfI was to harness technology to widen access to education and training, thus enhancing employability and increasing productivity. Learndirect was established as the brand name of the flexible learning opportunities offered by UfI, and more than 2000 learning centres have now been established in England, Wales and Northern Ireland. Learndirect Scotland has taken a different approach, acting more as educational broker than learning provider.

Following discussions between the TUC and UfI as to how the initiative might support trade unions, the Trade Union Hub was established in 2001 with the aim of creating learning centres especially for trade unions. Initially these were established in further education colleges and a few union offices, but were gradually expanded to include workplaces where unions are recognised by employers. The TU Hub currently supports 81 such learning centres, and at the end of academic year 03/04, around 7,395 learners had accessed over 12,000 courses, the majority of which were online.

Organisation and management

The factor that differentiates the TU Hub from other Learndirect hubs is its focus on supporting union learning representatives (ULRs) in the workplace. These representatives have responsibility for raising awareness of the benefits of education and training, promoting Learndirect learning opportunities to union members, and providing (or pointing to sources of) learning-related information. They have a statutory entitlement to paid time off for these activities in agreement with their employers, although this does have to be negotiated locally and support from employers can vary. The TUC provides training for the ULRs, including courses on 'Setting up a trade union learning centre' and 'Managing a trade union learning centre'. Approximately 7000 representatives have already been trained, with a target of 22,000 set for 2010.

Following the structure set out by the UfI, the TU Hub is at the centre of a range of learning services and is responsible for monitoring quality, budgets and staff. It works towards developing partnerships with local colleges to ensure learner access to a wide range of learning opportunities which are not necessarily limited to the Learndirect courses. Medium centres (larger scale learning centres) are often in trade union education centres within colleges and have tutors who are qualified to teach, support and assess learners, face-to-face and online. These larger centres will be responsible for monitoring and supporting the smaller Link centres which are more likely to be based in the workplace. TUC policy demands that each Link Centre is directly attached to a Medium Centre within the geographical area to ensure the learner has easy access to its support structures.

Medium Centres also provide support to the union learning reps within their area.

A robust quality framework is in place, with the TU Hub making two monitoring visits per annum to individual learning centres, each of which must produce an annual self-assessment report along with a development plan. The Hub itself also has to produce such reports, and all are submitted to the UfI and the Learning and Skills Council (LSC) to justify continued public funding (£1.5 million in 2003/04). The LSC is responsible for funding and planning education and training for over 16-year-olds in England. There is also a contribution from the Union Learning Fund and the TUC (approx £450K in 2003/4).

The target audience includes members with low skills and qualifications levels, those from equal opportunities target groups, and individuals who are returning to learning after a time away. The TU learning centres address the union priorities of numeracy, literacy and ICT skills, and strongly encourage a workforce development strategy.

E-Learning courses

Access to ICT and the internet is made available in the learning centres. It is recognised that a supported learning venue within a workplace can provide a valuable tool in empowering the local union learning representatives to engage learners and increase motivation. Expanding these facilities therefore is a vital priority and a Supported Learning Venue Strategy has now been drawn up. Learners can also access online courses from home, although download times may be slow if they do not have broadband facilities.

Learndirect courses are provided via the virtual learning environment which was developed as part of the UfI Learndirect initiative. This platform plays a central role in the delivery of online courses, assessment, feedback and learner support.

Discussion boards and email are used alongside the more traditional telephone and face-to-face contact. Other courses, such as those provided by some colleges, make use of commercial software such as WebCT. ICT skills are among the most popular courses, with an emphasis on the need to develop role-related expertise and how to build on these skills to access a wider range of learning opportunities.

Learndirect courses are not accredited but are benchmarked across to existing qualifications such as the European Computing Driving Licence (ECDL) and national vocational qualifications. Some courses, such as the ULR training courses, are accredited by the National Open College Network, a recognised national qualification awarding body which is the central organisation for 28 Open College Networks (OCNs) across the UK.

Although e-learning is at the core of this initiative the TU Hub is aware that this approach may not be suitable for all learners, therefore a range of options is on offer. If an individual's learning plan indicates that e-learning is not appropriate, other learning routes and resources will be sought. Learner support is given a high priority, with face-to-face assistance available in the Link and Medium Centres along with online tutor support within the online and blended courses. There are standard guidelines on learner support to which ULRs, centre staff and tutors are expected to adhere and it is expected that Medium Centres should be aiming to 'become centres of excellence in e-learning and distance support'.

The TU Hub is still under development and the number of workplace learning centres is continuing to expand. A Virtual Learning Centre is also being created to supplement existing support structures by providing online access to courses and tutor support for distance learners who cannot attend a local learning centre. In the longer term,

the TU Hub will become part of a proposed new Trade Union Academy, which is likely to result in a major restructuring. As part of an EQUAL project, the TUC is also examining the potential of videoconferencing and a virtual library to further support learners.

2.8 Other examples

TUC

The TUC is involved in a number of other initiatives which aim to support its overall e-learning strategy. These include:

- BOWL: Building Opportunities through Workplace Learning. This EQUAL-funded project specifically targets social exclusion and widening participation through the provision of a range of local learning opportunities such as basic skills and enhanced access to educational advice, information and guidance, using ICT as an enabler. It aims to build on the success of the union learning representatives in addressing these issues by expanding provision for them and the learners they support. This report was commissioned by the BOWL project.
- UEO: Union Education Online. Funded by the Joint Information Systems Council (JISC) in the UK, this project aims to overcome interoperability issues by establishing a model for the establishment of systems and processes to ease the transfer of learner data for national programmes between student record systems and managed learning environments (MLEs) It has a particular focus on data-sharing between the TUC and individual colleges, and between the awarding body, individual colleges, and a single MLE.
- ULRO: Union Learning Reps Online. This project aims to expand the TUC's support for union learning reps by developing online courses and resources to complement the current face-to-face training provision. It will also develop online pre-course guidance and assessment systems and is supported by a combination of EQUAL and Department for Education & Skills (DfES) funding.
- Online communities: the TUC is also encouraging involvement by hosting several online discussion groups e.g.
  - for ULRs at **www.learningservices.org.uk/midlands/index.cfm**
  - for union representatives at **www.unionreps. org.uk/login.cfm**

ILO Actrav: Solicomm

Actrav, the Workers' Affairs Bureau of the International Labour Organisation (ILO) have recently launched Solicomm (formerly known as Course Reader), based on a number of open source software components. Solicomm provides a technical infrastructure that can be used readily as a web-based conferencing and basic document repository by users in developed countries while simultaneously being accessible via freely available client programmes which do not need to have internet connections open permanently, in countries where access to the internet is more restricted or expensive. Solicomm is currently being assessed for use by several Global Union Federations for both educational and organisational purposes.

As a conferencing system, the Solicomm software does not have a strong pedagogical approached embedded in it. To date, it has been used both to support pure online courses, and as a medium for follow-up to residential seminars.

IFWEA – International Study Circles

During 1997 and 1998, the International Federation of Workers' Education Associations (IFWEA) and the European Federation of Workers' Education Association (Euro-WEA) piloted a methodology for using ICT to support international study circles, based on the Scandinavian study circle approach (Salt, 2000; IFWEA, 1998), which formed the basis for a subsequent transnational education program up to 2003. As with Actrav's Solicomm, ISCs were originally developed in the context of global learning events where the participants may be working in countries which, *inter alia*, have very widely differing levels of technology access.

The ISC approach links together face-to-face study circles working in different countries on a programme of study. In the initial conception of the ISC, the internet was to be used only by each local circle's facilitator who writes up the results of their group's work each week, and circulates this by email to the facilitators of the other study circles. When received, the reports can then be used as inputs to each study circle's subsequent work. In this way study circles can collaborate internationally on topics of common interest with modest access to ICT. Early evaluations, however, indicated that participants themselves wanted to use the internet themselves as part of the process. The ISC approach is being further refined and used in training programmes in eastern Europe, the Balkans and in Latin America. IFWEA are currently planning to use ISCs, along with international residential sessions, to provide a year-long programme of accredited courses.

3 Key themes

3.1 Overview

The case studies outlined in this report reveal a range of approaches towards the use of ICT in trade union learning which reflect a variety of organisational priorities and responses in particular national and transnational contexts. Differing industrial relations environments, union cultures, national government policies and initial experiences with ICT in learning are among the factors contributing to this diversity. Despite this diversity however, we have identified eight themes running through the cases, which are highlighted below.

Perhaps the most significant of these themes is the emergence of a number of educational approaches alongside continued training in the use of ICT both for trade union and vocational purposes, and the increasingly close relationship of some of these approaches to the changing needs of trade union organisation.

3.2 ICT skills

There is a clear recognition that the acquisition of basic ICT skills is an essential first step towards empowering members to access a broader range of learning opportunities. Where unions have taken responsibility for engaging members in ICT skills courses (DGB-Bildungswerk, TUC, LO-S), demand for e-learning appears to be growing, as evidenced by the enthusiastic take-up of the ICT skills courses offered by the TU Hub project in the UK. Union 'branding' appears to encourage involvement and reach groups and individuals who may not otherwise have had the confidence or inclination to learn, particularly when these opportunities can be accessed directly from the workplace.

ICT skills are also high on the agenda for union employees. The approach taken by FNV for example, highlights the need for union employees to constantly upgrade their skills, not only to ensure enhanced communication within the organisation, but also to source timely, accurate and relevant information from the internet to keep the organisation and its members abreast with current issues and events.

From a union perspective, this rise in demand, although welcome, will inevitably result in greater calls on union resources. In some cases there is perhaps scope to expand the use of e-learning methods to teach ICT skills, which, although this would involve heavy upfront development costs, may prove cost effective in the longer term. Additionally, technical and wider information literacy skills needed to learn effectively are unlikely to remain static, creating needs for extension and refresher training.

3.3 From ICT skills to e-learning

We can see a diversity of approaches to the organisation and 'delivery' of e-learning:

- **Course-based e-learning (DGB Bildungswerk, ETUCO, TUC, CISL):** ICT is used to support learning as part of a conventionally conceived time-delimited course. While earlier initiatives explored purely online courses, there appears to be a growing conviction that blended learning mixing face to face and online phases is more effective. The structure of these blended courses varies, combining the two modes in different ways. Blended mode courses typically emphasise communication among participants in both residential and online phases. Outside the case studies covered in detail here, other pedagogies have included study circle-based learning (e.g. IFWEA/Euro-WEA) and purely online courses (e.g. ILO Actrav);
- **Self-paced learning (FNV):** ICT is used to support the individual learner progressing at

their own pace. Here, the emphasis is on multimedia learning resources which may be distributed either online or via CD-ROM;

– **Situated/organisational learning (CISL, DGB Bildungswerk, LO-S, ETUCO):** ICT is used to support learning-related organisational processes. This may take the form of ICT providing additional support for existing communities or other structures (e.g. DGB-Bildungswerk, ETUCO) or new forms of trade union organisation (ETUCO, LO-S). This approach is frequently, though not exclusively, associated with the concept of community of practice.

The growing recognition of the significance of organisational/situated learning in trade unions is similar to the convergence of the fields of computer-supported co-operative learning (CSCL) and computer-supported co-operative working (CSCW) which some have argued is happening more widely in the context of the spread of knowledge management and attempts to develop learning organisations.

3.4 Online networks

The use of ICT is frequently incorporated into organisational change and renewal strategies. The cases here suggest that in some cases (e.g. ETUCO; DGB Bildungswerk, LO-S), perhaps a growing proportion, this is also seen as an educational intervention associated with organisational perspectives on learning. New organisational forms and practices are often associated with networks and networking, and associated horizontal, informal flows of information. The nature of these networks varies, including:

– **course learning networks** established during the life of an online or blended mode course. These networks are typically organised around tasks or discussions planned and facilitated by a tutor usually with the aim of achieving one or more specified learning outcomes;

– **communities of practice** in which participants are concerned with doing similar things or which hold similar political mandates, as for example in the DGB Bildungswerk's labour law community of practice. These networks may emerge from existing practices or (and more difficult) be created around new practices supported by ICT. Key elements of communities of practice are that they are self-sustaining and the peer learning is largely problem-based and informal;

– **virtual teams** in which participants with different skills, specialisms or responsibilities are brought together. Virtual teams are often more explicitly task based than communities of practices (or other forms of community). Virtual teams are often time limited, though there are examples of virtual committees (ETUCO) at a transnational level which continue indefinitely, with participants representing their own organisations;

– **co-ordination networks** which aim to collect information as the basis for co-ordinating future actions (for example in European Works Councils).

This is not an exhaustive list of possible network structures, but represents some that can be identified in the cases examined for this report. The extent to which learning is explicitly promoted and occurs in these networks varies significantly. Learning about ways in which educational interventions can be planned to support setting up and maintaining different types of network is still at an early stage, both within the trade union movement and beyond.

3.5 Emerging roles

In some cases innovative approaches to learning are resulting in the emergence of new union-related roles, including:

- **the union learning representative (ULR)** in the UK: the focus of the ULR is to raise awareness of educational opportunities and engage workers locally, and then to provide continuing support and motivation as they proceed with their learning;
- **the 'barefoot pedagogue'** in Sweden, where union officers who are not education specialists will be trained to identify and support opportunities for learning interventions in unions at the local/workplace level;
- **the 'network animateur'** identified by ETUCO's Dialog On project, where a member of a network is trained in a range of techniques to support the (primarily online) work of the network.

By supporting these new key roles unions are extending the reach of e-learning, potentially increasing membership and going some way towards addressing the social inclusion agenda. The identification of training and support needs for individuals adopting these roles is a significant issue, and one where more work is necessary although some lessons are starting to emerge. The evaluation of the Dialog On project for example highlighted the greater than expected complexity of the network animation role, encompassing seven groups of activities and skills. Where such roles are undertaken by members on a voluntary basis, as will often be the case, it may be better to think of these as team rather than individual roles.

3.6 Training trainers

Despite the emergence of new roles in relation to ICT and learning, the role of the tutor will remain central. The shift towards e-learning heralds a major change for the majority of trade union trainers who have been used to more traditional classroom-based methods. The case studies indicate that preparing trainers for the online environment is being dealt with in different ways, often depending on the preferred pedagogical approach:

- where there is a strong emphasis on centrally supported online provision (e.g. the TU Hub, Dialog On, CISL), trainers are given the opportunity to experience online learning for themselves by taking part in online or blended training courses and are also given guidance on developing resources, activities and support for online learners.
- in less formal, more decentralised contexts (e.g. LO-S) where situated learning is the norm, training trainers to work online appears to be less prescriptive;
- where the emphasis is shifting from online courses to online communication in learning networks (e.g. DGB-Bildungswerk), trainers will be expected to become proficient in moderating online discussions. DGB Bildungswerk's accredited tutor training programme represents one attempt to address this issue.

Research also suggests that the engagement of online learners is often directly related to the expertise and commitment of the trainer (Salmon, 2004), therefore the challenge for unions will be to identify these e-learning approaches and provide relevant and timely training for the key players. Although there appears to be growing movement towards accreditation for e-trainers (DGB-Bildungswerk, TUC), most training activities still appear to be informal and unaccredited (CISL, LO-S).

Experiences to date of transnational activities

(ETUCO) suggest that trainers will also need to be aware of the linguistic and cultural differences which may impact on the learning experience. As collaboration expands at European level, demand for culturally aware trainers and online facilitators is likely to increase.

3.7 Learner support

Preparing participants for learning online and supporting them as they undertake e-learning courses is another emergent theme, the importance of which is also reflected in the new roles described above. By providing a range of support structures for learners from face-to-face advice and guidance (TUC, LO-S) through blended approaches (ETUCO, CISL, TUC) to online tutor and peer support (DGB-Bildungswerk, TUC), engagement and motivation levels can be maintained. Where there is a recognition that e-learning may not suit all learners, more traditional alternatives may be available (DGB-Bildungswerk, TUC). This appears to indicate that e-learning is not being viewed as a replacement for classroom-based training, but rather as a complementary activity.

Taking this a step further, one case study (TUC) describes the establishment of learning resource areas within workplaces as a longer-term strategy for engaging and supporting learners in situ, and encouraging higher participation rates by endorsing the learning with a union 'brand'. With union rather than employer ownership of the courses on offer, it is felt that members are more likely to become involved. In another case study (LO-S) the issue of internet and PC access was addressed by the development of a leasing system for individual union members.

Approaches to accreditation also vary. Whereas LO-S and FNV emphasise the importance of informal, situated learning over formal, course-based learning, both the TUC and DGB-Bildungswerk are engaging learners in activities which can lead to specific qualifications if they so wish. Again, this is a choice for the learner who retains control of the level and pace of their educational progress.

Another area of concern is the negotiation of agreements with employers for paid time off to participate in learning activities. Although there may be statutory rights in certain national contexts (e.g. UK), agreements with employers may still require to be negotiated locally and interpretations of the agreements by employers can vary.

3.8 Technologies

The potential for the use of technology to support learning is conditioned in part by the varying extents to which they are available in the varied national contexts of Europe. While trade unions can intervene in this area (as, for example, with the Swedish LO Computer scheme) impact will be limited. This diversity of access, both within and beyond the European union requires transnational education activities to work with relatively restricted ranges of technology and/or to become involved in the implementation of technologies specific to the purposes (e.g. ILO Actrav).

Where ICT is more widely available, the dominant use has been to support text communications. Computer conferencing systems, frequently but not exclusively web based, are widely used to support collaborative, group communications. The First Class system has been widely used (e.g. CISL, ETUCO, LO-S), though there is some evidence of the use of open source conference/learning environment platforms in the DGB Bildungswerk's use of Moodle and the ILO Actrav's implementation of Solicomm, based in part on the open source Virtual U. Email and email lists have also been used (e.g. DGB Bildungswerk's

communities of practice). In some cases, databases or document repositories have been implemented as part of supporting online networks and communities.

The FNV have produced multimedia CDs to support self-paced learning. The costs of designing and producing well-designed multimedia learning materials, particularly where subject matter changes often, has led to the rejection of this approach by the DGB Bildungswerk, and rather limited use elsewhere. FNV has addressed this by agreeing to share the costs among some of its affiliates.

The case studies presented here reflect a pragmatic (even conservative) approach to the use of technologies to support learning, in some cases perhaps because of difficult experiences with over-ambitious technology-led projects earlier. We found no evidence, for example, of use of mobile technologies explicitly built in to learning activities and limited evidence of experiments with or use of technologies such as videoconferencing. There are reasons for thinking that the time may be ripe for further experimentation with emerging technologies, for example:

- there is some evidence of a growing use of communications technologies such as instant messaging in support of computer-supported co-operative working (CSCW). Given the apparent convergence of CSCW with methods of computer-supported collaborative learning identified above, these technologies may better support some types of practice-based interaction than conferencing. Technologies (such as databases) more usually associated with work rather than learning may similarly be important tools in support of situated learning;
- many younger people are now familiar with a range of technologies including chat, instant messaging and mobile phones, and these may offer new channels for involving them in learning. There is significant interest in this, for example, in higher education.

3.9 Sustainability of e-learning initiatives

In significant part, the development of ICT support for learning has been influenced by the availability of funding external to trade unions. In the UK, for example, national funding in support of workplace learning has been available, and there is an acknowledgement (FNV) that funding is likely to become an issue. Actively seeking national and European sources of funding may therefore become a more widespread and important area of activity (already undertaken by ETUCO and the TUC) and one which may benefit from a greater collaboration among organisations at both national and European level, though this may create tensions between the priorities of the funding agencies and unions themselves. European funding, for example via Socrates, Leonardo, ESF and Framework programmes has played an important role in enabling trade unions to explore innovative approaches to using ICT in support of education, and it is likely that this will remain an important source of support. The availability of external funding also poses some difficulties. While many projects have only been feasible because of this funding, incorporating lessons learned into mainstream practice be difficult to sustain once the funding is finished. Accommodation of external funders' requirements may also dilute the requirements of trade unions.

The emergence of situated and organisational learning as arenas for trade union educators poses some particular challenges. Charging affiliates or employers for participation in conventional courses is well established. It is more difficult to see how ongoing pedagogic support for learning networks by specialist trade union educators, for example, might be sustained. In some cases, subscriptions

may fund some activities (as in the DGB Bildungswerk's research documentation used in the labour law community of practice). In some cases, it may involve training some trade union officers (as in the case of the LO-S's 'barefoot pedagogues') or network participants (e.g. DGB Bildungswerk, ETUCO) to fulfil specialised roles.

4 Challenges and recommendations

4.1 Training

This survey has identified three distinct types of training using ICT: a focus on trade union-related education with a target audience of trade union officers and representatives; training related to organisational change, again with an internal audience; and vocational and skills training which primarily targets individual members. Generally, there appears to be a shift away from content-driven to communication-driven learning. Surrounding this there are several issues which will require future planning:

- **ICT Skills:** to enable more individual members to access e-learning opportunities, ICT skills training should continue to be a major focus for trade unions with a commitment to addressing social exclusion and the digital divide.
- **Training trainers:** identifying the new skills required by online trainers and preparing them for an evolving pedagogical role is an area likely to expand as technologies progress and e-learning options attract a larger number of learners with more diverse profiles. Evidence suggests that training for trainers should mirror the learner experience.
- **New roles:** as new learning-related roles continue to emerge, appropriate and timely training and support structures will be required. Providing pedagogical and technical support for learners in the workplace has major long-term implications for the expansion of e-learning and will demand innovative approaches.
- **Accreditation:** in some cases, learners (and trainers) have the opportunity to gain qualifications as they study. In the context of lifelong learning, this may become a more important driver for union education than it appears to be at present, particularly for vocational and skills training. This may necessitate closer collaboration with other national education providers.
- **Communication:** historically trade unions have relied heavily on the spoken word and highly developed interpersonal skills. The shift to online, text-based communication necessitates a change in style and therefore should be addressed directly in training.
- **Accessibility:** one issue which was not highlighted by any of the case studies was that of access for learners with some form of disability. Given that legislation is already in place in several European countries, this is an area which all those involved in e-learning will need to address as a matter of urgency.
- **Employer support:** workplace learning is already a bargaining issue for some trade unions, and others are indicating that it is about to become so. E-learning is often invisible learning, as learners may be studying online from their desks rather than attending a classroom-based course. Raising awareness of the potential of e-learning at work, encouraging the support of employers and negotiating agreements with them should be an important focus of activity.
- **Transnational collaboration**: as collaboration in education, training and political networks increases at a European level, addressing cultural and linguistic issues is likely to be of future concern for trade union officials.

4.2 Learning, technology and organisational change

The convergence of ICT, learning and new forms of organising is emerging as a key trend. This has a number of consequences in training for new organisational roles which themselves link learning to trade union or workplace practice. Skills which

have been traditionally associated with specialist educators may be needed elsewhere in trade unions; technologies need to be used which similarly bridge learning and practice; and funding arrangements for some trade union education need to reconsidered.

Recommendation: trade union education needs to be integrated more closely with the consideration of trade union organising and re-organisation.

4.3 Technologies

There is widespread use of text communications to support formal and informal learning activities, typically email and conferencing. While there have been some experiments with other technologies, most notably videoconferencing, this remains limited. The use of multimedia learning materials is relatively limited, partly because of a culture of participative and collaborative learning which emphasises communication, and partly because of the cost and skill requirements of multimedia production.

Over the last five years, a range of newer technologies and standards have emerged and are spreading, sometimes rapidly, which are being explored in education and training more generally, and which may have roles to play in trade union education in particular. Examples include mobile communications technologies (including 'text' messaging), instant messaging including text, audio and video), handheld computing and mp3 players. The convergence of collaborative learning and collaborative working also brings technologies less frequently thought of as educational (such as databases and document repositories) into consideration.

Access to technologies remains a vital issue, even in those countries with relatively high levels of technology use. Technology access and learning centres, often in partnership with a range of other partners, will frequently be an important component of training, and are likely to remain so as new technologies emerge which will take time to become commonplace.

Recommendation: evaluating the potential of a wider range of technologies to support learning should be built in to future education projects.

4.4 Sustainability

Technology and its use in broadening participation in learning, and indeed a broadening definition of what comprises learning are placing increasing demands on trade union education. Governments' and European funding schemes have played a large role in helping trade unions to develop and deliver ICT-supported learning. Project-based funding can play particularly useful roles in developing innovative practices. Reliance on external funding creates difficulties, however, often restricting the ability to plan strategically and sometimes create tensions between the requirements of trade unions and those of funding bodies.

One particular area where there is a mismatch between emerging methods and income generation is in the area of organisational learning. Affiliates and others are familiar with the ideas of paying to send members on courses. Where a form of learning requires an open-ended commitment of educational support to, for example, a learning community or organisational network, it can be difficult to justify the costs.

Recommendation: explore ways of demonstrating the value of educational support in new contexts to affiliated unions (and others) to ensure ongoing support.

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