Crossing complex boundaries: transnational online education in European trade unions

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Abstract  Collaboration across boundaries in work and learning is increasingly a feature of networked organisation. We present a framework for analysing learning events as encounters across multiple boundaries of differing types, significance, role and severity. These boundaries may provide either/both obstacles to, and opportunities for, learning. Tutors and learners may negotiate these various boundaries with a variety of digital practices and artefacts. We apply this provisional framework of boundaries, artefacts and practices to the case of transnational trade union education, in which tutors and course participants negotiate a complex mix of boundaries. We identify ways in which practices and tools can have consequences for multiple boundaries and conclude that this approach provides a way to unpack some of the complexity of interactions in transnational learning situations and offers a framework to identify effective tools and practices.

Keywords  conferencing, evaluation, IT-use, online education

Introduction  Crossing boundaries of various kinds is an essential feature of networked organisation. In an increasingly networked world (Castells 2001), we can expect information and communication technologies (ICT) to be enrolled in boundary-crossing both in work and formal learning settings. Understanding the significance and diversity of these boundaries, and ways variously of exploiting or overcoming them, is likely to be of increasing significance in education and in the workplace. The network metaphor (Jones 2003) and its fusion of a range of theories provides a useful perspective on interpreting learning episodes such as these against the wider background of research into the networking phenomenon. For example, the concept of strong and weak ties (Granovetter 1973; Castells 2001; Buchanan 2002) emphasises the potential of weak links, often undervalued in the educational context, to bridge the boundaries between communities and forge unexpected relationships; actor-network theory (e.g. Latour 1996; Fox 2002) highlights the importance of practices such as mimicry and demonstration within and between networks. The flow and connectivity between nodes (Wittel 2000) in terms of objects, actors and practices, accentuates the importance of connections, demonstrated in this project both by a cascade of artefacts and practices, albeit adapted to a local context by a range of communities, and by the emergence of novel devices supporting these flows. In practice, we see that crossing boundaries incorporates layers of complexity, which may not be immediately evident.

In this paper, we analyse the conduct of transnational trade union education courses as boundary
encounters between participants\textsuperscript{1} in local/national trade union communities of practice. We are particularly concerned with the artefacts and practices used to negotiate boundaries in complex transnational learning events designed specifically as boundary encounters. The following section outlines the theoretical framework of boundaries and boundary crossing. We then apply this framework in the context of e-learning in a transnational trade union education setting.

\textbf{Background}

\textbf{Learning episodes as boundary encounters}

The concept of boundaries has been used frequently over the last decade in organisational studies, information systems and educational research. Boundaries can be thought of as discontinuities in some form of practice. At the most general level, boundaries occur between social worlds (Strauss 1993) which are limited by the boundaries of effective communications. Hence, boundaries occur, for example, as discontinuities between communities of practice (Wenger 1998) such as the communities of academics and students (Bruffee 1999); social activities (Beach 2003); organisations (e.g. Merali 2002); units within organisations (Ackerman & Halverson 1999) and work practices (Fitzpatrick 2000). Boundary encounters occur as people interact in some way across these boundaries. These encounters may be directly interpersonal and/or mediated by artefacts. Boundary-crossing has been analysed in terms of personal networks facilitating the flow of ideas and innovation (Granovetter 1973); boundary objects which support the communication of meaning across boundaries between communities of practice while simultaneously being interpreted distinctly by them (Star & Greisemer 1989) and boundary encounters (Wenger 1998). Examples of human agency include boundary spanning and brokerage (Wenger 1998). Examples of the enrolment of artefacts in boundary-crossing include conferencing systems, databases (Ackerman & Halverson 1999) or classification systems (Bowker & Star 1999). The use of technological artefacts in these practices may be explicitly managed in processes of ‘technology use mediation’ (Orlikowski \textit{et al.} 1995). In those encounters explicitly organised to support learning, artefacts might include physical or digital learning resources, and practices might include both planned and emergent activities of both learners and tutors.

Boundary encounters can be analysed as communication genres. Communication genres have a socially recognised purpose within a particular community, and features or properties to support that purpose. The concepts of genre and genre repertoire have been used to analyse e-learning situations, for example in higher education (Svensson 2002) and participation in learning communities (Collins \textit{et al.} 2001). Particular genres exist in wider settings of related genres – as for example a meeting agenda which exists alongside physical meetings and meeting minutes in a genre system or repertoire (Orlikowski & Yates 1994; Yates & Orlikowski 2002). In genre ecologies (Erickson 2000), particular genres may flourish or be replaced by others as communicative practices change. Genres may be designed explicitly for a particular purpose (for example, in the cases discussed below by educational designers), or emerge from an ongoing practice. In either case, genres will frequently change, by accident or design, over time (Yates \textit{et al.} 1999) as communicative practices and the available tools change.

\textbf{Boundaries: types, roles and consequences for learning}

In learning events which aim to cross boundaries, we propose and discuss four significant and interlinked elements with implications for the design of learning events and activities: the types of boundary in a particular learning event; the location of the boundaries among the actors involved in the learning event; the role of a boundary, which may be either as a barrier to learning or as a site of learning in the event; and the significance of a boundary.

\textit{Boundary Type:} as outlined above, there are discontinuities, for example, between organisations, departments or communities of practice. The nature of boundaries will clearly be of significance in designing artefacts either for overcoming or exploiting them. For example, organisational and personal profiles may be used in an online icebreaking activity to address cultural and organisational boundaries, while over-
Coming linguistic boundaries might involve simultaneous or machine translation.

**Boundary Location:** groups of learners may incorporate boundaries which coincide with each other or which intersect in more complex ways. For example, in a learning event language may largely correlate with geographic location, although an individual learner may be bilingual. This can be significant in that such potential ‘boundary spanners’ may play significant roles in facilitating communications within a group.

**Role:** interactions at boundaries can provide particularly fruitful opportunities for learning, providing opportunities for the communication of new ideas and the development of knowledge or they may be obstacles to learning. Consequently, boundaries can be either key elements of the design of learning events or simply barriers to effective learning.

**Significance:** the existence of some discontinuity of practice does not necessarily mean that a boundary is salient to a particular learning event. Either as learning opportunities or barriers, they will vary in significance.

### Boundary crossing in learning events

Based on the study of electronic communications, Yates *et al.* (1999) argue that communication genres may either be designed explicitly to support particular communications patterns, or may emerge from the practices of actors in a communication setting. Similarly, we suggest that in online learning events, boundary-crossing artefacts may be explicitly designed into an event by a tutor or by a materials developer, or emerge implicitly from practice. These two types of artefact may tend to have different properties. In producing designed-in artefacts and practices, tutors may draw on their previous experiences in other learning situations. For example, a document outlining a task to be undertaken by learners may have certain features (e.g. learning objectives, task descriptions), which are understood (although perhaps differently) by members of learner and educator communities through their recurrent use. Where practices and artefacts emerge implicitly from particular learning events, they are unlikely to comprise genres in themselves (as they would not ordinarily be part of a longer-term recurrent practice, at least in a conventional time-limited course). Such practices may however, form an important source of innovative ideas as educators and learners attempt to overcome or exploit particular boundaries, and may subsequently be ‘designed in’ as explicit genres in future learning activities.

The concepts of boundaries and boundary-crossing in e-learning are discussed below in the context of technology use in transnational trade union education.

#### Research context: transnational trade union education

E-learning and transnational education are increasingly significant issues in trade union education, as they respond to dynamics of economic globalisation and in the Europe Union to a growing European dimension of industrial relations. Trade unions are seeking ways of creating new forms of cross-border communication, education and organisation for their officers and members. This process involves bringing together participants from diverse contexts within the international, or in the cases discussed here more specifically European, trade union movement (Creanor & Walker, 2000). It also involves crossing multiple boundaries between participants in learning situations.

Using the theoretical tools outlined above, the remainder of this paper examines the boundary practices and artefacts in online trade union education courses carried out as part of Dialog On, a large scale project supported by the European Commission’s European Social Fund, and co-ordinated by the European Trade Union College (ETUCO), an agency of the European Trade Union Congress (ETUC). The project ran from November 2001 to February 2004. The work described here was carried out in the ‘Computer-Mediated Distance Learning’ (CMDL) strand, one of two main strands of work within the project. The strand comprised a tutor-training course that prepared experienced trade union educators subsequently to deliver fourteen distance-learning courses, seven ‘national’ courses and of particular interest here, seven ‘transnational courses’. The transnational courses brought together a pair of trade union educators from trade union confederations in different countries to design and implement a course on a topic in the broad area of the ‘new economy’. Participants were similarly drawn from each pair of countries.

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1In the event, only six national courses were delivered.

2The country pairs were Austria–Italy, France–Spain, Italy–France, Italy–Spain, Portugal–Spain, Sweden–Denmark, UK–Denmark.
Our analysis is based on data collected as part of the project evaluation which aimed to identify tools and practices associated with effective learning. The evaluation design was informed by Orlikowski’s (1992, 2000) application of Giddens’ (1984) structuration theory in the field of information systems. Structuration theory aims to reconcile those accounts of human action that offer structural explanations and those which foreground the autonomous agency of individuals. Briefly, social structures, in this case instantiated as patterns of technology use in distance-learning events, are conceived as being created by human action while simultaneously enabling and constraining those actions. This process is mediated by an actor’s interpretive schemes, norms shared with other actors, and the facilities or resources available. Hence the Dialog On project evaluation paid particular attention to the processes by which tutors and participants constructed and reproduced a social and technological learning environment, and the ways in which that environment simultaneously enabled and constrained learning activities. The discussion below highlights these processes in the tutor-training course and in the seven transnational courses (one of which is presented in detail, and the others in summary).

Research approach and methods

Each transnational course was treated as an independent case study. Participants completed an initial self-profile covering age, gender, knowledge of languages (spoken, reading and writing), union position and responsibilities, prior experience of transnational trade union collaboration and prior experience of both trade union and distance education. At the end of the course, participants were asked to complete an evaluative questionnaire in which they rated views on the course, materials, expectations of technology, experiences of collaboration online and expectations of the use of outcomes. The questionnaire included open-ended questions inviting participants to give a more detailed view of what they liked about the course and any suggestions for improvement. The online activities were analysed quantitatively, with information collected on distribution of conference contributions temporally, by participant and within sub-conferences (usually corresponding either to particular sub-tasks or work allocated to sub-groups). Course tutors were asked to complete an evaluation questionnaire, gave presentations of their experiences at an end-of-project conference and discussed issues raised at an evaluation workshop designed and attended by the authors. Data gathered were assembled into a common format site summary containing both qualitative and quantitative data.

The following gives an overview of the tutor-training course and presents data from the evaluation of one of the transnational courses, in some detail, and summary findings from the remaining transnational courses. As negotiating complex boundaries proved essential to the success of this type of networked transnational education, we pay particular attention to these boundaries and mechanisms for addressing them.

Salient boundaries in the transnational course described below were identified both from these case summaries and from the full conference archives. Boundaries were identified where course tutors and/or participants reported expecting, experiencing or observing difficulties in communication with or between groups of participants, and attributed these to some form of discontinuity. We have attempted to identify examples of both designed and emergent practices and artefacts which either were reported by tutors or participants as crossing some form of discontinuity, or where inspection of site summaries and conference archives supported such an interpretation.

Training trainers – designed practices and artefacts

As part of the preparation for the courses, all of the trade union educators who would serve as tutors for the subsequent transnational courses participated as learner-participants in a preparatory ‘training trainers’ course. The training was designed to mirror the planned course structure for the subsequent courses and to immerse the two tutors a similarly blended learning experience. The concept of boundaries as both potential barriers and enablers was not explicitly addressed although experience from a previous project in the sector had suggested that focusing on the social and organisational aspects of forming communities was a necessary precursor to bridging linguistic and cultural boundaries. (Creanor & Walker 2000). Among the tutors and project managers, the significance of supporting the crossing of linguistic boundaries was well understood from previous projects. Failure to find a way of supporting communica-
tions between different language speakers effectively renders transnational learning impossible. In residential sessions, well-understood methods were used including simultaneous interpretation and the translation of presentations, activity sheets and other documents. The interpretation booths, headsets and associated electronic gadgetry and the translated documents were essential to supporting the formal residential activities. Informal interactions always form an important part of learning events, and bi-lingual participants acting as informal bridges during social exchanges.

Techniques for supporting cross-language communication online were rather less well developed. The technical platform chosen for the project was the First Class conferencing system. This provides a very flexible conferencing platform allowing multiple arrangements of folders, conferences and participants, the management of which can be delegated to tutors. Differing configurations of these can be applied to different learning situations, and importantly can be improvised in response to emerging learning requirements. A further important factor in choosing First Class was the ready availability of a client (and a web interface) with interfaces in most major languages. Tutors were prepared for the challenge online through sessions on the effective use of machine translation tools; demonstrations of different language versions of the First Class client; the concept of online group work and separate monolingual sub-conferences within a multilingual learning community.

A strong emphasis on communication skills had been designed into the training as it was recognised that text-based communication in online conferences could foreground the challenges. Guides on moderating discussions, communicating online and transnational communication were developed and tools including simulated conferences with examples of ‘good’ and ‘bad’ communication practice were used in training sessions with participants. Further support was given in the preparation of artefacts: a pre-defined format was developed for activity sheets which aimed to provide a clear outline of learning tasks, and guidance and practice on designing the virtual classroom to afford usability for course participants was given.

Informal feedback from the tutor-participants suggested that the blended approach was important in forming relationships, establishing group identity and nurturing an appreciation of cultural differences. The residential sessions integrated several activities, including participant presentations and group work, which were explicitly designed to encourage transnational collaboration.

As part of the tutor training, tutors worked on the preparation of the courses they subsequently delivered. The structure of these courses was predefined in the project proposal, which specified a blended approach comprising two residential workshops with an intervening distance-learning period using a First Class conference server as the core technical infrastructure. Within the general subject area, the tutors of each course had substantial freedom to define the content and target audiences as appropriate to their paired organisations. The topics covered and the target audiences for the courses differed substantially (e.g. training for European Works Council members in transnational collaboration; for trade union educators in the design of an e-learning unit on the subject of atypical employment; for union representatives negotiating on vocational training on new managerial competencies). The nature of the learning tasks carried out in both the residential and distance phases of the courses also differed a great deal.

The remainder of this section describes the boundaries identified in one of the courses in some detail, followed by a summary treatment of the boundaries identified in similar analyses of all seven of the transnational courses.

A single course: ‘changing competences of supervisory workers’

This course brought together 16 trade unionists (mostly elected representatives) from Italy and France to address the changing requirements for new competences among supervisory staff in the ‘new economy’. We have chosen this course to exemplify the issues of boundaries, as it provides a particularly clear example of how boundaries relate to each other and how the failure to deal with one boundary issue has consequences for other (in this case, congruent) boundaries.

The course ran over 14 weeks from March to June 2003. Of the 11 participants who completed the profile questionnaire, seven were male and four female. The participants were older, fairly experienced trade unionists, although with little or no experience of transnational working: seven were aged 40 or older; one
was aged under 30. Six held elected trade union positions at national or local level, one was a trade union employee and four held no union positions. Seven reported no prior experience of transnational trade union work, and only one reported more than 1 year’s experience. Perhaps surprisingly, and atypically, five participants reported at least some prior experience of computer-mediated distance learning. Participants had some familiarity with information technology: all reported themselves ‘confident’ or ‘very confident’ in the use of email, and all except one in the use of word processors. Eight participants reported themselves ‘confident’ or ‘very confident’ in using the Web, but only five in using the First Class conferencing system (unsurprisingly, these were all Italian participants whose union organisations had both adopted First Class as their standard communications platform). All participants were mother-tongue speakers of either French or Italian. One French participant reported himself ‘very confident’ in speaking and reading Italian and two Italian participants reported themselves ‘confident’ reading French, although less so writing or speaking. Overall five participants reported themselves confident reading and speaking in English, and several others reported lesser levels of confidence. English was not used in the design and delivery of the course.

The course began with a 5-day residential workshop which explored a wide range of issues associated with the changing nature of much professional work, and concluded with a 3-day ‘evaluation’ workshop. The intervening distance phase lasted 3 months and was organised around three tasks:

1. online introductions, in which participants completed templates outlining their own work and union situations (2 weeks). This activity also allowed participants to demonstrate that they had been able access the conferencing server on returning from the residential workshop;
2. production of a document identifying issues associated with professional competences (4 weeks);
3. production of a document exploring possible interventions by trade unions (6 weeks).

Tasks two and three were carried out in three working groups, each with a dedicated conference area to work in. While these were also available to other participants, it was not expected that they would contribute regularly. Two of these groups, in effect, worked within linguistic and national boundaries. One group (‘groupe Italie’) was formed from Italian participants, working in Italian; one group (‘groupe France’) likewise was comprised of French participants working in French. In the third group, ‘groupe Europe’, participants’ language skills reduced the severity of the boundary (although did not entirely remove it) so that Italian and French participants worked together. The design of this task required participants to work in parallel with the other two groups but with a specific remit to look at the issues at a European (rather than national) level, hence also reducing the significance of differences between national industrial relations systems.

Figure 1 summarises the volume of communication during the online phase of the course in each of the course conferences, highlighting some of the communication patterns. Throughout the course, the ‘groupe Italie’ conference was used moderately (a total of 70 messages were posted), the ‘groupe Europe’ less so (52 messages) and the ‘groupe France’ group barely at all (19 messages). The course-wide conference had 52 messages posted, primarily from French participants, and was used very little in the second half of the online phase. These patterns reflect three boundaries identified by the course tutors and reported in the final project conference, and summarised in Table 1.

The language boundary was foreseen and prepared for through the selection of client software and the

4 Although it should be noted that experienced transnational trade union educators are sceptical of self-reported language competences.
organisation of group working within and between language groups. The general congruence of the national and linguistic boundaries was similarly addressed through the organisation of the group working. The plans for the course were, although, disrupted as unforeseen difficulties resulted in the cancellation of the First Class training in the first residential workshop. While the Italian participants were already familiar with the system, which is in widespread use in the two Italian trade union confederations involved, it was new to the French participants. In the absence of training they resolved the problem by choosing to work with the e-mail package with which they were already familiar (MS Outlook). Consequently, as they were using different communications platforms, cross-border collaboration was limited during the distance phase of the course. The failure to deal with the technological differences reinforced the linguistic and geographic boundaries within the course. One of the tutors referred to these problems as one of differing ‘technological cultures’.

Despite the difficulties during the distance phase, however, there was clearly value to participants in the cross-border dimension of the course. All of the respondents to the post-course questionnaire (7/16) either ‘agreed’ or ‘agreed strongly’ with the statement that the course had been useful, and commented that the opportunity to learn and exchange experiences with colleagues from the other country had been valuable. The national distinction persisted, however, with all participants reporting that they ‘agreed’ or ‘agreed strongly’ that they expected to continue working with participants from their own country, although 3/7 reported that they were ‘unsure’ whether they would continue working with course participants from the other country.

### Boundaries in transnational courses

The above example illustrates in some detail the occurrence of boundaries in one of the transnational courses. Table 2 summarises the most pronounced boundaries reported in the other blended courses in the project.

The following summarises boundaries encountered across the courses:

- **Language**: the most obvious and significant boundary was that of language, as the courses were designed to bring together learners from two countries with different mother tongues. The blended design of the courses placed different emphases on spoken and written language skills during the residential and distance phases. Many of the tutors and participants reported language as the out-

### Table 1. Tutor reported boundary issues

<table>
<thead>
<tr>
<th>Boundary type</th>
<th>Issue</th>
<th>Planned boundary methods</th>
<th>Observed boundary events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistic</td>
<td>Italian/French-speaking group</td>
<td>Practice: group working (monolingual/national) and bilingual/European</td>
<td>Practice: group working (monolingual/national) and bilingual/European</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Artefacts: online conferences for groups; multilingual software client</td>
<td>Artefacts: online conferences for groups; multilingual software client</td>
</tr>
<tr>
<td>Cultural</td>
<td>Differing political, legal and contractual contexts in the two countries</td>
<td>Practice: group working (monolingual/national) and bilingual/European</td>
<td>Practice: group working (monolingual/national) and bilingual/European</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Artefacts: online conferences for groups; multilingual software client</td>
<td>Artefacts: online conferences for groups; multilingual software client</td>
</tr>
<tr>
<td>Technological</td>
<td>Italian participants were familiar with First Class; the French were not</td>
<td>Practice: First Class training</td>
<td>Practices: national/linguistic groups used technologies with which they were already familiar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Artefacts: First Class</td>
<td>Artefacts: First Class; Outlook</td>
</tr>
<tr>
<td>Course</td>
<td>Title/Objective</td>
<td>Target Audience</td>
<td>Distance Phase Organization</td>
</tr>
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<tr>
<td>CISL-CFDT</td>
<td>New competencies for professional and managerial staff in the new economy</td>
<td>Professional staff active in their unions</td>
<td>Three tasks (a 4th task ‘online discussion’ was omitted because of lack of time): Individual icebreaker + 2 group tasks; Two national groups + 1 transnational</td>
</tr>
<tr>
<td>CFDT-CC.OO</td>
<td>Using Information Society Tools for European Trade Union Training</td>
<td>National and sectoral trade unionists with responsibility for trade union training and international affairs.</td>
<td>Four working groups (two by language and two subject)</td>
</tr>
<tr>
<td>CGIL-CC.OO</td>
<td>Trade union representatives in negotiating vocational training – activities and competences</td>
<td>Officers dealing with bargaining issues relating to vocational training</td>
<td>National groups One individual phase (info gathering – establish document repository); One discussion phase</td>
</tr>
<tr>
<td>CGTP-UGTE</td>
<td>Trade Unions and the Challenges of the New Economy</td>
<td>Trade unionists</td>
<td>Four mixed groups, devised own work programmes in producing cases; Document on new economy; Training materials on four case studies</td>
</tr>
<tr>
<td>LOS-NNF</td>
<td>Trade union communication and co-operation in a food industry working in multinational corporation environment</td>
<td>Union representatives in specified MNCs</td>
<td>Two company-based work groups; Weekly chats; Study visit</td>
</tr>
<tr>
<td>ÖGB-CGIL</td>
<td>Atypical employment and regulation of labour and social law in Austria and Italy</td>
<td>Trade union employees &amp; reps; workplace reps</td>
<td>Two language groups (create national e-learning scripts)</td>
</tr>
<tr>
<td>TUC-LOD</td>
<td>Social partnership</td>
<td>Experienced union representatives</td>
<td>Three phases: 1 – individual profiles and icebreaker; 2 – Four groups (two UK, two DK) investigating national models of social partnership; 3 – Three groups (one DK, two mixed) produce models of social partnership</td>
</tr>
</tbody>
</table>

*This course was not completed in time for the final Project Evaluation Workshop, so final outcomes are not reported here.*
standing unresolved difficulty, particularly during the distance-learning phase of the course;

- **Industrial relations systems**: although the courses were held against a background of an emerging European level of industrial relations, the differences in legal and political frameworks in which trade unions operate remain substantial. In one course, for example, the tutor and some participant evaluations remarked that the course would have been more useful to them had the course brought them together with colleagues from a country with a more similar industrial relations system;

- **Temporal**: the organisation of the learning experience as a time-limited course binds together the participants in time. Within the course, the residential sessions bind participants more precisely. Time emerges as an issue more frequently during the distance learning phases, however. While asynchronous conferencing relaxes some time constraints, allowing people to participate in the courses either from home or the workplace, participants frequently reported difficulty in sustaining participation throughout the distance periods as other work commitments, for example, made it difficult or impossible for individual participants to work as envisaged in the designed tasks;

- **Technological**: participants working in different contexts make use of different communications technologies. The courses sought to overcome these boundaries by requiring all participants to use a common conferencing system and training participants in its use. While a minority of tutors were unhappy at using a system different from their national system, this proved generally successful, with the exception of one course at which the training in First Class was unavoidably cancelled.

These reported boundaries do not exhaust the potential barriers to effective collaboration. Three further boundaries which were not explicitly reported by tutors or participants, but which might reasonably be considered to exist are:

- **Geographic**: the transnational nature of the courses inevitably created geographic boundaries, as course participants were unable to meet face to face. Given the nature of the project this barrier may have been rather too obvious to be reported. In two courses, however, ‘clusters’ of participants met face to face during the ‘distance’ phase, where they were close enough to do so;

- **Community of practice**: participants in the courses came from varied communities of practice. Most immediately visible is the difference between members of the trade union educators’ and learners’ communities of practice, although others might include boundaries between trade union members and employee CoPs;

- **Organisation**: in all cases, participants from different countries were from different trade union organisations. Participants within particular countries may also be members or employees of different trade union organisations. Trade union organisation varies a great deal between the European countries represented in this project. As well as differences between industrial sectors, some countries (Austria, UK) have a single national trade union confederation while others have separate confederations depending on type of employment (Denmark, Sweden) or political history and affiliation (France, Italy, Portugal, Spain). Organisational issues were not reported as posing a particular problem in any of the courses, suggesting either that the organisational boundaries were well negotiated, or possibly that identification of issues at the organisational boundary was conflated with other, coincident, boundaries and so difficulties were either hidden or attributed to other causes.

Overall, participants generally reported that the courses had been useful, in many cases reporting that the opportunity to work with colleagues from another country had been a central benefit of the course. However, the extent to which effective transnational collaboration was felt to have happened online was rather lower than during the residential sessions, where simultaneous translation was available. The quality of the course outputs (including variously reports, plans for future distance learning courses and presentations) was generally reported to have been high by both course tutors and participants,\(^5\)

\(^5\)An important success criterion identified by the designers of several of the courses was that outputs of the course would be used by participants in subsequent trade union work.
suggesting that, in general, and despite the problems reported above, the combination of artefacts and practices for crossing boundaries were partially effective.

**Discussion and conclusions**

This discussion highlights the range of boundaries identified in the courses delivered in this project, and the ways in which (although not originally conceived in terms of boundary practices and artefacts) the ‘training trainers’ course helped to prepare tutors for dealing with boundary issues in the subsequent delivery of the ‘transnational courses’. While needing further development, we argue that this approach to analysing communication in networked learning events will prove fruitful. Some initial issues can be identified from the material presented here.

**Boundaries are related.** The boundaries seen here are not independent of each other and have tended to coincide along national contours. Hence some boundary artefacts and genres supported communications across multiple boundaries such as the asynchronous conferencing, which supported communication across geographic, temporal, linguistic, organisational and community of practice boundaries. The breakdown of the practices intended to cross one boundary may have consequences for the ability to cross other boundaries.

**Boundaries are distinct.** Although the boundaries follow similar contours, they do not necessarily follow them identically. This can offer particular opportunities for the organisation of learning, as for example in the establishment of transnational working groups where language boundaries can be partially bridged by participants with second-language skills. In a variation on this theme, one course organised working groups such that each had a ‘local translator’ capable of translating key contributions into the language of their own working group.

**Artefacts and genres.** Artefacts, whether activity sheets, collaboratively produced documents or the computer conferencing platform, have evidently been enrolled in boundary crossing. At the highest level of arranging communicative actions – that of the blended-mode course itself – we may be seeing the emergence of a genre of residential-distance-residential blended mode courses originally designed in an earlier project and implemented again here. At an intermediate level, the conferencing system and its arrangements of sub-conferences, messages, threads and so forth can be seen as a genre system (Erickson 2000). Not all of these intended practices were successful, however. While the ‘training trainers’ course looked at machine translation on the web, this was hardly used either by tutors or course participants in practice.

**Designed and emergent artefacts and practices.** The relatively novel nature of the courses in the context of trade union education has led to tutors importing and adapting artefacts, such as activity sheets, settings for use online. The time-limited nature of these kinds of course means that there is less opportunity for new communicative practices and artefacts to emerge from the course participants, although participants’ agreement in one course to use a ‘chat’ facility regularly at specified times (a practice which continued beyond the life of the formal course itself) suggests the potential.

**Implications for future research and practice**

The approach to understanding networked learning events outlined here has implications for both practitioners and researchers. Briefly, we suggest that for practitioners, the focus on communicative practices and boundaries may help to ‘unpack’ complex situations and to design tools and techniques specifically to manage this complexity and may help tutors to prepare for learning events, particular in the types of complex environments described here.

For researchers, the use of genre analysis in online situations may provide a window on learning processes, both in participant reaction to designed artefacts, and through the study of emergent genres. Further, it suggests a line of enquiry into how the design of particular artefacts and methods might afford opportunities for particular types of learning. Both researchers and practitioners may benefit from the identification of patterns of effective artefacts and their use in particular learning contexts (Goodyear et al. 2004).

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6The stability of this top-level genre is not clear; however, one of the issues identified by tutors in the project evaluation workshop was that there had not been enough opportunity within the course to experiment with alternative ways of using ICT in the organisation of courses.
Future directions for research in transnational trade union e-learning can build on the analysis presented here along with the notion of working class learning networks (Sawchuk 2003) through which working class people’s informal learning about computers is frequently mediated, and with research into the changing information and learning needs of trade unionists as they move through trajectories of trade union involvement, perhaps in ways analogous to some professional careers (Star et al. 2003).

References


