



**EU Fourth Framework  
Targeted Socio-Economic Research**

**Work experience  
as an education and training strategy:  
new approaches for the 21st century**

**(WEX21C)**

**FINAL REPORT**

Contract n° SOE2-CT97-2025 (DG12-SOLS) \* Project n° SOE2-CT97-2025  
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**Title: WORK EXPERIENCE AS AN EDUCATION AND TRAINING STRATEGY:  
NEW APPROACHES FOR THE 21st CENTURY**

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## ABSTRACT

The proposal for this research project was developed in the context of the changing and future nature of work and the innovative role of learning organisations ‘as clear institutional differentiation diminishes and learning and knowledge become possible in different contexts’ (TSER WEX21C Research Team 1997). It was also the *elusiveness* of the true learning potential of work experience that led to the proposal to explore work experience as an informal (work-based) context for learning under the title of *Work Experience as an Education and Training Strategy: New approaches for the 21<sup>st</sup>. century*. Research partners were from the United Kingdom (UCL/Institute of Education, University of London), Sweden (Kristianstad University), Ireland (Dublin City University), Spain (University of València), Denmark (Copenhagen Business School) and Hungary (National Institute of Vocational Education).

The research has focused on the 16-19 age group and has examined the purpose, the assumptions about learning, the practice and outcomes of work experience in the light of changes in the European labour market and trends in workplace requirements and organisation. Innovative approaches to work experience have been analysed in a series of case studies and the methodology has involved researchers, enterprises and schools working together. Project papers and studies are listed in Annex III as the Technical Report and are being entered - through ‘KnowNet’ - on to a project database which will also provide access to other relevant material and increasing interactive capability.

The project has analysed how students, whether engaged in general or vocational education and training programmes, learn and develop through work experience. Studies of work experience have tended not to address this issue but have perpetuated the idea that the work contexts within which work experience takes place are stable, unchanging, transparent environments in which students can easily learn and develop (Griffiths and Guile 1999). The project has therefore addressed the concept of ‘context’ as the starting point for considering learning through work experience, arguing that any analysis of work experience should take account of, first, different types of context (eg, education and work – whether knowledge ‘rich’ or ‘poor’), different strategies within contexts and the influence of context on the process of learning; second, the extent to which students have to learn how to ‘negotiate’ their learning during work experience; and, third, the extent to which students must be supported to relate formal and informal learning, given that knowledge is unevenly distributed in workplaces. On the basis of this analysis, a typology of five models of work experience has been developed which embodies changing responses to policy, to the learner, to skills needed and to pedagogy and reflects the influence of different economic, technological and social factors prevailing within European countries as well as new ideas about learning and development. The fifth model may provide the basis for a more productive and useful relationship between formal and informal learning since it addresses how work experience can enable students to take explicit account of the learning which occurs within and between the different contexts of education and work. (Guile and Griffiths 2001)

## 1. EXECUTIVE SUMMARY

1.1 The project has focused on the 16-19 age group and has examined the purpose, the assumptions about learning, the practice and outcomes of work experience in the light of changes in the European labour market and trends in workplace requirements and organisation. Innovative approaches to work experience have been analysed in a series of case studies and the project has analysed how students, whether engaged in general or vocational education and training programmes, learn and develop through work experience. Project papers and studies are listed in Annex III as the Technical Report and are being entered - through 'KnowNet' - on to a project database which will also provide access to other relevant material and increasing interactive capability.

1.2 The formal objectives of the project were, in summary.

1. to undertake a European policy study and review of work experience.
2. to develop a common framework and terminology for understanding work experience.
3. to undertake case studies of innovative work experience partnerships.
4. to compare outcomes and develop transferable models.
5. to develop European quality criteria and a quality framework for work experience.
6. to undertake an active dissemination programme.

1.3 Studies of work experience have tended not to address this issue but have perpetuated the idea that the work contexts within which work experience takes place are stable, unchanging, transparent environments in which students can easily learn and develop (Griffiths and Guile 1999). The project has therefore addressed the concept of 'context' as the starting point for considering learning through work experience, arguing that any analysis of work experience should take account of, first, different types of context (eg, education and work – whether knowledge 'rich' or 'poor'), different strategies within contexts and the influence of context on the process of learning; second, the extent to which students have to learn how to 'negotiate' their learning during work experience; and, third, the extent to which students must be supported to relate formal and informal learning, given that knowledge is unevenly distributed in workplaces.

1.4 On the basis of this analysis and a series of policy and case studies, a typology of five models (described in Chapter 3 as *traditional, experiential, generic, work process and connective*) of work experience has been developed which embodies changing responses to policy, to the learner, to skills needed and to pedagogy and reflects the influence of different economic, technological and social factors prevailing within European countries as well as new ideas about learning and development. The fifth model may provide the basis for a more productive and useful relationship between formal and informal learning since it addresses how work experience can enable students to take explicit account of the learning which occurs within and between the different contexts of education and work. (Guile and Griffiths 2001).

1.5 This new approach to work experience - the connective model - is based upon the idea of a 'reflexive' theory of learning which involves taking greater account of the influence of the context and the organisation of work upon student learning and development, the situated nature of that learning, the scope for developing 'boundary crossing' skills and the development of new knowledge and skill. It also involves developing new curriculum

frameworks which enable students to relate formal and informal and horizontal and vertical learning in order to support ‘boundary crossing’ and to develop the intellectual basis for criticising existing work practices and envisioning new possibilities. From this perspective, learners need to be encouraged to conceptualise their experiences in different ways and for this conceptualisation to serve different curriculum purposes.

1.6 The term, *connectivity*, defines the purpose of the pedagogic approach which would be required in order to take explicit account of the vertical and horizontal development of learners. Supporting students to understand the significance of these two dimensions of development constitutes a pedagogic challenge, albeit a rewarding one, for teachers in educational institutions as well as those with responsibility for development in the workplace. It involves encouraging students to understand workplaces as a series of ‘interconnected activity systems’ (Engeström forthcoming) which consists of a range of ‘communities of practice’ (Lave and Wenger 1991, Wenger 1998). In addition, it involves teachers and workplaces in appreciating that work experience provides a range of very different ways of learning compared with how students normally learn in school (Guile and Young forthcoming). Consequently, learners, teachers and workplaces need to ensure that work experience provides an opportunity for learners to ‘learn to negotiate how they learn’ in workplaces since this is critical to effective workplace performance (Beach and Vyas 1998) as well as to learn the new capabilities that are gradually being required in ‘knowledge-based’ workplaces (Guile and Fonda 1999).

1.7 The project demonstrates how learners will need to be supported to appropriate concepts acquired through vertical development, and which are external to the context, to mediate the relationship between their formal programmes of study and, for example, trends in labour and work organisation. They not only have to develop the capacity to participate within workplace activities and cultures; they must also learn *how to draw upon their formal learning* and use it to interrogate workplace practices. They will also have to be encouraged to recognise that the practice of work experience is not simply a matter of acquiring forms of knowledge and skill that are products of previous individual and collective activity. Immersion in practice or enculturation in a ‘community of practice’ contributes to the transformation of both practice and the ‘community’.

1.8 These ideas about learning through work experience also reflect the early engagement of the research team with the following issues. The first is that ‘host’ organisations should consider how they can provide ‘environments for learning’ (or opportunities to participate in ‘communities of practice’) if they are to maximise the learning potential of these activities for themselves and for learners. This implies a reappraisal of human resource development strategies, as well as management and developmental practices, by ‘host’ organisations and of pedagogic practice by teachers, since students and workers have to learn how to enter unfamiliar territory and work collaboratively in different communities of practice. Second, the implications of this re-conceptualisation of work experience are evident in relation to the question of the ‘transfer of learning’. The concept of transfer has traditionally rested upon the idea that learning simply consists of acquiring knowledge and skill in one context (a workplace) and reapplying it in another (another workplace). This concept lies at the heart of the EU debate about key skills and key competences.

1.9 The main problem with this conception of skill and transfer is that it neglects the influence of context, resources and people upon the process of learning and, as Engeström *et al* (1995) argue, misconceives the process of transfer. Once workplaces are viewed as ‘activity systems’,

with their own divisions of labour, rules and procedures, it is possible to replace the notion of 'transferability' with the concept of 'boundary crossing'. This reflects the recognition that students engage successfully in different tasks and in different contexts by demonstrating what Reder (1993) has referred to as 'polycontextual skills'. Such an approach takes account of the fact that learning is a process both of self-organisation and enculturation (Cobb 1999) and that these processes occur while individuals participate in cultural practices, frequently while interacting with more knowledgeable others in the workplace 'zone of proximal development'.

1.10 At one level, learning through work experience 'calls for the formation of new mediating concepts' that assist learners in developing the forms of social interaction which support dialogic problem solving. At another level, it involves learners in functioning as 'connective specialists' and learning how to develop new goals, new actions and new strategies in order to grasp the connection between different activities.

1.11 The research team discussed the idea of 'innovation' on the basis that work experience and its potential for learning could be a vehicle for taking forward new ways of thinking about and addressing the challenges set by future work and change. Thus, the project's methodological resource had to be relevant to the very different contexts in which innovation was being analysed and the concept of *innovation within context*, which was meant to recognise considerable and necessary variation within an overall framework, was therefore developed. The case study approach is informed by these considerations.

1.12 Thus, there are not only different educational contexts in which work experience may be offered - within general education, within school-based vocational courses and within school- and work-based apprenticeship -but also different understandings about how context influences the development of practice. Moreover, work in the project's case studies included testing out the role of the teacher/trainer as an effective mediator between and within different contexts of learning and an exploration of the impact of theory on certain aspects of practice as a catalyst for learning. The research team worked on the principle that the pedagogic practices of mentors and trainers in workplaces had a significant impact upon the knowledge developed and acquired by students. An important feature of the research was the identification of three case studies in each of the six partner countries which were selected in the light of the theoretical underpinning of the project. The 18 case studies varied considerably but they were all activities which possessed innovative features within their own contexts. The project sought practitioner input so that its analyses were fully grounded, in particular in exploring questions which arose for the research team in its examination of learning theory (for example, the role of the 'mediator' in acting as a bridge or an interpreter between contexts, providing theoretical or practical insights at significant points in the experience). Using the work experience typology, the project was able to identify areas of 'innovation within context' through the case studies.

1.13 The project's policy analyses confirmed the difficulties experienced by policy makers in interpreting change and setting new developments in motion. The particular policy difficulty of adequately addressing complex learning issues, particularly those involving different contexts of learning, was evident. All countries are experiencing demographic change, the effects of technical innovation and globalisation on jobs and an increasingly delayed process

of insertion into the labour market. Faced with this, VET systems in all the partner countries have been undergoing reforms and attempts to align training with current and future demands of labour markets for flexible workers with good levels of general education and ‘transferable skills’, as well as relevant technical skills and knowledge. The Spanish policy analysis detected a difficulty central to the concerns of the TSER project: the effect of an instrumental perspective of VET and work experience which means that, in the response of both theoretical and practical training to labour market demands, the emphasis on learning and personal development may be neglected or assumed to be an implicit feature of work experience.

1.14 The policy analyses generally show that a shortage in the number and quality of placements is an increasing problem, thus forcing a search for alternatives. The problem of quality was described variously but there was agreement in attributing low quality to low levels of training of workplace instructors and supervisors and lack of industrial experience of school teachers. However, the project has developed, *inter alia*, a new approach to quality in work experience (see Chapter 3) which represents a considerable step forward from prevailing ‘bureaucratic’ and ‘mechanistic’ approaches. It provides a means of mapping an integrated approach to quality which is based on learning considerations and which requires explorations well beyond an exchange of information about the ‘quality’ of learning: it opens ways of supporting and encouraging greater innovation in practice.

1.15 Another major problem lay in the inadequately defined roles and responsibilities of education and business partners in organising and delivering work experience. There was a widely expressed need to strengthen the links between these partners, however much those links varied between countries. The Swedish policy study in fact questions how far the general wish for education-business links is actually expressed in practice and notes a widening gap between the two.

1.16 The project’s policy studies have consistently shown the barrier of the academic/vocational divide which persists in different manifestations and which continues to impinge upon the status and functions of work experience. There is discernible a general concern to increase the esteem of occupational and vocational learning in the face of increasing participation in university education and, interestingly, something of a trend to regard higher education as part of the school to work transition process. In a context of ‘qualification drift’, the implication of the policy and other analyses in this TSER project is that the function of work experience in post-16 and, indeed, in higher education will benefit from re-thinking. The Hungarian policy analysis reveals an urgent need for those continuing their studies at higher levels to get ‘hands-on’ training and to apply their knowledge in practice. Care needs to be taken in this in not reifying old models of work: employers may be demanding and needing higher level skills and fewer intermediate and basic skills (although this is constantly debated) but they also need the ‘polycontextual’ skills that are a feature of boundary crossing and working in less hierarchical organisational contexts.

1.17 A particular challenge presented by the policy analyses is that common problems, such as the multifunctionality of work experience and the challenge of curriculum and pedagogical issues, are addressed – naturally - in quite different ways. Some of the differences are cultural; others may arise from a use of *language and terminology* which conveys different meanings. A particular case in point concerns the question of *learning outcomes*. The UK policy analysis noted that policy emphasis on outcomes and qualifications was in effect

shifting the focus from the learning process. The analysis concluded that a narrow focus on outcomes might be counter-productive in emphasising the outcome at the expense both of the process of learning and of the relationship between different types of learning (*ie*, formal and informal). Thus, the question of improving learning as such through informal learning will continue to be difficult for policy makers. Other policy analyses did describe a less instrumental approach to 'learning outcomes' which allowed questions concerning the nature and extent of learning to be addressed more thoroughly. In some respects, for example, Ireland was focusing on outcomes with a view to ensuring that the processes were achieving their pedagogical purposes.

1.18 Moving away from instrumental or functional approaches will be necessary if work experience is to be viewed as a means of developing an involved sense of responsibility. In this sense, the dominant interpretation of 'transfer', which stresses 'the degree to which a behaviour will be repeated in a new situation', is insufficient. The more relevant concept of consequential transitions is necessary, one which recognises an extra dynamic in the process of exploring new territory in which pre-learned responses and solutions are unavailable and which involves the construction of new knowledge, identities and skills through transformation (rather than the application or use) of something that has been acquired elsewhere. A transition of this form involves a notion of progress and is best understood as a developmental process.

1.19 It is clear that lessons from past policy and practice need to be understood otherwise policy makers are in danger of reinventing what has been done in the past. In future, it will no longer be appropriate to view the purpose of work experience in knowledge-based companies as developing a technical competence in 'something'. It will increasingly have to be viewed as a means of developing that involved sense of responsibility that enables young people to add value by knowing how to manage existing work processes effectively and, wherever possible, working in 'communities of practice' to transform existing work practices.

1.20 The research shows is that it is possible to view the various models of work experience, noticeable to varying degrees in all European states, as embodying changing responses to policy as well as to the learner, to skills needed and sometimes to pedagogy. In this sense, the idea of 'innovation' is itself multi-faceted.

1.21 Thus, the (traditional) model of the 'bridge into work' provides in most European countries a role for formal learning in acquiring knowledge and skills and a role for work-based learning in learning tasks.

1.22 There are also attempts to develop this traditional model in response to the need for students to acquire less occupationally specific knowledge and skills and more generic knowledge and understanding about the content of work (an experiential model).

1.23 With the growth in interest of 'key skill' development, there is also apparent an attempt to develop another (generic) alternative to the traditional model which emphasises the use of work-based experience to acquire and accredit learning outcomes. Formal learning has a very limited role here, for competent work-based activity is all that is required.

1.24 The ‘Work Process’ approach is an attempt to address the omissions of the latter two approaches and to reassert the key role of the teacher or trainer. Work-based learning is seen as an opportunity to develop work process knowledge and the role of formal learning is to support that opportunity.

1.25 Finally, there is – if not an innovation at systems level – an interest which is innovative at the ‘periphery’ in developing a ‘connective’ model of pedagogy and learning in work-based contexts. This model integrates and goes beyond the principles of reformist, alternative and dualist models and makes a fundamentally different assumption about learning and development, accepting that learning is ‘situated’ and involves the use of concepts which may or may not be external to the context.

1.26 The approach offered through the typology and modeling of the project is important because, at policy level, there has been a failure to press for new theoretical and conceptual frameworks for relating learning in work-based contexts to formal education and training. It is not possible to reform the ‘launch’ model of work experience by trying to reform the content of the formal (VET) component of learning alone. Those managing change should therefore beware of the phenomenon of ‘innovation without change’, the capacity of a system to accommodate the rhetoric of reform within the culture and practice of the status quo.

1.27 Overall, this project has discerned a poor relationship between policy and practice, a lack of clarity in relation to the aims and objectives of post-16 work experience, its delivery (in particular, a lack of clarity in relation to workplace supervision, mentoring and teaching, the availability and quality of placements), a lack of evidence in relation to learning, the role of employers (the quality of relationships between employers and education, nature of qualifications sought, degree of attention to changing nature and modes of work).

1.28 Whereas the project’s overall policy analysis confirms the renewed emphasis (public or rhetorical) upon learning in the workplace, it is apparent that policymakers in most EU countries continue to tackle this objective in one of two main ways. The first assumes that the main purpose of work experience is to help young people to learn how to reproduce pre-existing activities, rather than to encourage them to learn and develop by ‘putting things’ into different contexts. The second assumes that learning in the workplace is best supported through involving young people in planning a work experience placement and managing and evaluating the learning through the use of statements about ‘learning outcomes’. As a result, apart from some developments associated with the TSER Project on Work Process Knowledge, the push to make work experience more widely available to young people has tended to address new issues about skill development by relying on old models of learning in the workplace.

1.29 Work experience can no longer be viewed as developing a technical competence in ‘something’ nor as providing an opportunity to use ‘learning

outcomes' as though they capture in some way the authentic knowledge/skill developed by a young person in a specific situation. Increasingly, work experience will have to be viewed as a means of developing an involved sense of responsibility. Thus, the project concludes that the dominant interpretation of 'transfer', which stresses 'the degree to which a behaviour will be repeated in a new situation', is insufficient. The concept of consequential transitions is necessary.

1.30 These conclusions of the project suggest (below) some overarching recommendations for consideration at a European level. They reflect the concerns underlying the original research questions (see Chapter 2) posed in the project and they connect with the broad questions of European frameworks, key qualifications and new skills increasingly concerning EU policy makers.

1. In order to facilitate current and future collaborative research between university researchers in partner member states, the terminology and concepts developed during the course of the research and exemplified in the project's typology should be analysed, tested and trialled during the course of other relevant research projects and developments.
2. The current policies of government, businesses and educational and vocational institutions in member states (towards work experience as an education and training strategy for the future) should be informed by what is known about learning as well as what is known about changes in work.
3. Businesses and educational and vocational institutions could practically respond - as learning organisations - to the challenge of the changing workplace and the likely demands of employment in the 21st Century by using and developing the project's connective model of learning through work experience.
4. The project's typology and the concepts and approaches which underpin it offer ways of connecting formal and informal contexts of learning which should be relevant in course development.
5. The concept and practice of 'mediation' between formal and informal contexts of learning are fundamental in achieving an effective relationship between classroom learning and workplace learning and can be developed by teachers and workplace educators/trainers in partnership.
6. The project's framework for considering quality allows for the identification, development and transfer of learning in way which goes well beyond the 'checklist' approach to quality issues. The framework should be developed in the school/workplace context.
7. The project's development of ways of connecting formal and informal learning arises from reflection on innovatory work taking place within different contexts. Change in educational institutions and in businesses in relation to education-business partnership innovation should take account of such innovation – often involving applications of the learning technologies at the 'periphery' –in the knowledge that 'innovation without change' is ubiquitous.

8. The successful transfer of innovations or good practice across European vocational education and training systems is difficult. This complexity should be accepted and an understanding of the need to develop 'boundary crossing' in the sense underlying the connective model of the project's typology should underpin future work in both EU and 'accession' countries.
9. The implications of this research for policy and practice at national, regional, business and educational institution level are significant. Policy making is constrained by time and political pressures, whereas 'applying' research results tends to take time, to involve patience, to expect change gradually over a long period. Policy makers may wish to take account of research but the political consequences of seriously doing so tend to mean that they do not. EU and national strategy should therefore explore the weaknesses in the interface between policy and research with a view to making the relationship more realistic, effective and productive, particularly in the areas for development revealed through the work of this project.

## 2. BACKGROUND AND OBJECTIVES OF THE PROJECT

2.1 The research has focused on the 16-19 age group and has examined the purpose, the assumptions about learning, the practice and outcomes of work experience in the light of changes in the European labour market and trends in workplace requirements and organisation. Innovative approaches to work experience have been analysed in a series of case studies and the methodology has involved researchers, enterprises and schools working together. The formal objectives of the project were, in summary.

1. to undertake a European policy study and review of work experience.
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6. to undertake an active dissemination programme.

2.2 The project has analysed how students, whether engaged in general or vocational education and training programmes, learn and develop through work experience. On the basis of this analysis, a typology of five models of work experience has been developed which embodies changing responses to policy, to the learner, to skills needed and to pedagogy and reflects the influence of different economic, technological and social factors prevailing within European countries as well as new ideas about learning and development. The fifth model may provide the basis for a more productive and useful relationship between formal and informal learning since it addresses how work experience can enable students to take explicit account of the learning which occurs within and between the different contexts of education and work.

2.3 The work of the project, whether relating to theoretical considerations, the European labour market, policy, the case studies or quality assurance, has involved periodic and intensive deliberation by the research team in order to track a coherent way through the complex and varying European contexts. Several research questions were formulated at the outset and these have been used in different areas of the work. The questions are listed below and were the beginning of a process of redefining concepts and ideas as the area of transfer and boundary crossing was explored through the research in more depth. Given the different backgrounds of the partners, several perspectives were taken into account in the process of research. These varied from psychology and curriculum studies to sociology and business studies. All, however, converged in the nature and scope of the learning processes in workplaces which people develop in the role of students. Despite the frequent challenge of working in this inter-disciplinary context, the research team felt that, overall, it benefited the work and that the questions of methodology and approach had to be addressed through clarity and transparency. Project papers and studies are listed in Annex III as the Technical Report and are being entered - through 'KnowNet' - on to a project database which will also provide access to other relevant material and increasing interactive capability.

### *Initial research questions*

*What common terminology and concepts can be developed during the course of the research - and in the context of the overarching questions - in order to facilitate current and future collaborative research between university researchers in partner member states?*

*What are the current policies of government, businesses and educational and vocational institutions in member states towards work experience as an education and training strategy for the future? Are such policies based on previous good practice or on futures analysis?*

*How are businesses and educational and vocational institutions practically responding - as learning organisations - to the challenge of the changing workplace and the likely demands of employment in the 21st Century? What models of work experience are being developed to address these issues? Do they reflect lifelong learning objectives?*

*What models of innovative work experience can be identified in selected courses in partner member states? What are the strengths and weaknesses of these models?*

*What features of the workplace environment are most helpful in developing flexible and core skills? What is the most effective relationship between classroom learning and workplace learning?*

*How can core/transferrable/flexible skills be developed and assessed through work experience? What are the most appropriate roles for the educational institution and the business in such learning assessment?*

*What criteria have been developed to judge the quality and effectiveness of current practice in domestic and European work experience? What success and quality criteria are appropriate for domestic and European work experience of the future across Europe?*

*What are the inhibitors and facilitators of change in educational institutions and in businesses in relation to education-business partnership innovation, with particular reference to work experience?*

*What economic, social and cultural factors facilitate or inhibit the successful transfer of innovations or good practice across European vocational education and training systems?*

*What are the policy implications of the research for policy and practice at national, regional, business and educational institution level?*

### 3. SCIENTIFIC DESCRIPTION OF THE PROJECT RESULTS AND METHODOLOGY

#### 3.1 Methodology

3.1.1 Most studies of work experience have insufficiently addressed the influence of different types of context (eg, education and work) on the *process of learning*. The methodology of such studies, action research, biography, etc. has led to a focus on learners' experience of work, and thus to a neglect of the influence of context upon learning, or to a markedly mechanistic consideration of this issue. Associated with this has been a failure to address the extent to which students need to 'negotiate' their learning' during work experience and to be supported in relating formal and informal learning, given that knowledge, and the knowledge embedded in work roles, is unevenly distributed in workplaces.

3.1.2 This project therefore addressed the question of methodology *ab initio* in its attempt to develop a methodology which would allow (i) the explorations to take account of the different contexts in which young people found themselves on work experience and the influence of those contexts on the process of learning and (ii) a rigorous approach which could be used flexibly in the differing conditions of member states, as the research partners explored the learning which occurred through work experience and provided data for analysis in the construction of a typology of work experience. Ideas from socio-cultural learning theory proved to be particularly useful in developing the project methodology.

3.1.3 The origins of socio-cultural learning theory lie in the work of Vygotsky (1978). By placing the idea of *mediation* at the centre of the learning process, Vygotsky reconceptualised learning as a 'complex mediated act' that took place in a *zone of proximal development*. The resulting triad involved the subject (the individual), the object (the task or activity) and mediating artifacts (eg, communication and information technologies, books) and the support of an experienced other, all of which emphasised that individuals could not be understood in isolation from their context and its enabling 'means' and that society could not be understood without taking into account the agency of individuals who use and produce those means. Vygotsky's ideas were extended by Leont'ev (1981) who drew a distinction between the idea of *individual action* and *collective activity*, between independent action and the complex relationship between the individual and the community. This relationship has been explored further by Lave and Wenger (1991) who have described a process of learning, referred to as 'legitimate peripheral participation', which enables individuals to acquire knowledge and skill and develop their understanding through contact with more experienced others. More recently, Engeström (2001) has argued that activity systems are characterised by diversity and dialogue and that the search for new meaning goes beyond the limitations of differing activity systems. Establishing dialogue between activity systems brings a new learning challenge in the collaborative construction of a meaningful 'object' - a *shared object*.

3.1.4 This work raised some important methodological questions for this study of work experience. The idea of *mediation* proved particularly productive in a study which was to take account of the way in which learners used cultural objects and experienced others to support and develop their understanding of the context of work and the relationship between the formal component of their study and the practical or informal experience gained in the workplace. The idea of the 'community of practice' also raised two important questions: how easily did learners (i) make the transition from one context to another and (ii) gain access to and operate in work contexts? The recurring assumption in most studies of work experience in both general

education and VET is that transition and access are accomplished *ipso facto*, an assumption which neglects the extent to which participating in a ‘community of practice’ can result in changes in identity as well as knowledge and skill and can also be highly problematic. The project’s explorations of learning theory emphasised further the importance of systematic inquiry into how far educational institutions recognised that when learners move between contexts (and when they are able to make ‘consequential transitions’), they have to develop the capacity to act as ‘boundary crossers’. This involves developing the capability of learning in ways different from those involved in formal learning. Some of these have been described (Beach and Vyas 1998) as ‘learning on the fly’, ‘learning by collaborating’ and ‘learning by observing’. The other object of inquiry illuminated by the exploration of learning theory was how far educational institutions recognised that ‘host’ organisations needed actively to provide opportunities for learners to observe, discuss and try out different practices with members of the ‘community’ which they had temporarily joined. Finally, an important mode of inquiry was needed to address the idea of dialogue within and between activity systems, opening up many issues about the extent to which educational institutions and workplaces encouraged learners to conceptualise their experiences in different ways and allowed these conceptualisation to serve different purposes, such as enabling learners to develop a holistic understanding of work, to contribute to work practices and to work collaboratively to transform practice. In relation to educational institutions, inquiry would need to establish the extent to which learners were supported to relate formal and informal, horizontal and vertical learning.

3.1.5 These considerations provided a rich context for the development of the project methodology. There were other aspects too: for example, the inter-disciplinary composition of the research team, different expertises and methodological familiarity and tradition. Thus, the starting point was agreement about *methodological principles* to inform the investigations in the different countries in relation to different types of work experience and about the construction of ‘tools’ or *methodological resources* which the researchers would use during their investigations. Three broad principles were formulated:

- (i) the overall approach would be appropriate in different contexts;
- (ii) within that overall approach, different methodological approaches would be employed, including action research, focus group exploration, observation, quantitative techniques;
- (iii) that the results of the inquiries would be useful in analysing the main features of the developing work experience typology and its emerging models. Connections would be tested with five broad features of the typology:
  - the purpose of work experience (*ie*, the reason for providing the work experience).
  - the assumptions about learning and development (*ie*, the ideas about pedagogy and learning in workplaces).
  - the practice of work experience (*ie*, the extent to which practice is seen as divorced from context).
  - the role of the education and training provider (*ie*, the pedagogic strategies employed to support students in learning).

- the outcome of the work experience (*ie*, the form of knowledge, skill or broader capabilities that students have developed).

3.1.6 The research team deliberated extensively about the construction of methodological resources which would be useful. At an initial stage, these necessarily involved a range of conventional research instruments:

- Research questions and templates for policy studies.
- Criteria for the selection of the case studies.
- Template for describing and reporting case studies.

However, in order to reflect the overall principles agreed and in order to use the insights developed during the exploration of learning theory, the research team defined and agreed a number of ‘theoretically-derived questions’ to explore within the case studies. These reflected the research interest in the idea of ‘mediation’ between one context of learning and another.

- (i) How can students be supported to use what they learn in school to enhance learning in the workplace?
- (ii) What is done in the school to use and develop the learning acquired in the workplace?
- (iii) How do you encourage students to use the resources and encounters of the workplace to develop their understanding?
- (iv) Do those students who have learnt the (tacit) school rules gain more from the workplace opportunities for learning?
- (v) How does the work experience help students to cope with the demands of future work?
- (vi) How far are the school and workplace working effectively to ‘connect’ the learning which arises from each context?

#### QUESTIONS RELATING TO THE ROLE OF MEDIATION

- (i) How far have you considered the relationship between learning at school and learning at work and the relationship between school and non-school knowledge?
- (ii) How do you help students to develop and use the learning and skills acquired in the workplace in more formal learning contexts?
- (iii) Do you make the theoretical or conceptual interventions which can assist students in making sense of their experience in the workplace - and vice versa?
- (iv) How far are you providing ‘bridges’ to help students work and learn between school and workplace?
- (v) How far are students thinking about and being supported for the changing nature of work?

3.1.7 These questions, which were designed to be used with learners and experienced others, arose from the research team’s deliberations as to how to construct a resource which used some of the ideas from socio-cultural learning theory about the influence of context upon learning, the important role of the ‘experienced other’ in supporting mediation, and therefore vertical and horizontal development, and boundary crossing.

3.18 The research team discussed the idea of ‘innovation’ on the basis that work experience and its potential for learning could be a vehicle for taking forward new ways of thinking about and addressing the challenges set by future work and change. Again, the methodological resource had to be relevant to the very different contexts in which innovation was being analysed. The research team therefore developed the concept of *innovation within context* which was meant to recognise considerable and necessary variation within an overall framework. The case study approach therefore took account of:

- (i) The importance of identifying at the outset the nature of the problem to which the innovation (case study) was a response.
- (ii) The ways in which the innovation was developed in order effectively to respond to the problem.
- (iii) The ways in which learning arrangements and outcomes were made and set in the context of the problem identified and the nature of the response to it; the extent to which there was institutional autonomy to support the innovation and to vary vocational or academic programmes.
- (iv) The ways in which the innovation had been able to respond effectively and the ways in which it had not.
- (v) The use of the work experience typology in identifying case studies as exemplars of the models and what further development of the models might be necessary in the light of the case studies.
- (vi) The use of the theoretically derived questions and concepts emerging from the discussions of project papers in exploring the different contexts of learning, the possible linkages between them and the role of mediation.
- (vii) The ways in which the different expressions of a European dimension within the case studies had drawn attention to issues which would be relevant in developing the modeling in later stages of the project’s work

3.19 Another methodological resource to which the research team had recourse was the idea of ‘contradiction’ as a source of change and development. Engeström’s definition of ‘historically accumulating structural tensions within and between activity systems’ was useful. When an activity system adopts a new element from outside (for example, a new partner), it often leads to an aggravated, subsequent contradiction (*eg*, in the rules that the community normally follow or the nature of the division of labour) in which some older elements collide with the new element. By thinking of the idea of contradiction as a methodological resource, the researchers could identify how contradictions generated disturbances and conflicts and also generated innovative attempts to change the activity. Taken in combination with the five broad features of the work experience typology, the idea of contradictions assisted in forming a judgement about the extent of piecemeal or systemic change within different models of work experience.

## **3.2 The European labour market**

3.2.1 The project has analysed the assumption that work experience can make a valuable contribution to developing students’ generic skills, and hence support their employability, by setting the link between work experience and employability in a wider context which takes account of economic and technological change.

## Economic change within the EU

3.2.2 There is a wide consensus that a process of structural transformation has been occurring with increasing rapidity in all advanced industrial states during the last 20 years. This process of economic restructuring is usually attributed to complex inter-relationships and inter-dependencies between the following four factors:

- the quickening pace of global scientific and technological innovation which has resulted in knowledge becoming more important to global economic development than such traditional factors of production as land, capital and labour (Drucker 1993).
- the emergence of a new techno-economic paradigm, which has sometimes been referred to as an 'informational mode of production' (Castells 1996). The main feature of this paradigm is the re-organisation of companies' production processes to ensure that the potential of information and communication technology can be used to provide feedback on workflow, productivity and product and process performance.
- the scale and impact of global, multinational activity which have resulted in the emergence of more customer-focused organisational paradigms, less hierarchical divisions of labour and new occupational profiles and new skill requirements (Bartlett and Ghoshal 1993).
- the global process of industrial convergence which is helping to blur the lines separating traditional industries, for example, telecommunications, from newer ones, such as media and computing, and creating new growth opportunities as technologies and markets converge (Coffe 1997).

3.2.3 Taken in combination, these four factors, although they may vary from one Member State to another according to national, and even regional, circumstances, have been responsible for exerting tremendous pressure for industrial, organisational and occupational change. Judging the extent and implications of such changes within the EU is very difficult, not least because of the very mixed nature of the evidence.

3.2.4 Some aspects of economic and technological change, for example, the idea about the emergence of a knowledge economy, rely mainly on theoretical plausibility and the use of highly qualitative data. Certainly, many commentators have asserted that a 'knowledge economy' and even a 'knowledge society' is emerging because the impact of the above four factors has led to new organisational imperatives to use intangible assets of companies to innovate and create value for shareholders and customers (Drucker 1993, Hamel and Prahalad 1994, Nonaka and Takeuchi 1995, Boisot 1998). There is in the diverse literature, however, at least four different classifications - embrained, encultured, embedded and encoded - of knowledge (Blackler 1995) and, moreover, each classification presupposes a radically different view of the contribution which knowledge makes to wealth creation and innovation.

3.2.5 Other aspects of economic and technological change, for example, labour market and organisational restructuring, are empirically undisputed. For example, the EU report, *Employment in Europe* (EU 1998), notes that the largest growth sectors in the period 1994-1997 were business services, health care, education and recreational activities and hotels and restaurants. Together, they accounted for more than 70 per cent of employment growth. In contrast, the five sectors where the greatest job losses occurred were agriculture, textiles, the wood industry, iron and steel and retailing. These sectors accounted for just over half of all the job losses and once again there was considerable variation between individual Member States.

3.2.6 A spate of socio-economic structural forecasts, however, has drawn attention to, first, the contradictory nature of the changes occurring in employment patterns and in the demand for higher levels of qualifications and, second, to the deceptive nature of many of the changes that are taking place in occupational classifications and profiles.

3.2.7 One of the reasons why it is difficult to establish an overview of the cumulative effect of globalisation is that writers tend to adopt different starting points in terms of how they analyse firms' responses to the intensifying impact of globalisation. Some writers emphasise that the key variable is the pressure on organisations to learn how to produce higher quality goods and services and to shorten the lifecycle of their products and services (Bengtsson 1993). In contrast, other writers (Regini 1995) focus on the way that competitive pressures are leading companies to try to become learning organisations and to link their product and service strategy closely to their skill formation strategies.

3.2.8 The absence of any clear-cut consensus about the trajectory of industrial, organisational and occupational change reflects the fact that the links between product and service quality, competitive advantage and knowledge and skill are not as simple and unidirectional as is sometimes assumed by policymakers (McKenna 2000). It also reflects the fact that it may be more realistic to acknowledge that these developments are restricted to specific sectors and specific parts of an organisation and, thus, specific sections of the workforce (Crouch et al 1999) and, moreover, to accept that, at present, 'knowledge-intensive' work tends only to be a feature of specific regions and not entire economies (Florida 1995) and that, even in those regions, there is still evidence that 'low-skill' work continues to flourish (Finegold 1999).

3.2.9 Nonetheless, the pattern of economic and technological change has led to a demand for more generic and less occupationally-specific forms of expertise and skill (Ashton and Green 1995; CEDEFOP 1998; Green et al 1999). The challenge of relating different types of knowledge to support workplace learning, however, raises issues about the relationship between formal and informal learning that have rarely been addressed by policymakers (Guile and Young forthcoming).

New concepts of skill throughout the EU

3.2.10 The project has identified that the concept of generic skill is characterised by its own complexities and ambiguities. Moreover, the question of generic skill is further compounded as a result of the different traditions and disciplines that inform and underpin the debates and discourse within EU education and training policy and in academic research in such fields as human resource development and socio-cultural learning theory.

3.2.11 It is possible to identify several definitions of generic skill: ‘work readiness’ (Keep and Mayhew 1999), key skill or key qualifications (Kämäräinen and Streumer 1998), intrapreneurial skill (Flecker and Hofbauer (1998) intellectual (Zuboff 1988) and boundary crossing skills (Engeström et al 1995).

A typology of generic skill.

		Nature of	Work Activities
<b>C o n c e p t i o n s  o f</b>	<b>FOCUS</b>	<b>Routine problems</b>	<b>Novel problems</b>
	<b>Individual conception of skill</b>	Key Skills ( <i>ie</i> , certified evidence of literacy, numeracy and IT)	Intrapreneurial skills ( <i>ie</i> , ability to work effectively in immediate work context)  Symbolic analytical skills ( <i>ie</i> , ability to apply specific form of expertise)

<b>s k i l l</b>	<b>Contextual conception of skill</b>	Key qualification ( <i>ie</i> , using technical, socio-cultural and participative competence in the workplace)	Polycontextual skills ( <i>ie</i> , ability to mediate between different forms of expertise)  Intellective skills ( <i>ie</i> , ability to mediate between symbolic data)  Boundary crossing skills ( <i>ie</i> , ability to operate effectively in different contexts)
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3.2.12 The typology illustrates the complex nature of the problems that policy makers face as they try to devise educational policies that will support young people’s employability in the EU ‘knowledge economy’. It reflects the diverse nature of the demand for generic skill as well as the range of meaning associated with the term. This is hardly surprising since generic skill serves as an all-inclusive, umbrella term to encapsulate the vast range of skills employers might require, from the fairly routine through to the more complex capabilities associated with ‘boundary crossing’ and ‘knowledge work’.

3.2.13 The increasing demand by employers for more generic skills or competences severely undermines the traditional assumptions about the relationship between work, skill and qualifications. Traditionally, the main role of qualifications has been standard-setting, thus denoting the proportion of any population that had achieved a specific level of academic or vocational attainment. The emphasis on generic skills, however, represents a shift towards demonstrating a potential to achieve in future, albeit in different ways from those normally associated with conventional qualifications.

3.2.14 The (inconsistent) shift towards more ‘knowledge-based’ forms of work, coupled with the demand for generic skills, presents workplaces and vocational educators with an entirely new set of problems. Addressing these problems involves separate but linked issues. They are, first, re-thinking how to assist young people to develop context-free skills in context-specific situations (Young 1999b). This is not easy: it is difficult to specify the nature and level of generic skills, such as problem-solving, and, moreover, the learning potential of the workplace, where young people practice such skills, varies enormously (Guile and Young forthcoming). The second issue involves re-thinking how to provide young people with opportunities to relate theory (*ie*, ‘codified’ knowledge) to practice (*ie*, ‘situated’ or ‘tacit’ knowledge).

### 3.3 European policy studies

3.3.1 EU policy in recent years indicates a reassessment both of the relationship between work and education and the role of work experience in academic and vocational programmes, on the basis that 'globalisation' is generating the need for new learning relationships between education and work which will support lifelong learning (EC 1995). Work experience, in both general and vocational education, is now conceived as having an important new role, providing an opportunity for young people in full-time education and training to develop their understanding of changes in the 'world of work', to enhance their key skills and to make closer links between formal programmes of study and the world of work (Green *et al* 1999).

3.3.2 Although there has been more recognition of the need for new learning relationships between education and work (*cf* Lasonen, forthcoming, and the wording of the Finnish Vocational Education Act which emphasises the learning component of workplace experience) and therefore a new agenda for work experience, there has been much less discussion of the extent to which the actual *context* of work may affect learning and development. Most EU and North American studies (Miller *et al* 1991, Stern and Wagner 1999a) and EU policy literature (EC 1995, 1997) have tended to adopt a narrowly functional view of the relationship between education and work, perpetuating the idea that the contexts of work experience are stable and transparent environments in which students can easily learn and develop. This functional approach can be useful, encouraging the development of models for the delivery of work experience which are based upon the creation of management arrangements between educational institutions and workplaces (Griffiths *et al* 1992, Miller and Forrest 1996, Stern and Wagner 1999a). Schools and other intermediary agencies thus manage the arrangements between education and work more effectively and ensure that essential health and safety considerations are satisfactorily addressed (Peffer *et al* 1997). However, whilst it was previously reasonable to assume fairly stable work environments, to do so now is to ignore the unprecedented pace at which global economic pressure, coupled with developments in communication and information technology, is forcing continuous change. One symptom of this is the polarisation of those organisations which are seeking to compete on the basis of the information that resides in their 'communities of practice' and those organisations still trying to compete on the basis of price (Guile forthcoming). The potential of these continuously changing work contexts for learning and for higher-order skill development is considerable. However, it involves re-thinking how students can be supported to relate their 'vertical development' and 'horizontal development'. This involves addressing the institutional separation of these modes of learning and taking more account of the influence of context upon learning.

3.3.3 Policy analysis at a European level in this area is complex: the history, politics, culture and economy of particular societies and regions play important roles and mean that similar policy intentions may have very different patterns of enactment with often unintended consequences (Attwell 2000a). Most comparative studies have been focused on systems level analyses and Attwell and Hughes (forthcoming) note that, in their concern to describe the paradigms comprising different national systems of education and training, most studies have failed to pay attention to relations between those paradigms. For vocational education and training, dependent upon a complex interaction between school, labour market and the world of work, the systems and paradigm approach fails to develop an understanding of the true dynamics of development and change.

### *Policy and the legacy of human capital theory*

3.3.4 The broad acceptance in the EU education and training policy literature of the premises of human capital theory (Becker 1964) has had a considerable effect upon recent thinking about learning in a variety of work-based contexts (Griffiths and Guile 1999).

3.3.5 In human capital theory, the rationale for and the level of investment in education and training is related primarily to perceived economic return. It has therefore proved particularly attractive to policy makers in their attempts to justify investment in education and training to employers and within EU member states more generally (EC 1995, Lasonen 1997).

3.3.6 Many of the developments in recent years are consistent with a perspective of human capital theory which sees the whole question of innovation and continuous improvement as primarily the result of exogenous, technological processes. Innovation within human capital theory is not, in general, perceived as being particularly affected by the introduction of new learning processes (Ellstrom 1997) nor by the development of the types of 'learning environment' within workplaces which support learning (Guile and Young 1999, Ghererdi *et al* 1998). Human capital theory tends not to be concerned with the contribution which different models of education and training, and their different assumptions about the process of human development, might make to future competitiveness and 'employability' (Ellstrom 1997). However, it is increasingly accepted in economic theory (Romer 1990), business economics (Boisot 1998), management science (Drucker 1993) and organisational studies (Ghererdi 2000) that innovation is as much an endogenous process as it is an exogenous process. In other words, in addition to scientific knowledge, innovation involves the exploitation of knowledge or information that is either available inside the 'communities of practice' of firms or can be acquired through the intra-firm transfer of knowledge creating practices. Whatever else education business partnership programmes have accomplished, companies have generally neglected the need for a broader definition of human capital theory which could take a more strategic view of the role of learning processes (although there are signs of a changing agenda). What is presently evident is a failure at policy level to press for new theoretical and conceptual frameworks for relating learning in work-based contexts to formal education and training. The debate in Germany is a case in point. Attwell (2000b) notes the striking paradox between the centrality of work experience in the school-to-work transition process - seen as a social process - and the lack of focus on informal learning in work processes as an educational goal. Bjornavold (1999) has suggested that Germany - together with Austria - is the country where 'non-formal learning' is most underdeveloped in comparison with other European countries.

### *The context of work*

3.3.7 The relevant literature has, in fact, tended to overlook the potential influence of the context of work upon learning and development in general because 'context' has been interpreted in a very specific way, as a definition of a pre-given object or condition or set of objects or conditions (Cole 1995). This interpretation of context is consistent with how the term is employed in such fields as business economics (Boisot 1995), strategic management (Bartlett and Ghoshal 1993) and labour market economics (Regini 1995).

3.3.8 Changes in technology and the conditions of profitability and competitiveness have led to the emergence of new forms of work and job design. These are based on less Fordist and

Tayloristic models of work relationships and therefore provide workers with broader based forms of responsibility and opportunities to learn and develop (Brown and Lauder 1995). Further, changes in the context of production are prioritising the management, acquisition, sharing and utilisation of knowledge to support business performance (Scarborough *et al* 1999). Changes in the context and nature of work have also resulted in the emergence of considerably expanded definitions of skill (Coffield 1998). Such definitions now include traditional definitions (technical and craft skills), recent enhancements to traditional definitions (such as key skills) and quite radically different conceptions of skill which reflect motivational traits and cultural dispositions (Guile, forthcoming).

3.3.9 Viewed from this perspective, the main purpose of work experience would appear to have been to provide an opportunity for students to learn about another context and to learn what skills might support their future employability. The use of work experience as part of apprenticeship programmes and post-16 education has demonstrated that work experience can provide valuable insights into economic and technological change. However, these goals may be insufficient as an expression of the learning potential of work experience. Work is not solely a context which students learn *about*; it is, like education, a context *through which* students can learn and develop. This shift of focus can direct attention to how individuals learn, grow and develop through the strength and richness of their interactions and applications within and between different contexts. An interesting perspective is provided by the experience of Greece. Patiniotis and Kaminioti (forthcoming) have summarised this as complete dysfunction between the labour market and the education and training system. It is this dysfunction which explains the value placed on work experience in the labour market and the very low formalisation of work experience as a strategy for education and training.

#### *Themes in European policy*

3.3.10 Themes which emerged from the first phase (1997-98) of the project's European policy analysis (TSER WEX21C Research Team 1999) included the multifunctionality of work experience (*eg*, as an integral part of an apprenticeship or as a voluntary feature of an academic or quasi-vocational course), the identification of common problems, the challenge of curriculum and pedagogical issues and the role of key skills.

3.3.11 Beyond this, however, was discernible the strength of the varying cultural, social and historical forces which shaped these themes. There is perhaps a more considered role for the European Commission to play in helping countries build upon their existing strengths. Even where there is attention to form and structure, there may be neglect of pedagogy. Smaller or poorer countries may be both reliant upon EU funding and excessively attentive to research findings from elsewhere.

3.3.12 The second phase of project policy analysis (2000) confirmed the difficulties experienced by policy makers in interpreting change and setting new developments in motion. The particular policy difficulty of adequately addressing complex learning issues, particularly those involving different contexts of learning, as described above, is evident across sectors as well as across nations.

3.3.13 The *multifunctionality of work experience* was, in some senses seen as a strength but it also gives rise to uncertainty and a lack of clarity as to purpose. Divergence is, of course, linked to the extent to which work experience is integrated into the VET system and whether

formal regulation oversees its implementation. However, even with regulation, standards of VET as such vary considerably. Green *et al* (1999) identify a number of categories which reflect the relative strength, status and extent of participation in apprenticeship systems across Europe (for example, among the countries represented in this project, Denmark falls into the categories of *high status/high participation*). All are, however, experiencing demographic change, the effects of technical innovation and globalisation on jobs and an increasingly delayed process of insertion into the labour market. Faced with this, VET systems in all the partner countries have been undergoing reforms and attempts to align training with current and future demands of labour markets for flexible workers with good levels of general education and ‘transferable skills’, as well as relevant technical skills and knowledge. For example, a major new programme was launched in Flanders in 2000 with a rolling programme of implementation and evaluation for the following six years. The programme will introduce new curriculum profiles and integrated learning methods, bringing together vocational training, education and key qualifications. It is intended to connect the standards for academic education to those for vocational education and training. One aim is to assist students in connecting the different subjects and places of learning, thus leading to greater motivation (Attwell 2000b)

3.3.14 The Spanish policy analysis detects a difficulty central to the concerns of the TSER project: the impact of an instrumental perspective of VET and work experience which means that, in the response of both theoretical and practical training to labour market demands, the emphasis on learning and personal development may be neglected or assumed to be an implicit feature of work experience. The policy analyses generally show that a shortage in the number and quality of placements is an increasing problem, thus forcing a search for alternatives such as work shadowing or simulation. There is, across all models, an easy consensus about the ‘value’ of work experience, despite the dearth of good evaluation studies, particularly of learning. The Danish analysis poses the question, ‘Where is the knowledge in work experience ...? How can that be accounted for as the students involved are outside the organisation? To press the matter even further, how do you account for the knowledge in the partners in the social dialogue?’

3.3.15 The policy analyses resulted in the identification of *common problems*, including sectional interests among employers and the shortage of work experience placements. The problem of quality was described variously but there was agreement in attributing low quality to low levels of training of workplace instructors and supervisors and lack of industrial experience of school teachers. Another major problem lay in the inadequately defined roles and responsibilities of education and business partners in organising and delivering work experience. There was a widely expressed need to strengthen the links between these partners, however much those links varied between countries. The declared need was for clear policy and effective legislation which accorded with good practice. The Swedish policy study questions how far the general wish for education-business links is actually expressed in practice and notes, in fact, a widening gap (Madsén and Wallentin 2000).

3.3.16 *Certain curricular and pedagogic* issues were common. There is general discussion of models of pedagogy and modes of learning appropriate to the diverse curricular functions which work experience is required to perform (there is not a huge research tradition in this area). Changes – in content and curriculum, pedagogy and processes of learning and in the organisation and location of learning – are taking place in every Member State of the European Union, although the form and expressions vary greatly. In The Netherlands, for

example, there is a growing awareness of the complex nature of curriculum links between the school and the enterprise but curriculum integration remains a major problem (Attwell 2000b). The specific problem of the lack of clear connection between work experience, as a form of informal learning, and formal learning led the research team to greater reflection on the role of mediation between different contexts and an attempt to bring the research literature on learning to bear upon these issues and upon the development of a typology of work experience.

3.3.17 The project's policy studies have consistently shown the barrier of the academic/vocational division which persists in different manifestations within the curricula of Europe and which continues to impinge upon the status and functions of work experience. Given the traditionally hierarchical nature of the French education system and the deep divide between general education and technical and vocational education, the vocational *baccalaureat* may be seen as a major innovation in French education and training. By opening access from vocational education to higher education, it has helped to re-establish the prestige and role of vocational education as a whole. It has also resulted in some re-assessment of the role of work based learning in contributing to knowledge acquisition. Gendron (2000) says '...in spite of an orientation towards the acquiring of practical know-how, vocational *baccalaureat* programmes were set up with innovative pedagogical tools and a new logic of training combining fundamental knowledge – justifying the title “*baccalaureat*” and in-company experience - “vocational”’.

3.3.18 There is discernible a general concern to increase the esteem of occupational and vocational learning in the face of increasing participation in university education and, interestingly, a general trend to regard higher education as part of the school to work transition process (Attwell 2000a). Some countries have increased the status of the former polytechnic or hochschulen type of institution and the trend can be seen in the changing curricula offered by universities. The Standing Conference of Rectors in Germany has recommended that work experience be included as part of university studies. At the same time, many of the skills – and especially knowledge – previously viewed as part of the academic world are now becoming part of the occupational curriculum – especially the ability to solve complex problems through forms of research and enquiry (Brown 1997). Onstenk (1998) defines the ability to shape solutions or recognise ‘core problems’ as of growing importance in developing innovation and job creation.

3.3.19 *Generic and transferable skills, key skills and learning skills* are recognised in the policy analyses as being essential curricular elements, although different terminologies and emphases are employed. (Hungary emphasises entrepreneurial skills to the extent that they are a common element across the upper secondary education curriculum. – Benke and Gorgenyi 1998) Most use portfolio completion as a means of attempting to individualise learning, to capture the essence of the reflective process, to record the results of planning and to encourage self-assessment. Griffiths and Guile (1999) refer to the learning limitations which may easily beset all these processes. Coming through the policy analyses is a sense that the learning potential of the workplace cannot be overestimated but is insufficiently understood.

3.3.20 A particular challenge is presented by this analysis in that common problems, such as the multifunctionality of work experience and the challenge of curriculum and pedagogical issues, are addressed in quite different ways. Some of the differences are cultural; others may arise from a use of language and terminology which conveys different meanings. A particular

case in point concerns the question of *learning outcomes*.

### *Learning outcomes*

3.3.21 The UK policy analysis noted that policy emphasis on outcomes and qualifications was in effect shifting the focus from the learning process. The analysis concluded that a narrow focus on outcomes might be counter-productive in emphasising the outcome at the expense both of the process of learning and of the relationship between different types of learning (*ie*, formal and informal). Thus, the question of improving learning as such through informal learning would continue to be difficult for policy makers. Funding is likely to be increasingly related to learning outcomes and the present UK pre-16 focus is, in fact, on defining a core of such outcomes which would be expected of work experience – and upon the accompanying question of whether that core could be linked to accreditation. The policy analysis also observed that a one-sided view of learning, which over-emphasised learning as a social activity and neglected the skills and knowledge which learners needed to acquire, was also an abstraction which could neglect what distinguished *learning* from other activities (Young 2000).

3.3.22 Other policy analyses described a less instrumental approach to ‘learning outcomes’ which allowed questions concerning the nature and extent of learning to be addressed more thoroughly. In some respects, for example, Ireland was focusing on outcomes with a view to ensuring that the processes were achieving their pedagogical purposes. In Finland, new legislation places greater emphasis on the demonstration of skills and envisages the gradual introduction of a competency-based system. There are fears, however, that this will lead to a more summative assessment regime (Attwell 2000b). A potentially productive approach is offered by Kämäräinen *et al* (forthcoming) in seeing key qualifications as one tool for curriculum planning and as underpinning skills and knowledge arising from learning in the work process.

3.3.23 Common to all the project’s policy analyses was the sense that there was little hope of achieving progress in the formulation of policy and its effective implementation without a clear statement about the purpose of work experience and its pedagogical role - in however many of its manifestations. The failure of work experience policy to be formulated and implemented in the light of students’ learning needs is clear, for example, from mapping work undertaken in relation to the Irish and Spanish policy analyses. The lesson from the UK policy analysis is that where qualifications reform focuses primarily on the specification of outcomes, and not the activities which might generate the outcomes, there may be a narrowing of the learning potential. Thus, contemporary learning theories (*eg*, Engeström 1994, Lave and Wenger 1991) have a much broader and more ‘expansive’ view of learning than is expressed by qualifications alone. From such perspectives, learning is seen as an essentially social activity which involves change in relationships and identities. Measures such as numbers of qualifications gained or numbers registered on part time courses say very little about such changes and therefore say very little about learning as it is increasingly understood by research (Young 2000).

### *Shortcomings of policy*

3.3.24 The general concern about the effectiveness or lack of policy was evident in conclusions concerning: the poor relationship between policy and practice, the lack of clarity

in relation to the aims and objectives of work experience post-16, its delivery (in particular, a lack of clarity in relation to workplace supervision, mentoring and teaching, the availability and quality of placements), the lack of evidence in relation to learning, the role of employers (the quality of relationships between employers and education, nature of qualifications sought, degree of attention to changing modes of work).

3.3.25 The overall policy analysis confirmed the renewed emphasis (public or rhetorical) upon learning in the workplace. Debates on lifelong learning included reference to the importance of learning outside formal institutions, such as in workplaces, on-line and in community and other settings – even though actual policy was still seen as wedded to traditional notions of work experience. (The Spanish policy analysis notes the development and expansion of workplace training but that policy and administration have not changed). The Danish analysis included an overview of OECD reports of the 1990s in which a recurrent theme was the plea for better foundations for lifelong learning, for quality and for care in the language of ‘basics’: ‘The terminology of “basics” confronts two equally present dangers. One is that the modern world requires command of complex knowledge and skills and the ability to adopt creative approaches to solving new problems, that sits uneasily with the language of “basics”. Second, few would deny that any specific knowledge and skills of vocational relevance learned in initial education are subject now to dauntingly rapid obsolescence, putting the premium on general mastery of that change and learning anew’ (OECD 1989). In the UK there is apparent agreement about the importance of work-based learning, work experience, key skills development (although the latter, in particular, is criticised for the vacuousness of some approaches) in the context of lifelong learning, but there is a divergence in emphasis and approach which renders effective change difficult to achieve in practice. At the same time, there is growing awareness – usually outside the policy arena - of more open routes to learning based on developing closer relationships between ‘vertical’ and ‘horizontal’ development (Guile and Griffiths 2001) of learners, taking account of the implications of new forms of working made possible through the advances in communications and information technology and seeking to connect through mediation different contexts of learning, formal and informal.

#### *Lessons from the past and strategies for the future*

3.3.26 It is clear that lessons from past policy and practice need to be understood otherwise policy makers are in danger of reinventing what has been done in the past. There is a big polarisation between ‘leading-edge’ and other companies in their human resource policies – those successfully making the transition to success in the new context of work are doing the same thing: they share their values, make clear what is expected of employees and what responsibility they have for the successful running of the company. Moreover, these developments are beginning to generate a new human resources agenda (Guile and Attwell forthcoming). One factor is the responsibility felt by individuals and teams for adding value on behalf of the company for which they work. Consequently, in future, it will no longer be appropriate to view the purpose of work experience in knowledge-based companies as developing a technical competence in ‘something’. It will increasingly have to be viewed as a means of developing that involved sense of responsibility that enables young people to add value by knowing how to manage existing work processes effectively and, wherever possible, working in ‘communities of practice’ to transform existing work practices.

3.3.27 It is possible to view the various models of work experience, noticeable to varying degrees in all European states, as embodying changing responses to policy as well as to the learner, to skills needed and sometimes to pedagogy. The research team developed this analysis in the form of a typology, described below.

### **3.4 Learning through work experience**

3.4.1 How students learn and develop through work experience has been explored within the project. Contemporary learning theory, the adult education literature and curriculum theory have been drawn upon in developing a critique of current thinking and exploring how far this provides the basis for a new pedagogic model for supporting learning through work experience. Crucial to this is the concept of 'context' and the learning which occurs within and between the different contexts of education and work. Most models of work experience have either ignored the influence of context upon learning or have approached this issue mechanistically and one conclusion of the project's work is that new curriculum frameworks are needed to allow work in all of its forms to be used as a basis for the development of knowledge, skills and identity. A typology of work experience has been developed which identifies models of work experience, including a model which embodies the concept of 'connectivity'. This may provide the basis for a productive and useful relationship between formal and informal learning.

#### Work as a context for learning and development

3.4.2 The project has noted the importance of the reappraisal of the work of John Dewey (1981, 1986 and 1988) charted by Cole (1995) and the growing influence of the Russian cultural-historical school of psychology influenced by the work of Vygotsky (1978). Dewey emphasised the importance of not separating events and circumstances from their contextual whole: 'in actual experience, there is never any such isolated object or event, an object or event is always a specific part, phase, or aspect, of an environment experienced world' (Dewey 1986). This understanding that context is not fixed, well-defined and stable but is shaped by the relationships between people, their activity and the social world of which they form part is complemented by Vygotsky's work and the work which it went on to influence. By placing the idea of mediation at the centre of the learning process, Vygotsky reconceptualised learning as a 'complex mediated act', a triad involving the subject (the individual), the object (the task or activity) and mediating artifacts (eg, communication and information technologies, books). Although they offer slightly different interpretations of Vygotsky, the ideas of situated learning (Lave and Wenger 1991) and activity theory (Engeström 1996b) have contributed to broadening the debate about the relationship between context, mediation and human development. These theories offer different, but complementary, insights into the process of learning through work experience.

3.4.3 Lave and Wenger (1991) have demonstrated how the process of 'legitimate peripheral participation' in fairly stable and well-bounded 'communities of practice' enables individuals to acquire knowledge and skill and develop their understanding

through contact with more experienced others. This raises the question of how easily students gain access to and operate in such work contexts. A recurring assumption in the general education and VET work experience literature is that this happens *ipso facto*. However, this neglects the extent to which participating in a 'community of practice' can be highly problematic. As Ghererdi et al (1998) have observed, it requires 'host' organisations actively to provide opportunities for learners to observe, discuss and try out different practices with members of the 'community' they have temporarily joined.

3.4.4 Participating in workplace 'communities of practice' therefore raises serious questions for the providers of work experience: first, the extent to which the 'host' organisation enables students to participate in interacting with more knowledgeable others in the workplace 'zone of proximal development' may well depend upon its Human Resource Development strategy (Guile forthcoming). Second, it means that education and training providers of work experience have to recognise that students need to learn in ways different to those in which they learn in school or college (Beach and Vyas 1998) and that students do not easily accomplish these methods of learning, partly because these types of 'horizontal development' are not easily reconciled with conventional ideas about 'vertical development' and run counter to school experiences. This calls for careful mediation.

3.4.5 Engeström has concentrated on analysing how learning occurs in work situations that are not necessarily stable and well-bounded (Engeström et al 1995, Engeström et al 1996). His basic unit of analysis is the idea of an 'activity system', in other words, the complex interrelations between the individual and different workplace 'communities' or 'networks' that are influenced by the division of labour and workplace rules and procedures. Engeström argues that increasingly workers are expected to act as 'boundary crossers' between 'activity systems', in other words, to possess the ability to contribute to the development of new forms of social practice and to produce new forms of knowledge. According to Engeström, this entails learning how to contribute to the transformation of work contexts, an issue rarely raised in the work experience literature. Lave and Wenger and Engeström's ideas suggest that new questions should be asked about how students learn through work experience provided as part of their general education or VET. It is thus important to explore how work experience can provide (i) a context for participating in 'communities of practice' and learning how to develop the ability to act as a 'boundary crosser' and (ii) a means of re-examining and re-forming the relationship between work experience and formal programmes of study.

3.4.6 In a report of the LCVP research and evaluation project in Ireland, Granville (1999) criticises the dominant interpretation of 'transfer' in the education systems as stressing 'the degree to which a behaviour will be repeated in a new situation'. In contrast to this restricted conception, he refers to the concept of consequential transitions (Beach 1999) which recognises an extra dynamic in the process, one which must involve the exploration of new territory for which pre-learned response and solutions are unavailable. Consequential transitions involve the construction of new knowledge, identities and skills or the transformation (rather than the application or use) of something that has been acquired

elsewhere. A transition of this form involves a notion of progress and is best understood as a developmental process. Such transitions may involve changes in identity, as well as changes in knowledge and skill. In other words, they are processes which involve the full person not just learned attributes or techniques.

### *Conceptualising approaches to work experience*

3.4.7 Taking its theoretical explorations into account, the research team has discussed different approaches to or models of work experience which embody changing responses to policy, to the learner, to skills needed and to pedagogy. This conceptual framework deploys a 'five-by-five matrix'. The horizontal axis identifies five different models of work experience:

1. The traditional model of work experience: 'launching' students into the world of work.
2. The experiential model: work experience as 'co-development'.
3. The generic model: work experience as an opportunity for key skill assessment.
4. The work process model: a strategy to assist students in 'attuning' to the context of work.
5. The connective model: a form of reflexive learning.

The vertical axis identifies five main features of the models:

1. The purpose of work experience (ie, the reason for providing the work experience).
2. The assumptions about learning and development (ie., the ideas about pedagogy and learning in workplaces).
3. The practice of work experience (ie, the extent to which practice is seen as divorced from context).
4. The role of the education and training provider (ie, the pedagogic strategies employed to support students in learning).
5. The outcome of the work experience (ie, the form of knowledge, skill or broader capabilities that students have developed).

3.4.8 The first four of the five models reflect the influence of different economic, technological and social factors prevailing within European countries as well as different ideas about learning and development. Although the models may be specific to different periods of economic and technological development and reflect changing educational ideas about the process of learning, they can and do co-exist in different countries. They are analytical rather than descriptive; no specific work experience programme fits neatly into any of the models and some programmes may contain elements of more than one model. The fifth model presents a new approach to work experience which is based upon the principle of connectivity and takes account of the theoretical considerations summarised above. It displays innovatory features which are relevant to future approaches to effective learning through work experience and provides a basis for different explorations (Herlau et al 2000).

## **Typology diagram**

### *The traditional model of work experience: 'launching' students into the world of work*

3.4.9 Until relatively recently, a prime aim of apprenticeship-based work experience programmes was to mould and adapt students' skills in workplaces (Vickers 1995, Stern and Wagner 1999a, 1999b). By contrast, the school-based work experience schemes introduced in the UK in the 1970s tended to assume that students would unconsciously or automatically assimilate relevant workplace knowledge, skills and attitudes and internalise the implications of occupational changes occurring in the workplace (Watts 1983). This emphasis upon both adaptation and assimilation in the traditional model of work experience is a distinctive feature of a technical-rational perspective on education and training. Students engaged in work experience have often been viewed as 'containers' (Lave 1993) into which various forms of social interaction can be 'poured' and it has been assumed that knowledge and skills can be taught quite separately from the context of their use.

3.4.10 These assumptions about learning are consistent with what Kindermann and Skinner (1992) have termed a 'launch' perspective on the relationship between people and their environment. In other words, it is the initial learning situation (school, college or vocational training centre) which largely determines what a person will do in a new situation: the earlier learning determines the trajectory of later learning, with the environmental influence being fairly minimal. Thus, from this perspective, the prime purpose of traditional models of work experience has been to 'launch' students into the world of work

3.4.11 Conceptualising work experience simply as 'launch', however, leaves little incentive to develop a theory of how students learn and develop through work experience and this has helped to maintain the divisions between formal and informal learning and academic and vocational education (Lasonen and Young 1998). As a revealing study by McNamara (1991) has elaborated in schematic form, it is not possible to reform the 'launch' model of work experience by trying to reform the content of the formal (VET) component of learning alone. A further cautionary note is provided by Granville (1999) in referring to the phenomenon of 'innovation without change', the capacity of a system to accommodate the rhetoric of reform within the culture and practice of the status quo.

### *The experiential model: work experience as 'co-development'*

3.4.12 As Prawat has noted (1993), many American and European educationists have interpreted Dewey's important ideas rather narrowly as an expression of the idea that all stages and phases of education should be made 'relevant' to students and that there should be a more problem-based approach to education and greater use of inquiry-based models of teaching and learning. There has therefore been considerable interest in the psychology of education (Resnick 1987), curriculum studies (Michaels and O'Connor 1990) and adult education (Kolb 1984) literature in the extent to which the idea of practical problem-solving and experiential learning can serve as a strategy to promote higher order thinking.

3.4.13 In the case of work experience programmes, certain versions of experiential learning, specifically those based on Kolb's idea of the experiential 'learning cycle', were perceived in general education as providing a useful framework for understanding how students learn through work experience (Jamieson *et al* 1988, Miller *et al* 1991). One consequence of adopting this slightly broader perspective on work experience was that it placed the idea of a

student's interpersonal and social development at the forefront of the agenda for work experience (Miller *et al* 1991, Wellington 1993). Two ideas lay behind this interest: first, it reflected certain educational aims, such as a desire to equate the value of learning more clearly with its practical applications (Watts 1991). Second, it reflected a growing policy interest across Europe in establishing education-business partnerships in order to assist students in adjusting themselves more easily to the ever-changing demands of the labour market (Griffiths and Guile 1998, Stern and Wagner 1999b).

3.4.14 Re-thinking the purpose of work experience in order to take more explicit account of the actual trajectory of a student's development has led to greater dialogue and cooperation between education and workplaces. In many ways, it reflects Kindermann and Skinner's notion of 'co-development' between interested parties (1992). A gradual re-thinking of the principles of work experience along the above lines took place from the late 1980s in various European countries. Some of these schemes and, for that matter, some schemes in the USA (Stern and Wagner 1999b), as well as certain approaches to work experience introduced in the UK through the Technical and Vocational Education Initiative (TVEI), began to take greater account of the process of student development.

3.4.15 This led to greater interest being displayed in three areas: first, the need for educational institutions or intermediary agencies, such as education-business partnerships, to negotiate clear objectives for students, workplaces and schools/colleges in advance of the work experience (Griffiths *et al* 1992, Miller *et al* 1991); second, the development of new pedagogic practices to assist students in identifying, possibly through the use of a de-briefing process after the work experience, the influence of the experience on personal and social development (Watts 1991); third, the long term benefit of evaluating work experience in order to identify how the work experience might have affected subsequent motivation and performance in school or college.

3.4.16 However, despite this fresh thinking about the purpose of work experience in general education, the mainstream curriculum in most EU countries was left broadly unaffected, with work experience effectively kept separate from it. Equally, the whole question of the relationship between theoretical study and work experience, even in countries with strong apprenticeship systems, was also left unresolved.

#### *The generic model: work experience as an opportunity for key skill assessment*

3.4.17 One of the main educational debates in Europe in the late 1980s and early 1990s concerned the attempt to promote a greater sense of learner autonomy and self-discipline, particularly in low-attaining students, within general and vocational education programmes (Green *et al* 1999). These developments have led, in the UK in particular and to a lesser extent in certain parts of Europe, to the emergence of what may be referred to as a 'generic' perspective on learning. By and large, this perspective is based on the idea that it is, first, more liberalising and egalitarian to adopt a system which attaches prime importance to the 'outcome', the result, and does not prescribe the form of learning necessary to gain a qualification (Jessup 1990). Second, that an agreed series of common outcomes can be identified for any programme of study and on that basis it is possible to assess the learning that has occurred (Kämäräinen and Streumer 1998).

3.4.18 In the UK, the notion of ‘learning outcomes’ has been associated with attempts to shift the emphasis away from traditional curriculum concerns with structure, content, and teaching ‘inputs’ towards actual outcomes (Young 1998). They have been viewed as a method that can be used to assist individuals to capture their own experiences and present such experience for accreditation (Ecclestone 1998; Usher *et al* 1997). Certainly, the notion of ‘learning outcomes’ has been subject to considerable criticism in the UK for its highly behaviourist and superficial assumptions about the process of human development and learning (Ecclestone 1998), as well as the assumption that neutral judgements can be made about the extent to which experience is equivalent to understanding or the development of occupational capability (Jones and Moore 1995).

3.4.19 Nevertheless, ‘learning outcomes’ have gradually become an accepted part of 16-19 vocational education and training in the UK. As a result, strong emphasis has been placed in post-16 education upon a particular interpretation of student-centredness related to student autonomy and independence. In the case of work experience, this has been interpreted as planning a work experience placement and managing and evaluating the learning through the use of statements about ‘learning outcomes’ (Miller 1996, Oates and Fettes 1997). This approach to learner-centredness requires learners to formulate their own personal action plans for work experience. The plan serves as a type of contract between the individual, the workplace and the educational institution, thus facilitating student self-assessment and external verification of key skill development within a workplace, albeit in a rather narrow and mechanistic way (Ecclestone 1998).

3.4.20 In theory, the use of action plans generates a new role for teachers. They are required to assist students in assembling portfolios of evidence for assessment at a later stage. However, all too often, this consists of the application of a specific set of methodological procedures designed to facilitate the recollection of experience (Usher *et al* 1997). By virtue of the procedures having generally been derived from a meshing of the Kolb learning cycle and behavioural learning outcomes, they are assumed to be constant across all contexts and capable of guaranteeing the authenticity and validity of the experience (Ecclestone 1998, Usher *et al* 1997).

3.4.21 However, the idea of teacher/trainer-facilitated reflection is complex.

3.4.22 First, it involves alertness to the assumptions (i) that ‘experiential learning’ is a natural category and (ii) that the ‘voice’ of an individual or community constitutes in some way authentic knowledge of a situation. As Moore and Muller (1999) argue, the idea of ‘experiential learning’ and ‘voice discourses’ are themselves endowed with theoretical assumptions. Accordingly, the meaning and significance of experience depends not only upon the experience as such but also on how and by whom it is interpreted (Brah and Hoy 1989).

3.4.23 Second, it involves those in education or workplaces with responsibility for supporting the process of learning exploring with learners the extent to which experience is influenced by the constraints of its context. As Young and Lucas (1999) argue, this is likely to involve the use of concepts to provide a theoretical framework in which learners can reflect critically upon their experience. Eraut (1999) observes that, in order to use a scientific concept in a practical situation, it has to be transformed or resituated in a form which fits the context. This

is not a process of logical reasoning but rather of ‘mulling over’ the situation until ‘something seems to fit’.

3.4.24 Thus, concepts and theories can be introduced to the learner by the teacher or trainer and deepened through conversation in order to facilitate the process of reflection. In other words, learners need to be immersed in ideas as well as in the world of experience and it is the process of mediation which provides learners with a basis for connecting their context-specific learning with ideas or practices which may have originated outside those contexts.

#### *The work process model*

3.4.25 One response to the classic problem of division between formal and informal learning has emerged from within the German VET tradition. The term, ‘inert knowledge’, has been employed to describe types of formal knowledge which have been taught to apprentices but which have not proved useful in practice, even though the knowledge itself may be relevant to work practices. Consequently, the concept of ‘work process knowledge’ has been introduced to assist apprentices and teachers in overcoming the dilemma of ‘inert knowledge’ (Kruse 1996). Work process knowledge has been defined as understanding the labour process in terms of the following dimensions: ‘product-related, labour organisational, social ecological and systems-related’ (Kruse 1996). The main distinguishing feature of the concept of ‘work process knowledge’ is that it draws attention to the importance of situating work practices in the actual context of the labour process. Thus, it has been argued that work process knowledge is fundamental to a VET curriculum. Apart from developing formal elements of a programme of study, including work experience, to assist the student in understanding individual tasks, activities or behavioural expectations, it has also been recognised that it is vital to develop a broader understanding of the actual work context (and hence employability). As Fischer and Stuber (1998) have argued, this combination of theoretical and practical learning prepares apprentices to engage more rapidly with new organisational forms of production and enables them to move into alternative work environments more easily.

3.4.26 The prime purpose of work experience, from this perspective, would be to help students adjust themselves more successfully to the changing context of work through the opportunity to participate in different communities of practice. The idea of ‘attunement’ recognises that the development of any individual is affected by the task or activities which he or she is asked to undertake in a specific context and that the context, in turn, is also affected by their development (Kindermann and Skinner 1992). A key concern, therefore, is to ensure that students learn about the context in which they are working and are presented with opportunities to learn and develop within that context by adjusting or varying their performance as required. Only on this basis, it is claimed, will students fully develop the capacity to transfer the knowledge and skill gained in one work context to another. Attwell and Jennes (1996), however, have argued that work experience will not by itself promote work process knowledge and that it needs to be mediated - perhaps by the introduction of concepts, perhaps by subject knowledge - and that the process of mediation may take place within the workplace and company-training centres. They conclude, in relation to the German VET programmes, that these programmes will have to be further evolved to help students connect formal and informal learning more explicitly. They do not, however, provide any

explicit guidance on how to achieve that objective, other than suggesting that students need to be coached to 'reflect-on' and 'reflect-in' action.

*A new approach to work experience: the connective model*

3.4.27 This model of work experience is based upon the idea of a 'reflexive' theory of learning (Guile 2001) which involves taking greater account of the influence of the context and the organisation of work upon student learning and development, the situated nature of that learning, the scope for developing 'boundary crossing' skills and the development of new knowledge and skill. It also involves developing new curriculum frameworks which enable students to relate formal and informal and horizontal and vertical learning in order to support 'boundary crossing' and to develop the intellectual basis for criticising existing work practices and envisioning new possibilities. From this perspective, learners need to be encouraged to conceptualise their experiences in different ways and for this conceptualisation to serve different curriculum purposes. This is very similar in intention to what Freire has defined (Freire and Macedo 1999) as the role of the teacher - to create 'pedagogical spaces', in other words, to use his/her expertise to pose problems in order to help learners analyse their own experiences and arrive at a critical understanding of their reality.

3.4.28 We have employed the term, *connectivity*, to define the purpose of the pedagogic approach which would be required in order to take explicit account of the vertical and horizontal development of learners. Supporting students to understand the significance of these two dimensions of development constitutes a pedagogic challenge, albeit a rewarding one, for teachers in educational institutions as well as those with responsibility for development in the workplace (*cf* 3.1 above, the project's list of 'theoretically derived questions'). It involves encouraging students to understand workplaces as a series of 'interconnected activity systems' (Engeström forthcoming) which consists of a range of 'communities of practice' (Lave and Wenger 1991, Wenger 1998). In addition, it involves teachers and workplaces in appreciating that work experience provides a range of very different ways of learning compared with how students normally learn in school (Guile and Young forthcoming). Consequently, learners, teachers and workplaces need to ensure that work experience provides an opportunity for learners to 'learn to negotiate how they learn' in workplaces since this is critical to effective workplace performance (Beach and Vyas 1998) as well as to learn the new capabilities that are gradually being required in 'knowledge-based' workplaces (Guile and Fonda 1999).

3.4.29 Thus, learners will need to be supported to appropriate concepts acquired through vertical development, and which are external to the context, to mediate the relationship between their formal programmes of study and, for example, trends in labour and work organisation. They not only have to develop the capacity to participate within workplace activities and cultures; they must also learn *how to draw upon their formal learning* and use it to interrogate workplace practices. Eraut (1999) suggests that this could involve: use of prior knowledge, seeing the relevance of concepts, resituating the concepts and integrating the new knowledge. They will also have to be encouraged to recognise that the practice of work experience is not simply a matter of acquiring forms of knowledge and skill that are products of previous individual and collective activity. Immersion in practice or enculturation in a 'community of practice' contributes to the transformation of both practice and the 'community'. This occurs in two ways. On the one hand, work experience helps to make the purpose of practice and its associated activities more explicit to the young person. On the other hand, by situating practice

in a curriculum context, work experience creates a more reflexive relationship between a subject and an object, where previously there was no such reflexivity.

3.4.30 These ideas about learning through work experience reflect the early awareness of the research team about the following issues. The first is that ‘host’ organisations should consider how they can provide ‘environments for learning’ (or opportunities to participate in ‘communities of practice’) if they are to maximise the learning potential of these activities for themselves and for learners. This implies a reappraisal of human resource development strategies, as well as management and developmental practices, by ‘host’ organisations and of pedagogic practice by teachers, since students and workers have to learn how to enter unfamiliar territory and work collaboratively in different communities of practice.

3.4.31 Second, the implications of this re-conceptualisation of work experience are evident in relation to the question of the ‘transfer of learning’. The concept of transfer has traditionally rested upon the idea that learning simply consists of acquiring knowledge and skill in one context (a workplace) and reapplying it in another (another workplace). This concept lies at the heart of the EU debate about key skills and key competences.

3.4.32 The main problem with this conception of skill and transfer is that it completely neglects the influence of context, resources and people upon the process of learning and, as Engeström *et al* (1995) argue, misconceives the process of transfer. Once workplaces are viewed as ‘activity systems’, with their own divisions of labour, rules and procedures, it is possible to replace the notion of ‘transferability’ with the concept of ‘boundary crossing’. This reflects the recognition that students engage successfully in different tasks and in different contexts by demonstrating what Reder (1993) has referred to as ‘polycontextual skills’. Such an approach takes account of the fact that learning is a process both of self-organisation and enculturation (Cobb 1999) and that these processes occur while individuals participate in cultural practices, frequently while interacting with more knowledgeable others in the workplace ‘zone of proximal development’.

3.4.33 At one level, learning through work experience ‘calls for the formation of new mediating concepts’ that assist learners in developing the forms of social interaction which support dialogic problem solving. In this sense, as Engeström *et al* further argue, ‘boundary crossing may be analysed as a process of collective concept formation’. At another level, it involves learners in functioning as ‘connective specialists’ and learning how to develop new goals, new actions and new strategies in order to grasp the connection between different activities. This process may take two forms (Guile and Young forthcoming). First, new patterns of activity and new meanings may emerge from the original context which constitute a modification of the original practice rather than an alternative realisation of that practice. Second, it may not be possible to resolve the original problem unless there is contact with ideas that lie outside the immediate situation, a route providing access to a ‘theoretically-constructed-world’

3.4.34 The research team came to see the idea of ‘practice’ as central to this process. Thus, teaching and learning become more a product and process of interaction within and between contexts and the successful mediation of these relationships is based upon a recognition that learning involves the *negotiation of learning* as part of actual workplace experience.

### **3.5 Innovative practice in work experience**

The idea of work experience as a form of practice.

3.5.1 One of the main assumptions made by the project is that the concept of practice is central to understanding the learning and development that occurs through work experience. However, unlike other studies of work experience, which have tended either to view practice in individual terms of attributes (knowledge, skills, attitudes) and tasks or to assume that it is possible to decontextualise practice from its cultural, social, technological and organisational context, the project has tried to avoid viewing practice as a series of discrete actions performed by individuals. Drawing on recent developments in socio-cultural learning theory that have focused on practice as a way of analysing human cognition and development as an integral part of a larger system, the project has introduced an alternative conceptualisation of practice.

The concept of practice

3.5.2 The concept of practice has a long and distinguished history in the social sciences (Bourdieu 1977, Wenger 1998) and is inextricably bound-up with the idea of learning. Certainly, many accounts of practice emanating from cognitive psychology have stressed that one of its central features is the ability to acquire facts, knowledge, problem-solving strategies or metacognitive skills, while sociological accounts have tended to stress immersion into habitus, that is, cultural codes and conventions (Bourdieu 1977).

3.5.3 Recent work in social-cultural learning theory, in particular Activity Theory (Engeström forthcoming) and Situated Learning (Lave 1993, Lave and Wenger 1991, Wenger 1998) and Distributed Cognition (Hutchins 1995) has suggested, however, that it more helpful to view practice in relational terms. By this we mean the relationship between people, action and the context in which people and action are located. First, this avoids treating the concept of practice and the context in which the practice is situated separately and allows both the macro-structural and personal process of construction to be taken into account (Lave 1993). Second, it avoids viewing the development of practice as though it were simply a matter of solving problems through the application of cognitive skill (Engeström and Gronin forthcoming). Third, it highlights that the development of practice involves learning how to use the 'resources', which may reside in or be distributed across different contexts to develop understanding, identity, new knowledge and, ultimately, to transform practice (Hutchins 1995).

3.5.4 By specifically eschewing the assumption that students engaged in different forms of work-based practice can be viewed as 'containers' to be filled-up with relevant knowledge and skill (Lave 1993), the project has been able to avoid assuming either that the social practice in which students become involved automatically enables them to assimilate in a fairly unconscious way relevant workplace knowledge, skills and attitudes or to internalise the implications of occupational changes occurring in the workplace, adapt to the 'world of work' and

develop an occupational identity (Guile and Griffiths forthcoming). Nevertheless, despite the strong emphasis on the concept of practice as a way of identifying the learning and development that occurs through work experience, the project has recognised that mastery of specific forms of practice may not be possible solely through participating in that practice (Lemke 1997). Put simply, full 'membership' of a specific 'community of practice' may entail active participation in another 'community of practice' in order to be counted as having mastered the practices of the first community.

3.5.5 In the light of the above considerations and working from the insights of Engeström, Lave and Hutchins about practice, the project has identified three different expressions of aspects of practice. It has distinguished between the forms of practice, the meaning of practice and the historically constructed basis of practice (Guile and Griffiths 2001).

3.5.6 Forms of practice relate to the different types of vocational/professional practice (ie, 'communities of practice') in which students might participate; pedagogic practices which support learning through work experience; and the forms of practice associated with different activity systems, which in turn help to shape the division of labour and rules which students encounter in workplaces.

3.5.7 The meaning of practice reflects the idea that any form of practice has been meaningful in terms of (i) the activity system in which that practice is situated and (ii) the processes of enculturation, identity change and intellectual development that people undergo. Thus, instead of reducing the meaning of practice to descriptions of either the perceived changes undergone by an individual or the changes in workplace activities that people are now expected to undertake, the project has illustrated how the meaning of practice will always be located in the changing relationships between people and the activities that they undertake. Building upon the insights provided by social-cultural learning theory, the project's case studies have highlighted that it is the inter-relationship between practice and context that enables people to personalise their experiences, mull over their understanding of specific practices and, ultimately, recontextualise their learning in other situations.

3.5.8 In the case of the historically constructed basis of practice, the project has illustrated the importance for educators to remain sensitive to the fact that all forms of practice are historically constructed activities which are constantly evolving and changing. This alerts us to the fact that one crucial element of any programme of work experience ought to be to introduce students to various conceptual frameworks that allow them to identify the historical 'roots' or origins of practice, identify current ideas about practice and begin to envisage future developments about practice.

Practice and the context of work experience

3.5.9 By arguing that the practice of work experience has to be viewed in relation to the context in which it takes place, the project has taken more seriously the concept of context than is usual in most of the work experience literature.

3.5.10 Two different interpretations of the concept of context have been distinguished (Guile and Griffiths 2000, Guile 2000). The first focuses on the actual context of work and defines context as a pre-given object or condition or set of objects or conditions. Three different aspects of this definition have been identified: the organisational context, the production context and the changes occurring within context. According to this interpretation, context is conceived as an external reality which individual students must either learn about or to which they must adjust.

3.5.11 The second interpretation reflects the idea that work and education are contexts through which students can learn and develop. Instead of focusing upon the individual as the main unit of analysis and describing the individual's response to external stimuli when identifying development, the project has used the following three ideas about learning to explore the practice of work experience in relation to the context where it takes place. The first is that learning entails engaging in some form of activity (or practice) that takes place in historically constituted social situations (Engeström forthcoming). This idea alerts educators to the importance of locating specific workplace activities in terms of their contribution to the overall work of an organisation at a particular period in time. The second is the situated basis of learning (Lave and Wenger 1991). This idea helps to draw educators' attention to the difference between two different conceptions of knowledge (Guile and Young forthcoming). The first is knowledge which is embedded in specific contexts and can be acquired by participation in those contexts. The second refers to knowledge that has been codified in bodies of rules and that can be apply in a range of contexts when it has been 'acquired' ( Sfard 1998), 'stolen' (Seely Brown and Duguid 1993) or 'appropriated' (Brown et al 1993) from situated contexts (ie, classrooms, laboratories, books, the Internet). The third is that the process of learning takes place in a mediated activity which occurs in a zone of proximal development (Vygotsky 1978). This idea has been used to explore the extent to which students are encouraged initially to 'connect' the learning and development that occurs within and between the context of education and work and subsequently to use this understanding to develop new form of practice or to develop alternative conceptions of practice.

3.5.12 These ideas and considerations about context and practice have informed the development of the typology described above, provided a basis of analysis for project case studies and encouraged the beginnings of cross-system mapping. The influence of the three ideas mentioned above upon the work of the project can be briefly illustrated in the following ways.

3.5.13 The idea of innovation in context: one of the project's main conclusions is that the relationship between the practice of work experience and context is significant

for work experience and its potential for learning. It allows new questions to be asked about how students participating in a work experience programme learn:

- from the members of the workplace 'community of practice' of which they are temporarily members;
- to relate the formal and informal learning that occurs within and between the contexts of education and work;
- to re-situate their learning and develop a transformative, rather than an informative, perspective about the world of work.

3.5.14 The project has tried, therefore, to address innovative questions and issues about learning through work experience, irrespective of whether the work experience was undertaken in general education or VET, by developing a conceptual framework to take account of the complex pedagogic issues relating to the practice of work experience. The idea of innovation described above, however, does not accord with many of the conventional assumptions about innovation.

3.5.15 The concept of innovation has traditionally been associated with some form of macro-level change. The terms, 'adaption' and 'creativity', have frequently been used in order to differentiate between the degree of innovation that has occurred. This basic distinction has been echoed in the organisational learning literature (Dodgson 1993, Garratt 1990), the literature about national systems of innovation (Edquist 1995, Lundvall 1991) and the literature about national skill formation systems (Green et al forthcoming).

3.5.16 It has been axiomatic in the organisational learning literature for many years to assume that companies which want to remain competitive in the global economy must continue to innovate. Innovation has usually been characterised as a form of error detection and error correction (Argyris and Schon 1978, Senge 1990). Argyris and Schon stress that innovations in organisations occur as a result of people engaging in 'double-loop' learning, in other words, establishing creative ways of questioning the norms of an organisation to ensure they adapt their systems, routines etc. Senge, in contrast, suggests that, although organisations have to adapt to survive, adaptation by itself is insufficient. He argues that the process of adaptation must be supplemented by a process of 'generative learning', that is, a form of learning that enhances an organisation's capacity to be creative and fundamentally transform business practices, organisational structures and so on.

3.5.17 Similar ideas and sentiments about the need for adaptation and creativity are found in the literature analysing national innovation or skill formation systems. Edquist distinguishes between short-term tactical actions (ie, adjustments) and longer-term strategic actions (ie, creative solutions) that governments have taken to enhance national innovation systems in response to the intensifying pressure of globalisation. Green et al (forthcoming) have identified the different mix of 'tactical' or 'strategic' responses that the UK, European, Pacific Rim and North American governments have made in an attempt to transform their national skill formation

systems to ensure that they support the creation of 'high-skill', economic development. Broadly speaking, all three literatures tend to treat innovation as though it were a macro-level phenomenon, hence the focus on innovation in systems, institutions and organisations.

3.5.18 One of the legacies of this widespread consensus (that innovation entails macro-level and systemic changes) has been that policymakers have been inclined to overlook the situated, improvised and collectively planned nature of innovations that have occurred in work experience. The emphasis upon macro-level change has tended to deflect the attention of policy makers away from the valuable contribution which stakeholder 'driven' and locally and/or regionally planned innovation can make to the design and delivery of work experience (Ireland, Sweden). Second, there has been insufficient attention to the significant impact which the transfer of 'best-practice' into a new context can make to the design and delivery of work experience (Hungary). There is also the critical contribution which 'meso-level' processes make to the successful implementation of innovation (Denmark). Finally, there is a pressing need to identify new models of work experience which take explicit account of the emergence of 'knowledge work' and the importance of supporting students to become 'boundary crossers'.

#### Innovative practice in work experience

3.5.19 These considerations inform what follows. As we have demonstrated, there are not only different educational contexts in which work experience may be offered - within general education, within school-based vocational courses and within school- and work-based apprenticeship -but also different understandings about how context influences the development of practice. Moreover, work in the project's case studies included testing out the role of the teacher/trainer as an effective mediator between and within different contexts of learning and an exploration of the impact of theory on certain aspects of practice as a catalyst for learning. Despite acknowledging with Fernstermacher (1989) that 'teaching' does not necessarily cause 'learning', the research team worked on the principle that the pedagogic practices of mentors and trainers in workplaces had a significant impact upon the knowledge developed and acquired by students (Griffiths and Marhuenda forthcoming). Thus, an important feature of the research was the identification of three case studies in each of the six partner countries which were selected in the light of the theoretical underpinning of the project. The 18 case studies varied considerably but they were all activities which possessed innovative features within their own contexts (Marhuenda 1999). The project has sought practitioner input so that its analyses are fully grounded, in particular in exploring questions which have arisen for the research team in its examination of learning theory (for example, the role of the 'mediator' in acting as a bridge or an interpreter between contexts, providing theoretical or practical insights at significant points in the experience).

3.5.20 Using the work experience typology, the project has been able to identify areas of 'innovation within context' through its case studies. They can be accessed in detail

through the full Technical Report. What follows are aspects of some of the case studies which illustrate the concept of innovation in relation to the five models.

The traditional model of work experience: 'launching' students into the world of work.

3.5.21 The idea of 'launching' students into the world of work still exerts a powerful influence on policy makers and educators alike. Having said that, some of the project's Case Studies show that it is possible to create an innovative programme in a fairly traditional setting.

3.5.22 Ireland: Case Study 1 - Fingal Community College, illustrates how the College had enhanced the design and delivery of a fairly traditional model of work experience by locating the work experience within the context of the Learning Certificate Applied (LCA). The College used experiential learning methods to enhance students' College-based learning experiences in order to engage disaffected and low achieving students in taking their studies more seriously. All subjects were based on experiential learning methodology, in the belief that they would be more accessible to students experiencing difficulty in coping with traditional academic learning in classroom settings. Thus, work experience fitted well within that new framework and ethos as its basis was more experiential in any case, even using the traditional model of work experience. This helped students receive feedback about their performance after completion of the work experience and to review their options in relation to joining the local labour market. The integrated nature of this curriculum allowed for the use of material from one area in another. For example, the English teacher used the reporting of work experience as a topic in her classes; discussion of the students' own work experience was used to bring added dimension and reality to Business Studies. Fingal was therefore able to provide greater congruence between pedagogy and the methods of assessment than is usually the case in other parts of the Irish academic educational system.

3.5.23 The Hungarian Case Studies – Deak (Business Studies) VIK (Catering and Tourism) and Esely (traditional crafts) – illustrate the way that work experience has been reformed to support Hungary's transition to a market-oriented economy. Instead of concentrating solely upon the development of specific occupational skills, each school has attempted to broaden the skill sets which students acquire. The Deak school has tried to develop students' professional and social competence by gradually strengthening their sense of responsibility and their ability to work on their own. Deak uses a simulated office environment to provide students with an opportunity to close the 'zone of proximal development' between their grasp of basic economic theory and their ability to monitor and assess the on-going financial performance of companies. In recognition that there is considerable overlap between the social and personal skills or competence required in the catering and tourism industries, the VIK school has tried to prepare students to operate in a variety of work contexts by providing a mix of on-the-job training and in-school practical sessions. The former allows students to acquire, for example, catering skills, while the latter supports students in appreciating the importance of customer care skills.

3.5.24 The Esely school has adopted a different strategy. It has enhanced a fairly traditional work experience by providing students with the opportunity to become 'boundary crossers'. Students undertake a two-week work experience in Germany. This allows them to acquire broader knowledge and skill in relation to traditional craft skills, such as leather work, understand how traditional craft skills are being used to make new products and services in response to changing consumer demand and learn how to collaborate and work with other specialists.

The experiential model: work experience as 'co-development'.

3.5.25 Despite the longstanding attempts to secure and maintain employer involvement in the design and delivery of work experience, several of the Case Studies reveal the innovative nature of the work undertaken by intermediary agencies to secure the active participation of new business partners in the delivery of work experience programmes.

3.5.26 Ireland: Case Study 2. Prospects, Ballyman Job Centre Co-Op, is a community project that highlights how a wide range of partners constructed a work experience programme that encouraged young people to undertake an overseas placement in Europe or America. This programme provided opportunities for students to enhance their knowledge about the forms of practice required in several industries associated with the 'new economy', for example IT, Tele-Services, Tourism. Furthermore, it significantly extended the range of agencies which helped students to personalise their experience and develop a more holistic sense of the activity system in which they were participating. Apart from receiving support from cross-cultural supervisors, students received additional support from FÁS trainers. FÁS trainers would use the work experience details as backup to points made in training, identifying similarities and differences based on the participants' own experiences. For example, the differing attitudes to service between retailing in Ireland and in Canada or the US. Local development organisations provided the debriefing sessions, as well as funding the ongoing post work experience training programmes on their return to Ireland. The involvement of parties not traditionally associated with work experience is innovative in the Irish context. Moreover, it has resulted in an average of over 80 per cent of each cohort of students gaining employment on their return home.

3.5.27 The second UK Case Study concerns a partnership of three regions: Suffolk, West Flanders and Zeeland. The partnership has used work experience, work shadowing, work visits and projects in the workplace to increase students' and teachers' knowledge and awareness of the differences between working and learning in the three regions. The project's website supports schools and workplaces to engage in simultaneous online communication, while students and teachers are exploring what can be done/learnt at the level of email, the intranet, the internet, video conferencing, on-line communication and access to other facilities, like libraries. The regional partners have established a project – Partners Across the Sea – within the

EU Netd@ys programme by creating an electronic network bringing together teachers and students from other different projects to compare their project work and to talk to each other. What is evident from the Suffolk experience thus far is that different ways of approaching work experience have emerged in each region based on the co-development model. The Suffolk study indicates that the central place which information and communications technologies (ICT) have come to occupy and, more importantly, the way in which it is used, suggest the beginnings of a 'distributed learning community'. In this regard, one of the most important innovations is that the partnership has tried to support learning across contexts and used workplaces to develop student understanding.

3.5.28 A slightly different approach to using the participation of business partners to support work experience is provided by the first Swedish Case Study: Bergagymnasiet. The school cooperates with its business partners to re-design work experience. They have agreed to set the students assignments that they undertake in the workplace and back at school; these projects are managed in small groups of students. Having been provided with an authentic business problem, as well as access to their teachers in order to gain the information they need to help produce a solution to a specific problem, the case study illustrates how innovations in work experience frequently rely upon the active participation of all stakeholders.

The generic model: work experience as a opportunity for key skill assessment.

3.5.29 One of the main educational debates in Europe in the late 1980s and early 1990s concerned the attempt to promote a greater sense of learner autonomy and self-discipline, particularly in low-attaining students and young people who are socially excluded, within general and vocational education programmes. It is widely accepted that the transition from education to work or from unemployment to work is becoming increasingly difficult for young people.

3.5.30 UK Case Study 2, 'Breakbeat', illustrates one of the many attempts to support the re-inclusion of unemployed, disaffected and socially excluded young people by providing new types of work experience that offer accreditation to those who lack conventional qualifications.

3.5.31 Breakbeat has specifically targeted the music industry because London has an unparalleled concentration of music industry 'businesses', and many young people, particularly in the above target group, have an interest in and draw role models from the music industry. The main intention is to develop young people's knowledge about the economics and organisational structure of the music industry, entrepreneurial flair and capabilities to work in different organisational contexts ('boundary crossing').

3.5.32 A learning programme has been established based on the use of negotiated 'learning outcomes' that inducts participants into the 'forms of practice' required in

the music industry. 'Key skill' modules have been written to help participants to identify their 'work process knowledge'. Participants are expected to symbolise their commitment to the project by agreeing a 'learning contract' that stipulates their role and responsibilities. This work experience is highly innovative in the UK context. It has not only tried to integrate the work experience component and the key skill modules, it has also supported participants in mediating the links between their 'work process' and 'inert' knowledge, and between the different learning context (ie, Breakbeat's premises and commercial premises) and work expectations (ie, standards of work and level of performance).

3.5.33 *The third Swedish Case Study, Ekopiloterna*, illustrates how the school can try to support the students to earn their own living. The means include examination projects that involve the students during the third academic year and a course in entrepreneurship and business administration. Students undertake the project work in close relation to people outside school and to local institutions. One of the main aims is to help students understand the changes that are occurring in the local community and labour market and how they will need less occupationally-specific and more generic forms of skill.

3.5.34 An alternative example of the value of negotiated 'learning outcomes' is provided by the *third Irish Case Study 3, Kilbarrack*. This work experience programme is also targeted at socially excluded young people. It provides an opportunity for participants to choose an occupational field, for example, photography or child care, and to negotiate a personal training plan to help them to acquire practical skills and basic qualifications (NCVA/City and Guilds). The plan involves a mix of work experience and course work; responsibilities for monitoring progress are split between a workplace mentor and a tutor.

The work process model: a strategy to assist students in 'attuning' to the context of work

3.5.35 The classic problem of the division between the formal knowledge which is taught to apprentices and the knowledge acquired through work (ie, 'work process' knowledge) continues to cause difficulties for vocational educators. Several of the project's Case Studies have addressed this problem.

3.5.36 Spain: Case Study 1, CELA, provides an excellent illustration of how periods of work experience in the automobile industry can be combined with simulated work experience in a VET institution to overcome the problem of 'inert knowledge'. Students are initially introduced via workshops to the technical, organisational and product-specific dimensions of the practice of automobile mechanics. Opportunities are provided for students to apply the knowledge that they have gained by working on simulated breakdown. CELA's trainers support students' grasp of the meaning of practice by modelling through their own practice the process of problem identification and problem solving. By integrating coaching and direct instruction, trainers are able to impart knowledge and support to students to develop their practical skills and logs are kept to enable students to record their progress. Weekly meetings help the tutors to monitor the work experience.

3.5.37 At a later stage in the course, students are provided with an opportunity to work in an automobile repair centre. Here, unlike at the training centre, the culture of most automobile centres presents students with opportunities and challenges and students have to learn how to 'learn-on-the-fly'. Opportunities to observe, discuss and participate in a 'community of practice' mean that they are soon able to develop specific practical skills and behavioural expectations that assist them in responding more effectively to customer preferences. In contrast, they find it much more difficult to understand the complex nature of the activity system in which they are working or to grasp the changing historical basis of the practice of motor mechanics. The work experience is innovative in the Spanish context because it has tried to make the tacit dimension of learning more explicit.

3.5.38 A different example of how to develop work process knowledge is provided by the Danish Case Study 1: Aarhus Business College. The school has developed a model – the School Based Enterprises (SBE) – that attempts to integrate periods of simulated work experience with actual work experiences. The college has created a 'simulated' office environment that encourages students to work in ways that are similar to how they will work during their work experience. Each student has their own base in an 'office', access to their own personal computer and organisational functions and work assignments to fulfil. Students choose to pursue a specific vocational profile. An inter-disciplinary group of teachers designs a learning programme, consisting of theoretical study, work experience etc that supports students in achieving the specific competences they have chosen to develop. Aarhus Business College illustrates the challenge of trying to develop work process knowledge by shifting the focus from disciplinary-based curricula to the development of competences and the ability to act in working life.

3.5.39 The Spanish Case Studies 2 and 3, which are both based in the La Florida Institute, provide slightly different examples of how to use work experience to link the learning acquired in an educational institution with work process knowledge. The curriculum consists of periods of theoretical study interspersed with work experience. Having undertaken basic study in either Administration and Finance or Administration of Computer Systems, students begin their work experience in the agriculture, banking, food and telecommunications industries. Firms provide students with workplace tutors, help students to relate their theoretical knowledge to workplace assignments and, thus, achieve the learning outcomes stipulated in their 'learning contract'. Firms expect students to fulfil the same responsibilities as full time workers. By making these demands, students are immersed into the 'workplace community of practice'. They learn that any decisions they take or actions they perform can have positive or negative consequences and that companies' reputation and profitability can be effected by hasty or ill-considered actions. The Case Studies illustrate how to use learning across contexts to develop work process knowledge.

## The connective model: a form of reflexive learning

3.5.40 One of the project's clearest messages is that practitioners continue to develop highly innovative approaches to work experience despite the constraints imposed by national education and training systems. Several of the project's Case Studies provide particularly good examples of situational and collectively planned innovations that have been designed to assist students in developing a more 'connective perspective' about the relationship between their formal and informal learning.

3.5.41 Sweden: Case Study 3, KfS Gymnasium, a school that specialises in teaching business administration for upper secondary students, illustrates how schools can overcome the academic and vocational divide at the local level. It has achieved this goal in the following ways. First, although students enrol for either the academic or vocational programmes, the school does not separate them for teaching purposes. As a result, all students follow the same curriculum during the first academic year. Second, it has re-engineered the curriculum. It has dispensed with the idea of a subject-based and whole class-based curriculum. The school now operates with a more progressive pedagogy so that both the students' and teachers' work patterns and behaviour have more in common with contemporary working life than with traditional upper secondary schools. This innovation means that students are encouraged to view their school experience as a form of work experience, in other words, to think about the school as a site where they work and learn with one another, with their teachers and with outside experts.

3.5.42 This process of learning has many affinities with the idea of an 'activity system'. Students usually work in couples or small groups, they use computers to communicate and share ideas with one another and their teachers and they contact professionals outside school for practical advice and assistance with assignments. This pattern of working allows students to develop the practices associated with enquiry-based learning as well as the emerging practices associated with the changing nature of work in business administration. Students are also allowed to take part in the school's decision-making processes which influence the content and pedagogy of their programme of study. The school places high demands on students and they are encouraged to keep agreed deadlines and meet certain expectations and standards. Teachers are encouraged to work in similar ways; each team of teachers has a workroom, which facilitates their collaboration, and weekly meetings are held to monitor student learning and curriculum development.

3.5.43 Another example of the type of localised innovation that reflects the principles and assumptions of the 'connective model' is provided by:

3.5.44 UK: Case Study 3, East Berkshire College and Legoland: the College's Media Faculty has negotiated with Legoland, UK (Windsor) to provide students with a work experience that involves producing Legoland's Staff Newsletter. This work experience allows students to develop their media-related skills (ie, journalism and

production) and to 'connect' their formal and informal learning. Producing the Newsletter involves students in researching and writing all the copy and learning to work within Legoland's corporate guidelines in order to design the final layout. Students, therefore, are constantly experiencing some form of 'consequential transition', they continually cross the boundary between school and college and take responsibility for varying their performance between two work contexts which are constantly evolving. College staff support students to come to terms with the different demands associated with two different 'zones of proximal development'. The college provides a 'safe' space for students to 'fail', since teachers accept that students need opportunities to take risk. Working at Legoland, however, means that they are subject to the same type of demands that the company would place upon full-time staff. This means the context in which students have to accept responsibility for self-improvement is much more demanding and some students find this difficult to come to terms with in accepting and fulfilling their responsibilities as 'boundary crossers'. The Case Study is innovative in the UK context because it has been specifically designed to assist students to develop a more 'connective' perspective on their learning and not leave it to chance. This has led the Media Faculty to modify the delivery of aspects of the curriculum and explicitly use tutorials to consolidate the link between different types of learning.

3.5.45 The second Danish Case Study, Aalborg Technical College, provides an illustration of the application of the 'connective model' to the education of machinists. The school has introduced into the curriculum some new features, namely the idea of a personal education plan and the use of a student logbook, which originally arose in another context. A further development has been to offer students access to a cross-disciplinary curriculum and a greater range of learning activities and processes. In order to ensure cohesion, joint themes are chosen and projects, theoretical input and workshops are directed within those joint themes. As a result, the college has stopped trying to offer a generic course to different cohorts of students. It has recognised that students have different educational goals, projects, workshops and classes and that these require specialist forms of support. The school is also piloting a new school-enterprise model of education. This allows each student, the school and enterprises to monitor student progress and take corrective action if needed. Greater understanding about the effectiveness of different learning has been achieved by offering teachers periods of work experience.

3.5.46 The third Danish Case Study, Tietgen Business College and Odense Technical College, illustrates how a new course in Innovation and Entrepreneurship has been introduced to support students' employability. The impetus for the initiative came from the Ministry of Education. The new course assists students to combine different types of theoretical knowledge - for example, knowledge of work cultures, work organisation, production technology, information technology and environmental education - and practical knowledge - for example, entrepreneurship, innovation, co-operation and project management. Work experience is integrated into the course in one of two ways. Students following apprenticeship-based education design their education around work practice in a specific company. Conversely, students who

are following an academic course are offered periods of work experience. Irrespective of the type of work experience undertaken, students are expected to undertake interdisciplinary project work and interdisciplinary co-operation. The college seeks to provide students with conceptual and practical experience and tools that will enable them to develop new concepts, products and services. In order to support learning across contexts, a link has been established with the South Bank University, London, and the University of Wolverhampton in England, where the students are able to attend a number of additional courses during the course of their education.

### 3.6 Work experience, quality assurance and innovation.

*'Value for money', 'fitness for purpose', 'meeting customer expectations'*

3.6.1 Questions about 'quality' in relation to work experience have usually been presented in terms of a concern to manage more effectively the relationships between education and business (Winter 1994) or the social partners (Fischer et al forthcoming). This concern arises from a sense that work experience is a vitally important component of educational policy and that its continuation depends upon the goodwill of the 'business community' and other stakeholders. Accordingly, it has been argued that steps need to be taken to 'manage' the education-business relationship in order to ensure that work experience offers 'value for money' to students, to education and training providers and to the 'business community'.

3.6.2 The concern with 'value for money' has resulted in most European countries in the importation of a series of terms that are supposed to help to assure the 'quality' of work experience, irrespective of whether it forms part of general or vocational education. The origins of many of these terms lie in manufacturing and commerce. Foremost among these imported terms are notions, such as 'fitness for purpose' and 'meeting customer expectations'.

3.6.3 The former term is usually employed to refer to the idea that the measures selected to assure quality offer some reasonable indication about the activity in question. The latter term has a close conceptual link with 'fitness for purpose'. Thus, in an industrial setting, quality is seen in terms of fitness for purpose, that purpose being established partly by the views and feelings of the customers of the service offered.

3.6.4 These ideas have often resulted in the production of very narrow, bureaucratic, mechanical and reductionist approaches to assuring quality in work experience. In contrast, the TSER project has started to develop a more holistic and integrated approach that redefines the idea of 'fitness for purpose' and 'meeting customer expectations'. Instead of conceiving these terms purely in accordance with their

industrial origins, the project has reformulated them to reflect more explicit educational concerns.

The practice of work experience: specifying purposes and outcomes

3.6.5 The starting point for this reformulation is the idea of the practice of work experience. We have used this term to highlight the culturally, socially and historically organised nature of work and learning. Thus, in the case of work experience, the idea of practice refers to the learning that occurs through processes of 'work' in the sense of actual vocational or professional practice. This definition indicates that work is potentially a very important context in which young people may learn and develop. Consequently, it presents educators with the challenge of trying to devise a system that identifies and/or quantifies in some way the learning that occurs through work experience.

3.6.6 Up to now, two main strategies have been deployed to assure the quality of work experience: the bureaucratic approach and the mechanistic approach.

(a) The bureaucratic approach: the quality of the management arrangements for work experience

3.6.7 This strategy has been based upon the creation of management arrangements between educational institutions and workplaces. This has taken two forms. First, a wide variety of guidelines has been produced throughout the EU encouraging schools, colleges and other intermediary agencies to manage the arrangements between education and work more effectively and to ensure that essential health and safety considerations are satisfactorily addressed (cf Peffers et al 1997, Griffiths et al 1992). A typical 'quality checklist from the European Work Experience Project, supported by the EC's PETRA and Leonardo da Vinci programmes, indicated, for example:

1. Integration of the EWE scheme with the curriculum and the setting of aims and objectives for the period of work-based learning.
2. Clear student selection criteria based upon the aims and objectives.
3. Appropriate language preparation.
4. Attention to equal opportunity.
5. Preparation visit to the school and company partners elsewhere in Europe.
6. Negotiation of the work placement in the light of aims and objectives.
7. Appropriate social, economic and cultural preparation.
8. Student preparation and follow-up assignments.
9. Attention to the 'psychology' of partnership (*ie*, to different approaches and customs).
10. Understanding of different education and training systems.
11. Attention to professional development through teacher placement.
12. Early clarification of insurance, health and safety and funding issues.
13. Monitoring of the scheme.
14. Evaluation of the scheme.
15. Developing future work in the light of the experience.

3.6.8 Second, social partners have established bureaucratic structures and networks, including government representatives and a number of external experts, to monitor the design and delivery of work experience within companies (Fischer et al forthcoming, Marhuenda et al forthcoming).

3.6.9 As our research has highlighted, there is a continuing place for such guides and bureaucratic structures. They reflect essential legislative requirements in different countries and direct attention to key management tasks. However, it is not the case, as might be implied, that all workplaces are stable work environment and offer similar contexts for learning. We face a situation in which the unprecedented pace of global economic pressure, coupled with developments in communication and information technology, is forcing continuous change in the workplace. This development is resulting in a polarisation of those companies which are trying to enhance their product and service strategy and become 'knowledge-based' organisations and those which are only prepared slightly to modify their competitive and management strategies (Guile and Fonda 1999). This suggests that approaches to quality will have to take more explicit account of the different types of environments in which learners undertake their work experience.

(b) The mechanistic approach: the use of 'learning outcomes'

3.6.10 The alternative strategy has been to focus on the idea of 'learning outcomes'. The main advantages of the 'learning outcomes' approach are that, first, it is thought to be more liberalising and egalitarian to adopt a system which attaches prime importance to the 'outcome', the result, and does not prescribe the form of learning necessary to gain a qualification. Second, an agreed series of common outcomes can be identified for any programme of study and on that basis it is possible to assess the learning that has occurred.

3.6.11 In the case of work experience, a growing practice has been to encourage students to plan a work experience placement and manage and evaluate the resulting learning through the use of statements about 'learning outcomes'. A common feature of this approach is to require learners to formulate their own personal action plans for work experience that identify areas for skill development. The plan serves as a type of contract between the individual, the workplace and the educational institution, thus facilitating student self-assessment and external verification of key skill development within a workplace, albeit in a rather narrow and mechanistic way.

3.6.12 One of the problems associated with 'learning outcomes' is that they tend to imply that the process of teacher/trainer-facilitated reflection is fairly straightforward. However, as previously indicated, unless handled carefully, facilitated reflection can fail to take account of at least three issues: that (i) workplaces and work cultures are not transparent and that learning from experience

is a much more complex and problematic process than the use of 'learning outcomes' suggests; that (ii) the 'voice' of the learner does not constitute the only form of authentic knowledge of work and hence aspects of work experience; and that (iii) the meaning and significance of experience depend not only upon the experience as such but also on how and by whom it is interpreted.

3.6.13 Another difficulty with the use of 'learning outcomes' is that, in order to use them effectively, those in education or workplaces with responsibility for supporting the process of learning need to explore with learners the extent to which experience is influenced by the constraints of its context. This means they have to be prepared to use concepts to provide a theoretical framework in which learners can reflect critically upon their experience. It suggests that concepts and theories have to be introduced to the learner by the teacher or trainer and deepened through conversation in order to facilitate the process of reflection. In other words, learners need to be immersed in ideas as well as in the world of experience and it is the process of mediation which provides learners with a basis for connecting their context-specific learning with ideas or practices which may have originated outside those contexts. However, as our research has indicated, learning outcomes are rarely used to help learners relate practice to context, to conceive alternatives to practice or to identify the limitations of context.

3.6.14 Both approaches have therefore, albeit in different ways, developed the conventional 'industrial' notion of 'fitness for purpose' and 'customer expectations'. The former approach rests on an explicit assumption that the 'customer', in this case the company which has provided the placement, must feel satisfied. The latter rests on an assumption that context is unimportant and that the use of 'learning outcomes' provides a strategy for identifying some evidence that learning has occurred.

#### *Beyond 'fitness for purpose'?*

3.6.15 An example of a highly regulated approach to quality assurance is given in the Danish policy study (Christensen 1999) for the project. Here it is the responsibility and duty of trade committees to authorise the enterprises considered suitable to take students for 'work practice'. Decisions are taken on the basis of a 'concrete assessment' of whether the enterprise is able to complete the work practice in accordance with the rules drawn up in the respective consolidated Act and of whether the enterprise is able to offer satisfactory training conditions. The Ministry of Education has proposed that an evaluation institute be established in connection with future reform so as to produce 'a better quality assurance of education nationally'. Under present arrangements, students are required to pass a final examination in which their theoretical and practical skills must be shown to correspond to a set standard. The role of the trade committees is reported as being valued in a model of quality assurance which is highly regulated and expresses many features of 'fitness for purpose' and 'customer expectations' strategies.

3.6.16 Another approach to transforming 'fitness for purpose' and 'customer expectations' strategies emerged through the Irish case and policy studies. As a result of reflection on those studies a staged approach to quality assurance was seen as:

- STEP 1: An agreed definition of work experience as a process.
- STEP 2: Identification of the Stakeholders in the work experience process.  
 Participants/Learners, Providers, Practitioners  
 Mediators/Facilitators/Mentors, Funders  
 Social Partners: their Associations, Accrediting Bodies  
 The Workplace Unit of the National Adult Learning Council  
 Policy Makers: Department of Education & Science Inspectorate  
 Department of Enterprise Trade and Employment, Department of Finance
- STEP 3: Work experience as a polarity between personal development and employability in a volatile environment negotiated for each client and client group.
- STEP 4: The role of the stakeholders in the quality assurance process.  
 (Roles are reflected in the policy studies, the case studies and the mapping of the case studies to the models.)
- STEP 5: The role of mediators, facilitators and mentors in ensuring the dynamic design and implementation of work experience as a process.
- STEP 6: Identification of the resources required to enable Steps 3-5 to be carried out effectively.

3.6.17 These steps reflect some of the issues discussed during the project deliberations and which were summarised after its London (April 1999) meeting as follows:

*Quality issues arising from present arrangements and existing and new approaches*

1. Establish the purpose/goals of work experience (for example: to support students' employability and ability to participate as active citizens in society) and also to identify how work experience might fulfil those purposes/goals (for example, through workplace socialisation and/or opportunities to relate formal and informal learning).
2. Identify (i) the 'stakeholders' in work experience, for example, students, educational institutions, companies and policymakers and (ii) the benefit that accrues to each 'stakeholder' as a result of participating in/providing/facilitating that work experience.
3. Identify how the process of learning is mediated in the workplace and in the educational institution as well as by the student. Among the resources that could be used to support this process of mediation are:
  - the theoretically derived questions. They provide a way of identifying students' progress through both the vertical and horizontal 'zones of proximal development';
  - the future qualifications. They provide a checklist of the skills that students may have acquired.
  - provide access to 'high added value' work experience placements. This will ensure that students have opportunities to:

- follow tasks, manage situations, develop work process knowledge and cross organisational boundaries;
  - experience different forms of management and supervision, for example, ‘arms length’;
  - work in different contexts (for example, teams), contribute to different activities (for example, produce an assignment) and participate in placements of varying length/duration (see Typology of Work Experience for other possibilities).
4. Ensure that sound management arrangements are in place so that students are:
    - not exploited;
    - not exposed to any Health and Safety risks;
    - have access to regular forms of support from the workplace mentor and school/college tutor;
    - are protected by statutory policy guidelines.
  5. Establish the relationship between work experience and the school/college curriculum so that:
    - the benefits of work experience can be evaluated;
    - the response of the student, before, during and after undertaking the work experience can be recorded/profiled;
    - the learning processes that support learning through work experience are identified
  6. Inform policymakers, the research community, practitioners and students about the value of work experience as an innovative strategy to support lifelong learning.

3.6.18 This summary took further the attempt to engage quality procedures adequately with learning issues but was insufficiently located within a conceptual framework capable of capturing the depth and complexity of the processes involved. What follows describes how an attempt was made to provide such a framework based upon the earlier theoretical and case studies of the project.

*The relationship between the practice and context of work experience and quality.*

3.6.19 In keeping with our research questions and assumptions about learning, the research team explored other possibilities for addressing quality. This led us to examine whether ideas arising from our theoretical considerations and case studies could provide the basis for developing a new, analytical framework which explicitly provides a ‘situated’ perspective on the relationship between work experience, innovation and quality. This framework builds upon a number of assumptions and features associated with the ‘connective model’ of the project’s typology (see above).

3.6.20 The framework first locates the idea of quality in the sociological analysis of the shift from ‘technocratic modernisation’ (Young 1998) to ‘reflexive modernisation’ (Beck et al 1994). Technocratic modernisation refers, in the case of education and

training, to the extended application of 'scientific' or business efficiency, models (eg, ideas about 'fitness of purpose') to education in general and work experience in particular. Reflexive modernisation expresses a growing recognition that technocratic approaches do not support the forms of learning required in relation to the enormous pressures for change generated by globalisation – and that it is only through becoming 'reflexive' that institutions and individuals glimpse the emancipatory possibilities in human action. Technocratic approaches to work experience thus frequently fail to support innovation (Fischer et al forthcoming, Herlau et al 2000) or to capture the learning which has occurred in workplace 'communities of practice' (Guile and Griffiths 2001).

3.6.21 The framework also acknowledges explicitly that the practice of work experience involves a form of 'boundary crossing', signalling a recognition of the different cultural, social and political configurations of power and knowledge that students will encounter as they move between education and work. Our approach to quality thus takes account of the pedagogical conditions which support students in becoming 'boundary crossers' and the role of education and training providers and workplaces in supporting learning between contexts.

3.6.22 The framework (see diagram) employs two new terms - insular reflexivity and connective reflexivity – to reflect the conceptual questions and issues raised above and to help in the process of discriminating more clearly what is being assessed by quality assurance strategies.

3.6.23 Insular reflexivity refers to context-bounded analysis and learning or learning that is internal to those organisations (ie, schools, colleges, companies.) participating in programmes of work experience. Organisations which exhibit insularity are inclined to accept existing conventions, assumptions, and paradigms about the practice of work experience in a fairly uncritical way and apply only these to any analysis or assessment of their practice. Connective reflexivity, on the other hand, refers to those organisations which review critically the assumptions they make about the

- purpose of the learning and development which work experience is supposed to support;
- learning activities which are offered to students as part of their work experience;
- nature of the relationship between the education and business partners.

and thus try to operate in the spirit of an 'enquiring system' (Churchman 1971) or an 'expanding activity system' (Engeström forthcoming).

3.6.24 Connective reflexivity differs from insular reflexivity in the extent of context provided for the critique. It focuses upon work experience as a whole activity system and stresses the interdependency of the whole and its constituent parts (eg, ensuring that the knowledge gained from managing work experience is shared throughout all parts of an organisation).

3.6.25 The project has made a further distinction between the resources for supporting learning through work experience and the outcomes of work experience. This has enabled us to contrast the differences between partial and more systematic engagement with the notion of innovation.

3.6.26 The diagram below is an attempt to develop a new perspective on the question of quality and work experience. It relates the forms of insular and connective reflexivity to the practice of work experience. These forms of reflexivity have been presented as a typology. The two axes of the diagram refer to the context and the practice of work experience. The first axis indicates whether the reflexivity adopted by those organisations participating in work experience is either insular or connective. The second axis refers to the focus of the reflexivity and can be internal or external.

Quality diagram

3.6.37 We suggest that this new approach to quality in work experience represents a considerable step forward from prevailing 'bureaucratic' and 'mechanistic' approaches. It provides a means of mapping an integrated approach to quality which is based on learning considerations, a process which is crucially neglected or is missing in other approaches. This framework requires explorations well beyond an exchange of information about the 'quality' of learning: it opens ways of supporting and encouraging greater innovation in practice. Fischer *et al* (forthcoming) have described 'practice-related transformation' and the framework provides for this as well as supporting the transformation of context through the creation of 'learning environments' in educational institutions and workplaces. Working through this framework in practice will be explored in further research.

3.6.28 In summary, effective use of the framework presupposes greater dialogue between learners, educationists and workplaces about how to address such issues and challenges as: 'boundary crossing', identifying pedagogic processes which support learners in resituating their learning and creating environments for learning.

### **3.7 Conclusions**

3.7.1 Due to the elusiveness of the true learning potential of work experience, the project has prioritised the exploration of work experience as an informal (work-based) context for learning. Thus, the concept of 'context' is the starting point for considering learning through work experience.

3.7.2 The broad conclusions of the project can be grouped into the four areas of Work and Employment, Policy, Learning and Practice. They are underpinned by the detailed case studies, policy and literature reviews undertaken during the course of the project.

#### **Work and employment**

3.7.3 The quickening pace of global scientific and technological innovation, the emergence of a new techno-economic paradigm based on the use of information and communication technologies, the scale and impact of global multinational activity and the global process of industrial convergence have been responsible for exerting tremendous pressure for industrial, organisational and occupational change.

3.7.4 Judging the extent and implications of the cumulative effect of globalisation on workplaces within the EU is difficult because most research tends to adopt different starting points in analysing the responses of companies to the intensifying impact of globalisation. This difficulty in establishing a clear-cut consensus about the trajectory of industrial, organisational and occupational change reflects the fact that the links between product and service quality, competitive advantage and knowledge and skill are not simple and unidirectional. The emerging consensus appears to be that, while it is important to acknowledge that there is a significant shift towards knowledge work, it is equally important to note that this is apparent in specific sectors and specific parts of an organisation and thus in specific sections

of the workforce. It is also important to recognise that, at present, 'knowledge-intensive' work tends to be a feature of specific regions rather than entire economies and that, even in those regions, there is still evidence that 'low-skill' work continues to flourish. A third feature is that, depending upon market segment and product development strategies, companies chose to adopt either 'high' or 'low' added-value models of production and skill formation (or a mix of such models) in order to remain economically viable for the foreseeable future.

3.7.5 Globalisation is, however, generating the need for new learning relationships between education and work which will support lifelong learning, not least because, although some organisations are basically interested only in employing people who will conform to the demands of corporate requirements, others are actively seeking young people with the ability to share and create knowledge, cross boundaries and take responsibility for adding value to product and service delivery - and thus, in the process, generating new skill needs. As experience deepens, however, there is some evidence that employers are increasingly and actively seeking people of all ages to fulfill their requirements. Thus, young people would also need to be responsive to the older person's life/work experience, as well as offering more recent qualifications. The importance of relevant work experience increases in this context.

3.7.6 The typology of five models of work experience developed by the project reflects the impact of different economic, technological and social factors prevailing within European countries as well as different ideas about learning and development. Although the models in the typology may be specific to different periods of economic and technological development and reflect changing educational ideas about the process of learning, they can and do co-exist in different countries. In this sense, the typology is useful in helping to address the complex relationship between policy, the learner, skills needed and pedagogy. The typology takes into account:

- The traditional model of work experience: 'launching' students into the world of work.
- The experiential model: work experience as 'co-development'.
- The generic model: work experience as an opportunity for key skill assessment.
- The work process model: a strategy to assist students in 'attuning' to the context of work.
- The connective model: a form of reflexive learning.

## Policy

3.7.7 The approach offered through the typology and modeling of the project is important because, at policy level, there has been a failure to press for new theoretical and conceptual frameworks for relating learning in work-based contexts to formal education and training. It is not possible to reform the 'launch' model of work experience by trying to reform the content of the formal (VET) component of

learning alone. Those managing change should beware of the phenomenon of 'innovation without change', the capacity of a system to accommodate the rhetoric of reform within the culture and practice of the status quo.

3.7.8 Overall, there is a poor relationship between policy and practice, a lack of clarity in relation to the aims and objectives of post-16 work experience, its delivery (in particular, a lack of clarity in relation to workplace supervision, mentoring and teaching, the availability and quality of placements), a lack of evidence in relation to learning, the role of employers (the quality of relationships between employers and education, nature of qualifications sought, degree of attention to changing nature and modes of work).

3.7.9 Whereas the project's overall policy analysis confirms the renewed emphasis (public or rhetorical) upon learning in the workplace, it is apparent that policymakers in most EU countries continue to tackle this objective in one of two main ways. The first assumes that the main purpose of work experience is to help young people to learn how to reproduce pre-existing activities, rather than to encourage them to learn and develop by 'putting things' into different contexts. The second assumes that learning in the workplace is best supported through involving young people in planning a work experience placement and managing and evaluating the learning through the use of statements about 'learning outcomes'. As a result, apart from some developments associated with the TSER Project on Work Process Knowledge, the push to make work experience more widely available to young people has tended to address new issues about skill development by relying on old models of learning in the workplace.

3.7.10 Work experience can no longer be viewed as developing a technical competence in 'something' nor as providing an opportunity to use 'learning outcomes' as though they capture in some way the authentic knowledge/skill developed by a young person in a specific situation. Increasingly, work experience will have to be viewed as a means of developing an involved sense of responsibility. Thus, the project concludes that the dominant interpretation of 'transfer', which stresses 'the degree to which a behaviour will be repeated in a new situation', is insufficient. The concept of consequential transitions is necessary, one which recognises an extra dynamic in the process of exploring new territory in which pre-learned responses and solutions are unavailable. Consequential transitions involve the construction of new knowledge, identities and skills through transformation (rather than the application or use) of something that has been acquired elsewhere. A transition of this form involves a notion of progress and is best understood as a developmental process. Such transitions may involve changes in identity as well as changes in knowledge and skill. In other words, they are processes which involve the full person and not just learned attributes or techniques.

Learning

3.7.11 Increasingly, workers are expected to act as 'boundary crossers' between 'activity systems', in other words, to possess the ability to contribute to the development of new forms of social practice and to produce new forms of knowledge. This entails learning how to contribute to the transformation of work contexts.

3.7.12 The project concludes that an innovative 'connective' model of pedagogy and learning in work-based contexts should be developed. This model would integrate and go beyond the principles of reformist, alternative and dualist models and make fundamentally different assumptions about learning and development. Learners need to be immersed in ideas as well as in the world of experience and it is the process of mediation which provides learners with a basis for connecting their context-specific learning with ideas or practices which may have originated outside those contexts.

3.7.13 The term, connectivity, defines the purpose of the pedagogic approach which would be required in order to take explicit account of the vertical development (individual progress through a hierarchy of knowledge and skills) and horizontal development (change and development through moving from one context to another) of learners. Supporting students to understand the significance of these two dimensions of development constitutes a pedagogic challenge, albeit a rewarding one, for teachers in educational institutions as well as those with responsibility for development in the workplace.

3.7.14 Learners will thus need to be supported to incorporate concepts acquired through their vertical development, and which are external to the context, to mediate the relationship between their formal programmes of study and, for example, trends in labour and work organisation. They not only have to develop the capacity to participate within workplace activities and cultures; they also need to learn how to draw upon their formal learning and use it to interrogate workplace practices. In addition, they need to use their informal learning as a resource to recontextualise their formal knowledge and skill and work with others to contribute to the development of new knowledge, new social practices and new intellectual debates. Thus, learning involves learners in functioning as 'connective specialists' by using specialist knowledge and skill acquired in formal education to understand why certain types of performance are required in different work contexts, to develop the confidence to cross organisational boundaries or the boundaries between different, and often distributed 'communities of practice' and to connect their knowledge to the knowledge of other specialists, whether in educational institutions, workplaces or the wider community. This means that pedagogy should be developed to facilitate the process of reflection-on-context as well as reflection-in-action.

Practice

3.7.15 Work is not solely a context which students learn about; it is a context through which students can learn and develop. This shift of focus can direct attention to how individuals learn, grow and develop through the strength and richness of their interactions and applications within and between different contexts.

3.7.16 Thus, the project has explored how work experience can provide (i) a context for participating in 'communities of practice' and learning how to develop the ability to act as a 'boundary crosser' and (ii) a means of re-examining and re-forming the relationship between work experience and formal programmes of study.

3.7.17 Fundamentally, in its work on 'practice', the project has made important distinctions between the forms of practice, the meaning of practice and the historically constructed basis of practice. Forms of practice relate to the different types of vocational/professional practice (ie, 'communities of practice') in which students might participate, pedagogic practices which support learning through work experience and the forms of practice associated with different activity systems, which in turn help to shape the division of labour and rules which students encounter in workplaces. The meaning of practice reflects the idea that any form of practice has to be meaningful: (i) in terms of the activity system in which the practice is situated and (ii) for the individuals who are engaged in the practice. In the case of the historically constructed basis of practice, it is important to remain sensitive to the fact that all forms of practice are historically constructed activities which are constantly evolving and changing. Thus, membership of a community of practice involves not only learning how to perform in one context but also what the performance means and how it might relate to other aspects of social or cultural life. The project's case studies illustrate this in different ways.

3.7.18 Finally, the project has developed a holistic and integrated approach that redefines the idea of 'fitness for purpose' and 'meeting customer expectations'. Instead of conceiving these terms purely in accordance with their industrial origins, the project has reformulated them to reflect more explicit educational concerns. A new perspective on the question of quality and work experience is suggested, capable of relating the forms of insular and connective reflexivity to the practice of work experience.

## 4. CONCLUSIONS AND POLICY IMPLICATIONS

### 4.1 Conclusions

4.1.1 Due to the elusiveness of the true learning potential of work experience, the project has prioritised the exploration of work experience as an informal (work-based) context for learning. Thus, the concept of 'context' is the starting point for considering learning through work experience.

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systems, which in turn help to shape the division of labour and rules which students encounter in workplaces. The meaning of practice reflects the idea that any form of practice has to be meaningful: (i) in terms of the activity system in which the practice is situated and (ii) for the individuals who are engaged in the practice. In the case of the historically constructed basis of practice, it is important to remain sensitive to the fact that all forms of practice are historically constructed activities which are constantly evolving and changing. Thus, membership of a community of practice involves not only learning how to perform in one context but also what the performance means and how it might relate to other aspects of social or cultural life. The project's case studies illustrate this in different ways.

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## **4.2 Recommendations**

4.2.1 The conclusions of this research project suggest some overarching recommendations for consideration at a European level. They reflect the concerns underlying the original research questions posed in the project and they connect with the broad questions of European frameworks, key qualifications and new skills increasingly concerning EU policy makers. The research partners from the UK and Denmark felt that the overall recommendations were appropriate to their national contexts, particularly regarding the potential of the 'connective model'. Research partners from Sweden, Ireland, Spain and Hungary added a number of recommendations relevant to specific national contexts and these may be referred to in detail in Annex I. The overarching recommendations are as follows:

1. In order to facilitate current and future collaborative research between university researchers in partner member states, the terminology and concepts developed during the course of the research and exemplified in the project's typology should be analysed, tested and trialled during the course of other relevant research projects and developments.
2. The current policies of government, businesses and educational and vocational institutions in member states (towards work experience as an education and training strategy for the future) should be informed by what is known about learning as well as what is known about changes in work.
3. Businesses and educational and vocational institutions could practically respond - as learning organisations - to the challenge of the changing workplace and the likely demands of employment in the 21st Century by using and developing the project's connective model of learning through work experience.

4. The project's typology and the concepts and approaches which underpin it offer ways of connecting formal and informal contexts of learning which should be relevant in course development.
5. The concept and practice of 'mediation' between formal and informal contexts of learning are fundamental in achieving an effective relationship between classroom learning and workplace learning and can be developed by teachers and workplace educators/trainers in partnership.
6. The project's framework for considering quality allows for the identification, development and transfer of learning in way which goes well beyond the 'checklist' approach to quality issues. The framework should be developed in the school/workplace context.
7. The project's development of ways of connecting formal and informal learning arises from reflection on innovatory work taking place within different contexts. Change in educational institutions and in businesses in relation to education-business partnership innovation should take account of such innovation – often involving applications of the learning technologies at the 'periphery' –in the knowledge that 'innovation without change' is ubiquitous.
8. The successful transfer of innovations or good practice across European vocational education and training systems is difficult. This complexity should be accepted and an understanding of the need to develop 'boundary crossing' in the sense underlying the connective model of the project's typology should underpin future work in both EU and 'accession' countries.
9. The implications of this research for policy and practice at national, regional, business and educational institution level are significant. Policy making is constrained by time and political pressures, whereas 'applying' research results tends to take time, to involve patience, to expect change gradually over a long period. Policy makers may wish to take account of research but the political consequences of seriously doing so tend to mean that they do not. EU and national strategy should therefore explore the weaknesses in the interface between policy and research with a view to making the relationship more realistic, effective and productive, particularly in the areas for development revealed through the work of this project.

## 6. DISSEMINATION AND/OR EXPLOITATION OF RESULTS

### Publications

Guile, D. and Griffiths, T. (2001) 'Learning through work experience' in *Journal of Education and Work*

Griffiths, T. and Marhuenda, F. (forthcoming) 'Interpretation of the relevance of work experience for future oriented educational strategies as a challenge for research' in *Qualifications, competences and learning environments for the future: European Reference Publication*, Thessaloniki, CEDEFOP

Griffiths, T. (2000) 'Learning through work experience' in *Further Education Bulletin*, 7 Spring, London, Centre for Information on Language Teaching and Research

Johannisson, B, Madsén, T and Wallentin, C (2000) *Aha! Företagsamt lärande (Aha! Entrepreneurship learning)* Accompanying text to three series for radio and television programmes on entrepreneurship education in Sweden, National Company for Educational Broadcasting (UR)

Madsén, T and Wallentin, C (forthcoming) *Aktivt och autentiskt lärande – skolan i närsamhället (Active and Authentic Learning – the School in its Local Society)*.

McKenna, P. and Ó Maolmhuire, C. (2001) *Work experience in Ireland: partnerships for future effectiveness*, The School of Education Studies, Dublin City University

Marhuenda, F., Cros, M.J., Giménez, E., González, N., Toribio, L., Martínez, R., Navas, A., Ros, A. and Alonso, M.A. (2001) *Aprender de las prácticas: Didáctica de la formación en centros de trabajo*. Final report of the Spanish WEX21C team, ISBN: 84-370-4935-0, Universitat de València

Marhuenda, F., Cros, M.J. et al. (2000) *Prácticas de empresa y formación profesional*. Interim report of the Spanish WEX21C team, ISBN: 84-370-4377-8, Universitat de València

### Presentations

UK: *Symposium on Work Related Learning*, proposal by Toni Griffiths for Symposium, based on the work of this project, at the European Conference on Educational Research (ECER), September 2001 in Lille.

UK: *Learning and work experience*, paper presented by Toni Griffiths to the Institut National de Recherche Pédagogique, February 2001, Paris.

UK: *Learning and work experience: European perspectives on policy, theory and practice*, paper presented by Toni Griffiths and David Guile at the European Conference on Educational Research (ECER), September 2000 in Edinburgh.

*UK: Learning and work experience*, paper presented by Toni Griffiths and David Guile at the annual conference of the British Educational Research Association, University of Sussex, September 1999

*Spain: Work experience as an education and training strategy: new approaches for the 21<sup>st</sup>. century*, presentation by Fernando Marhuenda at the European Conference on Educational Research (ECER), September 1999 in Lahti, Finland Conference

*Project team: Work experience as an education and training strategy: new approaches for the 21<sup>st</sup>. century*, presentation to the Fourth International Partnership Conference in Trondheim, Norway, June 1998

*Project team: Work experience as an education and training strategy: new approaches for the 21<sup>st</sup>. century*, presentation to the Leonardo da Vinci 'Spesnet' Project, Valencia,

## **Other**

*UK: Development of Resource Management Tools to Support the project, KnowNet (nearing completion)*

*Sweden: Presentations of the project for teachers and heads have been made in 2000 at two conferences in Kristianstad (Torsten Madsén) and further presentations will be made in 2001 to a network of Swedish researchers in the field of vocational education and to regional conferences for teachers, head-teachers and politicians planned for the autumn 2001.*

*Sweden: Torsten Madsén has been appointed a member of a reference-group, connected to the ongoing parliamentary investigation of the future organisation of upper secondary education in Sweden. This group is used by the chairman for the investigation for input of fresh ideas to the investigation.*

*Sweden: articles planned in the teacher publications, *World of Schooling* and *The Vocational Teacher*.*

*Denmark: Dr. Henrik Herlau (Copenhagen Business School) has made presentations and demonstrated the practical implementation of the matrix and the chosen part of that matrix at Vejle, Ikast, Odense, Dronninglund Vocational training Centres together with their accompanying partners in the social dialogue (unions, teachers, students, employers, companies).*

*Spain: conferences, seminars, courses and web site/database (see below)*

*The project team developed good contact with the Leonardo da Vinci 'Parity of Esteem' project during its multiplier phase as 'Spesnet' and had a constructive joint dissemination meeting in València in 1999. The project also remains involved in the DGXII 'TSER cluster' of projects, part of this activity now being supported under the EU Fifth Framework.*

## **Dissemination Plan - UK**

Dissemination plans have attended to both the UK and the wider European context:

European Dissemination Conference. This was held in London on 2-3 February 2001 with 65 participants from 15 countries and included a CEDEFOP workshop in which the results of the project's work were related to key European areas for development and inquiry. Full details of the conference are given at Annex II and the attached thematic presentation of the project's work was distributed to all participants.

#### *Publications*

Guile, D. and Griffiths, T. (2001) 'Learning through work experience' in *Journal of Education and Work*

Griffiths, T. and Marhuenda, F. (forthcoming) 'Interpretation of the relevance of work experience for future oriented educational strategies as a challenge for research' in *Qualifications, competences and learning environments for the future: European Reference Publication*, Thessaloniki, CEDEFOP

Griffiths, T. (2000) 'Learning through work experience' in *Further Education Bulletin*, 7 Spring, London, Centre for Information on Language Teaching and Research

#### *Presentations*

*Finland, Jyväskylä*, November 2001: Dissemination conference in association with the National Board of Education and the Ministry of Education

*Symposium on Work Related Learning*, proposal by Toni Griffiths for Symposium, based on the work of this project, at the European Conference on Educational Research (ECER), September 2001 in Lille.

*Learning and work experience*, paper presented by Toni Griffiths to the Institut National de Recherche Pédagogique, February 2001, Paris.

*Learning and work experience: European perspectives on policy, theory and practice*, paper presented by Toni Griffiths and David Guile at the European Conference on Educational Research (ECER), September 2000 in Edinburgh.

*Learning and work experience*, paper presented by Toni Griffiths and David Guile at the annual conference of the British Educational Research Association, University of Sussex, September 1999

#### *Other*

Development of resource management tools to support the project, KnowNet (nearing completion)

## Dissemination Plan - Sweden

### *During 2000:*

- Two of the Swedish cases are presented in a book on entrepreneurship learning in upper secondary education, published in August 2000. This is published by the National Company for Educational Broadcasting (UR), as an accompanying text to three series for radio and television of programmes on entrepreneurship education in Sweden, distributed and marketed during the autumn 2000. The title is: Johannisson, B, Madsén, T and Wallentin, C: Aha! Företagsamt lärande (Aha! Entrepreneurship learning), 128 pp.
- Two of the Swedish cases are presented in a book-manuscript, distributed during conferences during November 2000. The final version will be published during 2001. The title will be: Madsén, T & Wallentin, C: Aktivt och autentiskt lärande – skolan i närsamhället (Active and Authentic Learning – the School in its Local Society).
- Presentations of the project for teachers and heads have been made at two local conferences in Kristianstad (Torsten Madsén).
- Torsten Madsén has been appointed a member of a reference-group, connected to the ongoing parliamentary investigation of the future organisation of upper secondary education in Sweden. This group is used by the chairman for the investigation for input of fresh ideas to the investigation.

### *Planned in 2001*

- The National Agency of Education (NAE) in Sweden has been given an assignment from the government to improve the quality of vocational education in upper secondary education. This project is running during the years 2000-2002, and one focal point is workplace learning. In collaboration with this project we will be able to:
  1. Present the project to a network of Swedish researchers in the field of vocational education.
  2. Present the project during several regional conferences for teachers, head-teachers and politicians, planned for the autumn 2001.
  3. Publish a short text in Swedish about the project, based on the 'Executive Summary' in English and completed with short descriptions of the Swedish cases and the main conclusions and recommendations from the policy analysis.
  4. Get a connection through the homepage for The National Agency of Education, focusing work-based learning, which allows teachers and other interested people to download our national reports in PDF-format and also get linked to the project database in the UK.
- We are also aiming to get articles published in the teacher press. A journalist from *The World of Schooling*, published by the teacher union for upper secondary teachers in academic subjects, attended the European dissemination conference in London in February 2001. She is intending to incorporate the discussion during the conference in a series of articles about the future of secondary education. She will also write about our

cases. We are also approaching *The Vocational Teacher*, the target group of which is upper secondary teachers in vocational subjects.

- At Kristianstad University, Torsten Madsén has organised a home page about ongoing and actual research. A description of the WEX21C-project is already there, which is searchable through a national-wide search-engine for research, operated by our National Authority for Higher Education. Now this home page will be completed with possibilities to download the Swedish reports and the main report for the whole project as PDF-files. There will also be a link to the project database in the UK.

### **Dissemination plan - Ireland**

Information about the Project and the Dissemination Conference posted on the School of Education Studies Web Site at **Error! Bookmark not defined.**

Irish Policy and Case Studies: *Work Experience in Ireland: Partnerships for Future Effectiveness* published in January, 2001. 1700 copies were circulated including the following number of copies to the Research Partners (5), the policy study interviewees (13), the support Teams and Co-ordinators of the Transition Year (510), the Leaving Certificate Applied (280) and the Leaving Certificate Vocational Programmes (510), The Directors of Youthreach Centres (78), the Directors of VTOS programmes (150), members of the Irish Business Employers Confederation (10), the Irish Training and Employment Authority (FÁS) (80), The National Council for Vocational Education (6), The National Council for Educational Awards (1), The Registrars of Universities (9) and Principals of Institutes of Technology (13), European inspectors, teachers and professors on an Ariane visit to the Department of Education and Science (18), graduates of the MSc in Education and Training Management at Dublin City University (190) and attendees at the Dissemination Conference in London in February, 2001 (55).

Following the dissemination of the booklet and discussion with key representatives of the organisations circulated, it was decided that a follow-up workshop would be undertaken with the National Support Team for the LCVP on 16.02.01 at Killaloe in Co.Clare. This took the form of a discussion of supplementary readings to facilitate the implementation of the recommendations in the booklet on Work Experience in Ireland. The discussion focussed around the Stakeholder Model of organisational effectiveness, Team Building, and Adult Pedagogy and the amplification of the Models and Features of Work Experience developed in the project drawn from the Final Report and from the work of Guile, D. and Young, M. and Seely Brown, J. and Duguid, P. (96) *Organizational learning and communities of practice*, in Cohen, M.D. & Sproull, L.S. *Organizational Learning*, Sage, California. Following the Workshop a request was made that a similar presentation be made at the end of March to 50 teachers engaged in teaching students the LCVP programme. The Support Service Personnel would then facilitate the practical implementation strategies which could be adopted to engage stakeholders in work experience in the kind of dialogue and negotiation around the Models and Features of work experience to enhance its effectiveness on the LCVP programme.

Attendance at the Dissemination Conference in London (February 2001): eight of the policy study interviewees or their representatives attended the conference. It was felt that the

Conference was a very positive experience and led to a better understanding of the project. Arising from the Conference, the following actions were proposed:

1. The Department of Education & Science would be briefed by Helen Keogh to direct the attention of the new Workplace Learning Unit to be set up under the new Adult Learning Council to the findings of the research so that they could be incorporated at policy and implementation levels
2. FÁS: The National Training and Employment Agency will work closely with the Department of Education and Science through the Youthstart programme to ensure that the quality of work experience is addressed through the findings of the research
3. The Department of Education and Science co-ordinator of the LCVP, LCA and Transition Year programmes is very supportive of a proposal to host a conference in Ireland in late 2002 or early 2003 with the support of CEDEFOP to review the transformations resulting from the focus on work experience arising from this research project.  
(During the Dissemination Conference, Barry Nyhan of CEDEFOP had mentioned that this might be of interest to his organisation)
4. The LCA Support Team would be happy to provide any support for dissemination which would be appropriate.
5. A report on the Conference and copies of the Work Experience in Ireland booklet is to be forwarded to two Assistant Secretaries in the Department of Education and Science at the request of John Hayden, Secretary of the Higher Education Authority.

The demand for additional copies the Work Experience in Ireland booklet is such (over 100 copies are being sought) that it has been decided to put it on the School of Education Studies Webpage at DCU so that it can be downloaded by those interested in using it.

### **Dissemination Plan – Denmark**

In order to disseminate the result of the TSER-project we had originally – in accordance with the scheduled obligations – agreed to arrange a dissemination seminar (symposium), where policy-makers, partners in the social dialogue and the interest groups in our case-studies would have their say on the results – nationally and on the TSER-project level.

However, taking into consideration

- that policy-makers and interested groups in our case-studies have been part of the decision-making process of the new reform of Vocational Training in Denmark (to be implemented by law on Jan. 1. 2001). Therefore, they are not interested in any conference on the issue at the moment,
- that visions and practical suggestions of these stake-holders has been part of the negotiations – and compromises – of the new reform,

- that the visions and practical suggestions of the Danish reform can be seen as a practical implementation and experimentation of the fifth model of the horizontal part of the five point five matrix developed by the TSER project

we have decided (and acted) accordingly and are using two dissemination strategies:

1. At the local educational centres
2. In general at the employers' and the employees' level

This means that we have decided on a dissemination process in which practical implementation of the fifth horizontal model is in focus due to the fact that we simply believe in that model. This may be a little bit narrow-minded in comparison to the overall five point five matrix, but our choice is taken by the models and Weltanschauungen in which we believe, our life and work experience taken into account).

The dissemination of results has been carried out by Dr. Henrik Herlau (Copenhagen Business School) in teachings and practical implementation of the matrix and the chosen part of that matrix at Vejle, Ikast, Odense, Dronninglund Vocational training Centres together with their accompanying partners in the social dialogue (unions, teachers, students, employers, companies).

On the employers' side, we have been engaged in implementing and experimenting with the – KUBUS in DI and in the CASE-studies

On the employees' side, we are planning a dissemination session at the Danish Labour Union School at Helsingør in November 2001 in which the heads of Labour Union Schools in Scandinavian are having a joint meeting on the impact and actions to be taken by the unions on the so-called Globalisation of the Economy. During that meeting we have been asked to present our results and join the 'power-less' communication on the future of shop-steward education. This is important as we see that the important call for a student's ability to negotiate their future learning situation and context – their connectivity at large in society – must be brought to the attention of the negotiating partners at the labour market. This being a market or not.

## **Dissemination plan - Spain**

### **1. Dissemination activities:**

#### **Series of four lectures on work experience**

Universitat de València

Facultat de Filosofia i Ciències de l'Educació

Departament de Didàctica i Organització Escolar

#### **November 2000**

Participants in the dissemination:

- Dr. María Jesús Bravo, Senior lecturer and researcher, social psychology, Universitat de València
- Dr. Esteve Pont, Senior lecturer and researcher, curriculum studies, Universitat Autònoma de Barcelona
- Dr. Miguel Alonso, Lecturer, psychology of work, Universidad Complutense de Madrid

- Dr. Jordi Planas, Senior lecturer and researcher, sociology of education and work, Universitat Autònoma de Barcelona

Audience of dissemination:

Doctoral students

Post-graduate students

Colleagues in the School of Education

Other participants (upon invitation): policy makers, practitioners involved in the project

## 2. Dissemination activities:

Doctoral course on: 'Education, work and the curriculum'.

Discussion of the WEX21C project, its aims, methods and documents.

October – December 2000

Audience of dissemination:

Doctoral students

\* See annexed programme

## 3. Dissemination activities:

Publication of a book: Final report of the Spanish WEX21C team

Authors: Marhuenda, F., Cros, M.J. and Giménez, E., González, N., Toribio, L., Martínez, R., Navas, A., Ros, A., Alonso, M.A.

Title: Aprender de las prácticas: Didáctica de la formación en centros de trabajo.

Publisher: Universitat de València

ISBN: 84-370-4935-0

Number of pages: 285

February 2001

Dissemination audience:

All educational institutions providing work experience schemes in the region

All the educational administrations responsible for work experience in the 17 Autonomous Communities as well as the Minister of Education

Chambers of commerce, employers confederations and trade union departments responsible for work experience

Departments on curriculum studies and school organization in other universities carrying on research on work experience

Other policy makers

Other practitioners

\* See annexed book

## 4. Dissemination activities:

Publication of a book: Interim report of the Spanish WEX21C team

Authors: Marhuenda, F., Cros, M.J. et al.

Title: Prácticas de empresa y formación profesional.

Publisher: Universitat de València

ISBN: 84-370-4377-8

Number of pages: 162

April 2000

Dissemination audience:

All 161 attendees to the conference on Work experience

All educational institutions providing work experience schemes in the region

Chamber of commerce, trade union departments responsible for work experience

Other policy makers  
Other practitioners  
\* See annexed book

5. Dissemination activities:

Web database bibliography accesible in 3 languages (Spanish, Catalan, English) with all readings downloaded by WEX21C partners of the wide European team  
Address: <http://fm.uv.es/select.html>

6. Dissemination activities:

Web of the project

Address: **Error! Bookmark not defined.**

Website information sent to electronic mail distribution lists: RETLA, FOPECAL, others

7. Participation in conferences, seminars and round tables:

February 25<sup>th</sup> and 26<sup>th</sup> 2000

Jornadas informativas y de debate: La nueva formación profesional

Mesa redonda: La formación en centros de trabajo

Organiza: IES Laurona, Llíria

\* See annexed copy of programme

May 16<sup>th</sup> to 18<sup>th</sup> 2000

Primeres Jornades d'ocupació: El futur del treball al context europeu

Taula rodona: Elements innovadors y iniciatives que s'estàn incorporant

Organitza: Florida Centre de Formació

\* See annexed copy of programme

November 21<sup>st</sup> 2000

Curso La solidaridad como pedagogía

Sesión: La calle como recurso educativo

Organiza: ICCE, Valencia

\* See annexed copy of programme

December 16<sup>th</sup> 2000

Las prácticas en empresa y la formación profesional

Organiza: UNED, Denia

\* See annexed copy of programme

January 2001

Curs: Els efectes de l'expansió educativa en el mercat de treball a Europa

Organitza: ICE-UAB, Barcelona

8. Dissemination activities:

Organization of a conference:

Jornadas de reflexión: El potencial educativo de las prácticas en empresa.

Universitat de València, 12 and 13<sup>th</sup> November 1999

Announcement of the conference sent to the media

Interviews with the media around the conference

\* See annexed list of attendees and programme.

9. Dissemination activities:

Organization of a joint research meeting:

Joint research meeting WEX21C and SPESNET (Leonardo da Vinci).

Presentations by Johanna Lasonen, Marja-Leena Stenström, Michael Young, David Guile, Toni Griffiths and Fernando Marhuenda.

24 January 1999

\* See annexed programme and papers

10. Dissemination activities:

Presentation at ECER Conference

Lahti, Finland

22-25 September, 1999

\* See annexed presentation

11. Griffiths, T. and Marhuenda, F. (forthcoming) 'Interpretation of the relevance of work experience for future oriented educational strategies as a challenge for research' in Qualifications, competences and learning environments for the future: European Reference Publication, Thessaloniki, CEDEFOP

### **Dissemination plan - Hungary**

There will be a publication arising from the Budapest dissemination conference (September 2000). This will take the form of a book of around 120 pages to be published both in Hungarian and in English.

We hope to continue the research and to involve other people from different parts of the country who are interested in this work. We particularly want to develop the theoretical part of the work. 'Practice' is being further developed through a study visit to Denmark and Sweden in April and explorations with schools participating in the project.

Further dissemination of the research will be undertaken at the next research conference of the National Institute of Vocational Education in the autumn.

## 6. ACKNOWLEDGEMENTS AND REFERENCES

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The project would like to acknowledge with appreciation the interest in this work and the networking support offered by CEDEFOP.

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## ADDITIONAL 'NATIONAL' RECOMMENDATIONS

### SWEDEN

- Work experience should be compulsory for all students in upper secondary school, including the more academically oriented programmes. All evidence shows that it fulfils many functions for the students and that they very much appreciate periods at workplaces and often want more of them. Work experience must be seen as a central aspect of high quality upper secondary education. For students on more academically oriented programmes, work experience also opens up unique opportunities to try out academic occupations before decisions are made about further studies.
- Educational policy, including policy for work experience, should largely take into consideration the opinions expressed by young people themselves. In the upper secondary school age range, they are very well aware of their own interests and needs.
- Specific goals for work experience in the curriculum must take into consideration the very broad educational outcomes to which work experience has the potential to contribute. Evidence from the organisation of work experience during the 1980s and the 1990s has shown that relating it to specific learning outcomes in the syllabus severely constrains the learning potential of work experience, especially learning that is almost impossible to arrange in the school context. This approach has also restricted workplaces' engagement in co-operation with schools.
- The future policy and development of work experience should be guided by research based analysis of the relative merits of school-based and workplace-based education in relation to different learning processes and future oriented qualifications. One central starting point for this analysis is the sociocultural strand of educational research, focusing the situatedness of learning and cognition and the relation between context and human thinking and action.
- For the future, forms of work experience must be developed that fulfil the requirements of partnership between schools and workplaces, as analysed by the OECD in 1992. Until now, placements have largely been a burden for the workplaces. But, in our case studies, we have found models, *ie*, students working in groups with investigations which are useful for the workplaces, which create a mutual winning situation. Upper secondary schools and their students can contribute to the development of the production of goods and services in their neighbourhoods and at the same time organise rewarding learning processes.
- Closer links between schools and workplaces should be deliberately used as vehicles for local school development, not only as means to fulfil students needs. Contacts with working life must be understood as strategic in-service education for teachers and headteachers. Representatives of workplaces should also be engaged in the local negotiation of the curriculum.
- Although the responsibility for developing concrete links between schools and workplaces is situated at the local level, stakeholders at national level must support this process. Overcoming the boundaries means a lot of effort and is more demanding than the traditional school-based education. Without systematic support, local initiatives become very vulnerable, relying only on individual enthusiasts. Above all, the National Agency for Education must take a greater responsibility for the development within this area.

There is a great need for a national forum for stakeholders interested in supporting school-industry links. A ministerial committee has recently suggested a national council. This should be organised soon, irrespective of the further investigations being undertaken by the parliamentary commission on upper secondary education.

## **IRELAND**

1. An analysis of existing work experience be undertaken by all stakeholders in the learning process using the typology of Five Models of Work Experience and their Five Features put forward by this research.
2. Support for this analysis, in the form of workshops and mediation, be provided by national and other support agencies engaged in work experience.
3. Partnership dialogue and negotiations take place between stakeholders in work experience to optimise the learning of participants.
4. Information and Communication Technologies should be exploited to facilitate dialogue and negotiation between stakeholders.
5. The planning of work experience should form part of whole school plans and employers' strategic plans in which all stakeholders will have taken part.
6. The policy and case studies from the European partners in this research project be accessed to inform Ireland's analysis of work experience policy and practice.
7. The Workplace Learning Unit of the National Adult Learning Board be requested to ensure that the fora which it establishes will make policy proposals in relation to work experience.
8. The Department of Education and Science with the Department of Enterprise, Trade and Employment promulgate a policy on work experience which requires that the workplace as a learning organisation is committed to the ongoing development and empowerment of all its members

## **SPAIN**

### *1. Introduction*

1.1 The proposal which we make in the following pages arises from the conceptualisation of work experience as a curricular and methodological resource based upon the fulfilment of the educational, socio-laboral and developmental dimensions of the student.

1.2 Such a notion is not random; through it we intend to take into consideration the three basis upon which work experience may be a valuable educational tool, and it is this very educational potential which is often left aside when they are conceived as part of the employability strategies which students must explore. This is obviously an important element, but work experience is, as an element in the educational process of the young

person, something more than a tool for insertion into the labour market and to increase competitiveness of the workforce. Even without discussing the instrumental rationality underlying work experience, one may well decide upon the kind of instrumentality they provide, so to say, the aims to which work experience are driven and used as a tool.

1.3 Work experience has an educational, developmental and social content, beyond the acquisition of competences and skills for the adequate performance in the profession. They provide for most students the chance to have a first experience of the world of work, to learn and acquire skills required in a real working context, to get acquainted with the organisational culture of the company, to raise their consciousness about the world of work, its hierarchical relations and working conditions, the relation between work and capital, etc. All of these contribute for a better preparation to approach adult life, insofar the student in work experience experiments challenges and responsibilities which are part of adult life.

## *2. Educational institution*

2.1 The educational administration must provide a minimum regulatory framework for work experience, including aspects such as its length; while at the same time guaranteeing the allocation of sufficient human and material resources to adequately develop work experience. However, we suggest it should be the responsibility of the individual school –given its knowledge of the context of production surrounding it, the students as well as its own idiosyncrasy-, the design of the proposal for work experience which emerges from the collective exercise of reflection, while at the same time taking a position about the model of work experience which better suits the context, therefore defining aspects such as: the purposes at which work experience is aimed, the role it must accomplish, the learning models guiding it, the kind of relations with companies in the area, ...

2.2 Such a project at the school level would allow for a contextualised proposal as well as a framework for each of the qualifications provided by the school.

2.3 On another side, to accomplish work experience programmes which develop all of its educational, social and maturational potential inevitably requires the integration of work experience in the curriculum as an axis of it, rather than a mere side element or bottom one. This implies overcoming instrumental rationality in work experience, which contributes to its understanding as one more subject, in order to conceive them as the core axis of the curriculum, which gives meaning to the whole set of learning and experiences which happen in the school as well as in the company; to think of work experience as a bridge between contexts rather than as a context in itself. This is not but the best way to establish connections between theory and practice.

2.4 In order to satisfy this requirement, such an integrated notion of work experience must be accompanied by the design of a formative programme for work experience adapted to the needs and interests of the student as well as to the actual conditions of the company.

2.5 Both the curricular consideration of work experience and the planning of it in order to meet the student's needs and those of the context of production will require important levels of autonomy and flexibility, both organisational as well as curricular.

2.6 The importance of the role of the tutor in the school is widely acknowledged by all those involved in work experience. Nonetheless, it is only seldom that reference is made to the intensification of work for the teacher which undertakes responsibility over work experience. Such a responsibility implies, at least, to face tutorial as well as managerial and coordination functions, to add on top of the ones she has as a teacher. Not to mention the many tasks linked to design, planning, follow-up, assessment and evaluation of work experience and of the students and the companies. Adequately to perform all of these tasks within the role of the tutor is in fact an impossible duty, given the fact that the minimum organizational and labor conditions do not exist: a significant reduction in teaching hours, flexibility in the timetable to be able to adapt to the rhythms in the company, as well as the professional recognition of such a task, usually disregarded by colleagues.

2.7 The chance for teachers to have a *stage* in the company is important also to know first-hand the conditions of real work out of school, as well as to get acquainted with human resource departments, usually in charge of further training in the companies. Only by reinforcing and rewarding the excess of work will it be achieved that tutors remain so willingly, rather than rotating the role when avoiding it proves not to be a chance for the individual teacher.

2.8 To develop such a model of work experience new organisational conditions and possibilities of management are needed, in order to facilitate and allow for its implementation. Among such conditions, the following should be taken into account:

- (i) To start with work experience before the training process in the educational institution has finished, as well as to allow for extensive distribution of work experience in order to make of work experience the axis, not the final module, of the curriculum. This is the only way to make of work experience a bridge between the context of education and production, between academic and experiential learning.
- (ii) Organisational autonomy for the educational institution to allow them to adapt their processes of management so as to develop and introduce the room and roles most adequate to satisfy the needs of coordination, supervision, and evaluation of a scheme which requires it in order to properly deal with its complexities. Such autonomy is also necessary because of the role the educational institution plays in its relation to the production system surrounding the school; according to the demands of the professional qualification provided, the students attending it and the environment, the school should have the capacity to decide on the best planning conditions and features of work experience.
- (iii) Finally, to provide adequate and sufficient resources, both material – to allow for appropriate follow up of the students, not to impose an extra expense on the side of the supervisors- as well as technical and human ones –administration support for supervisors, enough teachers as to cover the teaching which the supervisors have to leave in order to visit students while in companies-. Without such support, the organizational conditions do not but hinder the success of work experience.

### 3. *The company*

3.1 The workplace in which the student will develop her work experience period must comprise a minimum set of conditions which guarantee her training and 'wellbeing' during her stay in the company. It would therefore be convenient to take into account the following aspects in order to design a formative placement, given that the student will not undertake a workplace as such. The possibilities provided by the company must be adapted to the training needs of the student, to the professional profile of the qualification she is studying, as well as to the level of qualification of such a qualification and the student's interests. We offer here some of those aspects:

- (i) Features of the placement she is occupying, of the profession and skills required to adequately perform in that placement.
- (ii) Specific description of the appropriate tasks of such a formative placement, taking into consideration the different activities the student has to perform, how and when. It would also contribute to specify what the student must not do and why, like tasks not related to her training.
- (iii) Social position of the student while in the work experience scheme. Such specification must be clear for the student, workers, and company about her role in the company, timetables, payments if any, dress, tasks, relations to the instructor and to other workers, length of the scheme, norms, etc.

3.2 In relation to the role of the instructor, her role in the workplace must be clearly defined as well, taking into account different aspects including role, tasks and functions she has to attend in her performance as an instructor.

3.3 It is considered as a positive effect on the student's learning that the instructor plays the role of a facilitator, thus optimising the educational benefit of the work experience. Such a role comprises as well being able to change and to move into different phases as to how to relate to the student and which attitude and strategies to show in her relation to the student. Among these, the management of the scheme together with the tutor in the educational institution is a task which corresponds to the instructor in daily contact with the student. Such an immersion into the process would make her closer to the student and the educational system as well, getting acquainted with the programme, the qualification, conditions, etc. related to the work experience.

3.4 This includes planning, supervising, developing and evaluating the programme and the training period for that and further collaboration. Such follow-up of the formative process of the student would help to favour the full implication of the instructor in the rationale of work experience, raising consciousness about the educational needs of the student, thus allowing her for any appropriate change, in dialogue with the tutor in the school.

3.5 The instructor lacks pedagogical training, and an effort should be made in this direction: beyond being an expert worker in her profession, she needs the necessary concepts and skills to deal with her tutorial role, training delivery, giving instructions, motivating the young person, etc.; all of which do not but favour the learning processes of the student.

#### *4. Business and Union organisations*

4.1 Several elements should be subject to collaboration agreements for the purpose of a better quality in the work experience scheme. In order for companies to cooperate with the educational institution, they must find support in the regulations which guarantee and facilitate the appropriateness of work experience in such a company.

4.2 The following dimensions might be taken into account in order to improve present conditions of such cooperation and to optimise quality in work experience:

- (i) Providing financial incentives for companies involved in the work experience programme, so as to acknowledge their 'educational will', to value their contribution to students' learning. Such incentives and rewards should reach instructors as well, and they might take the form of economic aids or professional credit for the worker, as a payment to their contribution to the professional education of young people.
- (ii) To guarantee a pedagogical training for the instructor which contributes to an appropriate involvement with the student, both proper, positive and educational. The instructor is an expert in her profession, not in that of teaching another person. It would be convenient to promote and offer companies the chance to provide pedagogical training to the workers willing to be acting as instructors. Only if such an education is provided for instructors will we be able to select them and to consider it as a requirement to select not just the instructor but the company as well. This might also contribute to provide the instructor with stability in such a role, with continuity along time. Taking work experience under the frame of the human resource departments in the company might be wise in this sense. To invite former students to undertake the duty of being instructor for future students is also considered as a good measure; as it is also the case with favouring workers members of a union to introduce this vision into the teaching to provide the student with.
- (iii) Guaranteeing the optimal labour and organisational conditions to perform the task of giving instructions and support to the young person is also important: to allow the instructor for time at work to devote to teaching the student, to adapt timetables for such a purpose, to redistribute working responsibilities, etc.
- (iv) A must is that of defining and regulating the roles and tasks of the instructor, to avoid any kind of confusion as well as to guarantee students the appropriate 'welcome' in the company, to avoid any misconception with regard to this.

#### *5. Educational administration*

5.1 As it was the case in the previous dimensions, the educational administration must respond with a clear regulation of work experience schemes. This regulation should be flexible above all, in order to satisfy the needs and interests of both students and the conditions of the context, the production system in the region. Furthermore, each qualification has its own particularities which demand different approaches to work experience, as opposed to the homogeneous regulation actually mandated.

5.2 Such a regulatory framework should be aimed to guarantee positive educational work experience for all students in vocational education and training programmes, with the emphasis laid on education and training on learning processes and outcomes of students in the company.

5.3 This regulation should take into account all the aspects referred to in the previous pages, translating them into flexible mandates –not the rigid ones of nowadays-, to facilitate and not to hinder work experience for educational purposes, satisfying a set of minimum conditions for all students with disregard of the educational institution that they attend, the productive context of the region or the differences among companies offering work experience for a specific qualification.

5.4 The creation and management of a database of formative placements, with a description of the features of each of them, is the best tool in order to adequately select, match and deliver work experience satisfying the needs of the student and useful for the company at the same time.

5.5 The administration is also responsible for guaranteeing enough resourcing, both material and human, in order to improve work experience to the extent of:

- (i) providing economic help for students to be able to have their placements elsewhere in the region.
- (ii) Providing incentives for companies.
- (iii) providing extensive pedagogical training to the instructors.
- (iv) sufficient human resources to allow tutors to devote the time needed for bridging education and work, rather than considering work as an extra element of the curriculum.

## **HUNGARY**

On the basis of the overall conclusions of the framework report we would like to make the following national recommendations for the future:

1. Hungary should increase research activity in the field of work experience and the relating subjects.
2. We have to study the localisation and specification of knowledge-intensive, knowledge-rich and knowledge-poor works according to the relevant sectors, and regions of the country, by sections of the workforce.
3. We have to study the effect of globalisation on the relationship between education and work and study how it generates needs for new skills.
4. We have to study the opportunity to work on the complete reform of the ‘launch’ model in the fields where it exists and to try to move towards the ‘connective’ model.

5. We have to try to create conditions and atmosphere in which work experience can be viewed as a means of developing an involved sense of responsibility. We have to strengthen the ways and good experiences, cases which want to involve and develop the full person and not only the learned attributes and techniques.
6. We have to make a better quality of balance and bridge between the theoretical and practical component of education in accordance with the needs of the labour market
7. We have to improve discussion between VET policy makers and the social partners.
8. Teachers and trainers in VET are required to have appropriate teaching qualifications.
9. We should encourage workers to become 'boundary crossers' in their work.
10. We have to encourage the pedagogical experiences to study the 'connective' model, to work with the 'connective' model. We also have to recognise and assess the existing elements of the 'connective' model which can be found in some cases in Hungary. It would mean a very interesting and innovative research and development work in the future to encourage, support and develop this model in Hungary.



EU Fourth Framework: Targeted Socio-Economic Research

**‘Work experience as an education and training strategy:  
new approaches for the 21<sup>st</sup> century’**

**WORK-RELATED LEARNING  
EUROPEAN RESEARCH DISSEMINATION CONFERENCE  
LONDON, 2-3 FEBRUARY 2001  
University College London, Gower Street, London WC1E 6BT**

**PROGRAMME**

**FRIDAY, 2 FEBRUARY 2001**

*The Eisai Lounge, South Cloisters, UCL*

12.00 Lunch

13.30 Welcome

Professor Sir Chris F. Llewellyn Smith, Provost and President, UCL

Professor Geoff Whitty, Director, Institute of Education

13.50 *Introduction to the EC Fourth Framework (TSER) project: ‘Work experience as an education and training strategy: new approaches for the 21<sup>st</sup>. century’:*

Toni Griffiths, Project Director and Director of Education and Professional Development, UCL

*Policy issues arising from the project:* Toni Griffiths

Respondent: Graham Attwell, Pontydysgu

15.00 Break with refreshments

15.30 Workshops

Workshop 1: The Eisai Lounge, South Cloisters, UCL

Workshop 2: Room 215, Foster Court, UCL

Workshop 3: Room 216, Foster Court, UCL

16.15 Break

16.30 *The Eisai Lounge, South Cloisters, UCL*

The project's typology of work experience and learning:

David Guile, member of the research team and Lecturer in Higher Education, IoE

Respondent: Professor Nick Boreham, University of Manchester

17.15 Workshops

Workshop 1: The Eisai Lounge, South Cloisters, UCL

Workshop 2: Room 215, Foster Court, UCL

Workshop 3: Room 216, Foster Court, UCL

18.00 Close of first day.

18.00- Reception: *The Haldane Room, South Cloisters, UCL*

19.30

## **SATURDAY, 3 FEBRUARY 2001**

*Lecture Theatre 2, The Cruciform Building, UCL*

09.30 The framework of the project case studies: Toni Griffiths

09.50 Three Workshops on the Case Studies I

Group 1: *Lecture Theatre 2, The Cruciform Building, UCL*

Sweden: Torsten Madsén, Christer Wallentin

Ireland: Dr. Peter McKenna, Colm Ó'Maolmhuire

Group 2: *Room 1.01, The Cruciform Building, UCL*

Denmark: Professor Leif Bloch Rasmussen

Spain: Dr. Fernando Marhuenda, Maria José Cros, Elena Gimenez

Group 3: *Room 1.02, The Cruciform Building, UCL*

Hungary: Dr. Magdolna Benke, Ildiko Görgényi

UK: Toni Griffiths, David Guile

10.30 Break with refreshments: *Room 1.01, The Cruciform Building, UCL*

11.00 Three Workshops on the Case Studies II

Group 1: *Room 1.01, The Cruciform Building, UCL*

Denmark: Professor Leif Bloch Rasmussen

Spain: Dr. Fernando Marhuenda, Maria José Cros, Elena Gimenez

Group 2: *Room 1.02, The Cruciform Building, UCL*

Hungary: Dr. Magdolna Benke, Ildiko Görgényi

Group 3: *Lecture Theatre 2, The Cruciform Building, UCL*

Sweden: Torsten Madsén, Christer Wallentin

Ireland: Dr. Peter McKenna, Colm Ó'Maolmhuire

11.40 *Lecture Theatre 2, The Cruciform Building, UCL*

*Linking the work of the project to current CEDEFOP activities*

Barry Nyhan and Pekka Kämäräinen, CEDEFOP

12.45 Conclusions

13.15 Close of conference



EU Fourth Framework: Targeted Socio-Economic Research

**‘Work experience as an education and training strategy:  
new approaches for the 21<sup>st</sup> century’**

**EUROPEAN RESEARCH DISSEMINATION CONFERENCE  
UNIVERSITY COLLEGE LONDON, 2-3 FEBRUARY 2001**

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EU Fourth Framework: Targeted Socio-Economic Research

**‘Work experience as an education and training strategy:  
new approaches for the 21st century’**

**WORK-RELATED LEARNING  
EUROPEAN RESEARCH DISSEMINATION CONFERENCE**

**LONDON, 2-3 FEBRUARY 2001**

The conference will report on and discuss the findings of a three-year research project, directed by Toni Griffiths, Chair of the VETNET network, and undertaken through the EC Fourth Framework (details overleaf).

The conference will take place at University College London.

The conference will include a workshop which will link the work of the project to current CEDEFOP activities

A mailing list is being drawn up of those interested in attending this conference. There will be no charge for the conference but participants other than those representing the project partnership will need to pay for and arrange their own travel and accommodation.

To be placed on the mailing list for further information, please send full contact details to:  
Anne McGee at UCL: [a.mcgee@ucl.ac.uk](mailto:a.mcgee@ucl.ac.uk)

## About the project

This research project has been developed in the context of the knowledge economy and the twin challenge of globalisation and regionalisation. It addresses the changing nature of work and the elusiveness of the true learning potential of work experience. It was accepted under the EC Fourth Framework (Targeted Socio-Economic Research - TSER) and undertaken between December 1997 and December 2000 under the title of *Work Experience as an Education and Training Strategy: New approaches for the 21<sup>st</sup>. century*. It involved partners from the United Kingdom (Institute of Education, University of London), Sweden (Kristianstad University), Ireland (Dublin City University), Spain (University of València), Denmark (Copenhagen Business School) and Hungary (National Institute of Vocational Education).

The project has focused on the post-16 age group and has examined the aims, processes and outcomes of work experience in the light of changes in the European labour market and trends in workplace requirements and organisation. Innovative approaches to work experience have been analysed in a series of case studies and a policy study has been undertaken.

Ê The project has analysed how students, whether engaged in general or vocational education and training programmes, learn and develop through work experience.

Ê It has addressed the concept of 'context' as the starting point for considering learning through work experience, on the basis that any analysis of work experience should take account of: different types of context, different strategies within contexts and the influence of context on the process of learning; the extent to which students have to learn how to 'negotiate' their learning during work experience; and the extent to which students must be supported to relate formal and informal learning.

Ê On the basis of this analysis, a *typology of five models* of work experience has been developed which embodies changing responses to policy, to the learner, to skills needed and to pedagogy and reflects the influence of different economic, technological and social factors prevailing within European countries as well as new ideas about learning and development.

Ê The fifth model in the typology may provide the basis for a more productive and useful relationship between formal and informal learning since it addresses how work experience can enable students to take explicit account of the learning which occurs within and between the different contexts of education and work.

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### TSER Research Team

#### Great Britain

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**TECHNICAL REPORT**

(Note: papers listed here are being entered – through 'KnowNet' <www.theknownet/wex/>- on to a project database which will provide access to other relevant material and increasing interactive capability).

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