Thematic Network Project in the area of Languages

Sub-project 3: New Technologies and Language Learning

ICT and Language Learning: Linking Policy, Research and Practice

Authors: Angela Chambers, University of Limerick, IE; Graham Davies, Thames Valley University, London, UK; Margarita Goded, Universidad Autónoma de Madrid, ES; Sake Jager, Rijksuniversiteit Groningen, NL; Ole Lauridsen, Handelshøjskolen i Århus, DK; Jeannette Littlemore, University of Birmingham, UK; Debra Marsh, University of Hull, GB; Martine Nicollerat, Université de Lausanne, CH; Peppi Taalas, University of Jyväskylä, FI; Herbert Van Uffelen, Institut für Germanistik und Niederlandistik, Universität Wien, AT; Thomas Vogel, Europa-Universität Viadrina, Frankfurt (Oder), DE.

Editor: Angela Chambers

Table of Contents

1. BACKGROUND TO THE ACTIVITIES IN YEAR 3

1.1 General information on the sub-project

1.1.1 *Introduction.* The Scientific Committee on New Technologies and Language Learning is a sub-project of the Thematic Network Project in the Area of Languages. This report contains a summary of the activities and outcomes of the sub-project in Years 1 and 2 (1996-97 and 1997-98) and a detailed account of activities and outcomes in Year 3.

1.1.2 *Members of the Scientific Committee.* Angela Chambers (chair), University of Limerick, IE; Yves Chevalier, Université de Lille III, FR; Graham Davies, Thames Valley University, UK; Roberto Dolci, Università Ca' Foscari di Venezia, IT; Margarita Goded, Universidad Autónoma de Madrid, ES; Sake Jager, Rijksuniversiteit Groningen, NL; Ole Lauridsen, Handelshøjskolen i Århus, DK; Jeannette Littlemore, Université Libre de Bruxelles, BE; Martine Nicollerat, Université de Lausanne, CH; Joseph Rézeau, Université de Rennes II, FR; Peppi Taalas, University of Jyväskylä, FI; Herbert Van Uffelen, Institut für Germanistik und Niederlandistik, Universität Wien, AT; Thomas Vogel, Europa-Universität Viadrina, DE.

1.1.3 *Rationale and background of the sub-project.* As demand for languages increases in higher education, from those specialising in languages and from students of other disciplines, new technologies are increasingly perceived as a solution to the problem of the greater resources necessary to meet this demand. Technological advances give learners unlimited access to relevant material and provide new opportunities for contact with native speakers. In addition, the provision of open and distance learning is increasing access to language courses.

If these developments are to succeed, new technologies and the appropriate methodologies must be integrated in the language learning process. New needs are emerging for all participants in the process: for learners, particularly in relation to autonomous learning strategies; for teachers, who must understand the potential of new technologies and encourage learners to develop new learning strategies; and for course planners, who must provide the appropriate technological infrastructure, learner support systems and opportunities for staff development.

1.1.4 *General aims and objectives of the sub-project*
  i.   To investigate current developments in this area in universities and other institutions of higher education in the European Union and the European Economic Area;
 ii.   To investigate to what extent research findings and developments are successful in influencing current practice in this area;
iii.   To identify the new needs in the area of new technologies and new methodologies in language learning;
iv.   To propose measures to meet these needs.

1.1.5 *Target audience*
i. Language teachers and researchers in universities and other institutions of higher education, and those involved in staff development in this area;
ii. Those responsible for course planning, resourcing and transnational co-operation in higher education.

1.2. Activities and outcomes in Year 1

1.2.1 *Aims and objectives for Year 1*
i. To investigate current developments in this area in universities and other institutions of higher education in the EU and EEA;
ii. To identify new needs in the area of new technologies and related new methodologies in language learning.

1.2.2 *Meetings of sub-project Scientific Committee*
1. Leuven, BE, 17-18 January, 1997.
2. Lille, FR, 3 July, 1997.

1.2.3 *Workshops*
1. **Autonomy and self-instruction in language learning: the current situation in European institutions of higher education**.
2. **Key areas in new technologies and language learning.** Venue: Université de Lille III, FR , 5 July, 1997. Participants: 67. Workshop content. The workshops took the form of a series of presentations on the reports prepared by the members of the sub-project in Year 1, followed by discussion and the drafting of recommendations.

1.2.4 *Outcomes*
Two reports were produced based on the activities in Year 1:
1. *Autonomy and self-instruction in language learning: the current situation in European institutions of higher education*. Jeannette Littlemore and Yves Chevalier, with contributions from Joseph Rézeau and Herbert Van Uffelen. (Full report available at http://odur.let.rug.nl/projects/tnp-ntll/reports.htm) For a brief summary, see Appendix 1.1.
2. *Key areas in new technologies and language learning.* (Full report to be published in 1999. Synthesis report available at http://odur.let.rug.nl/projects/tnp-ntll/reports.htm.) For a brief summary, see Appendix 1.2.

1.2.5 *Recommendations*
1. There is a need for teachers to be aware not only of the development of new teaching methods but also of the importance of new learning methods in the context of new technologies.

2. There is a need to develop learner autonomy in languages in collaboration with parallel developments in other disciplines.

3. Account must be taken of the great variation in learning cultures in European countries and the implications of these differences for the

successful integration of new technologies into the language learning process.

4. There is a need for the development of new technologies in language centres to be taken seriously by University, regional and national authorities, so that they can receive sufficient funding to develop both in technological and methodological contexts. The potential of network computing and open and distance learning was stressed.

5. There is a need for closer co-operation between institutions of higher education and industry in the development of new technologies and language learning.

With regard to the role of research in designing, implementing and evaluating self-access and distance learning schemes, the following recommendations were made:

1. That people working in the field must insist on the centrality of research on teaching/learning processes in institutions of higher education.

2. That staff must be recruited who have a training that equips them to undertake research and who are committed to doing so.

3. That national and international organizations must be convinced of the need for a research-and-development culture in language-teaching.

4. That national and international organizations must be persuaded to make programmes of international collaboration research-driven.

5. That national and international organizations must be persuaded to base international partnerships on complementarity of expertise and skills

In particular, it was felt that the following issues needed to be addressed:

1. The need to question the separation of language teaching and research in an increasing number of universities.

2. The need to develop a research culture associated with language teaching and learning at all levels of educational systems.

3. The need to develop empirical research in language learning.

4. The need to redefine the role of the language teacher as a facilitator of student learning.

5. The need to benefit from studies in autonomy, self-management and life-long learning both within language studies and in relation to other areas, particularly management.

With regard to the development of learner autonomy in HE institutions, the following recommendations were made:

1. Increased use of new technologies and greater learner autonomy will require an investment of time. As is often mentioned in the replies to the questionnaire and in the interviews, more time will be required for training and for putting together materials for self-study.

2. The layout of the self-study centres is crucial. In some cases classrooms will have to be (re)designed to accommodate both teaching and self-study.

3. The diffusion of information is very important. This includes theoretical information such as the meaning of learner autonomy as opposed to self-instruction, and practical information such as the kinds of human support required, ways of encouraging students to become autonomous and so on. Both types of knowledge seem to be unevenly spread between institutions. Ways in which information can be transmitted from one institution to another need to created and extended.

4. There is a marked gap between the high level technical skills and mastery of the new technologies shown by a small number of the centres, and the deficiencies in training and information shown by other centres. One of the challenges facing language educators will probably be to narrow this gap which exists both between and within countries.

5. We need to allow room for different kinds of practices to co-exist, ranging from totally self-study to totally teacher-centred learning. We must not expect all HE establishments to go about promoting learner autonomy and using new technologies in the same way, as different approaches will inevitably suit different learning contexts.

With regard to the teaching of lesser widely taught and less-widely used languages, the following policy recommendations were made:

1. As there is a fundamental similarity between the learning process of languages like French, English or German and lesser spoken languages like Irish or Finnish, it was recommended that these languages should be included in existing software-packages or those being developed for the major languages.

2. It was recommended that, where speakers of less widely-used and less widely-taught (lwu-lwt) languages are widely dispersed, measures should be introduced promote the use of computer networks as a substitute for the social networks that are the focus and means of linguistic communication and language learning in concentrated populations, that this would offer a unique opportunity to see whether computer networks can generate new modes of language use and language learning. If they could, these new modes could be applied to majority languages. In this sense research and development projects designed to support lwt-lwu

languages should be funded not only for their own sake, but because in principle they can also produce benefits for majority languages.

1.3. Activities and outcomes in Year 2

1.3.1 *Aims and objectives for Year 2*
1. To identify needs and propose new measures to meet the needs identified in Year 1, focusing specifically on the area of teacher education;
2. To develop two pilot projects in the area of teacher training in new technologies for language teachers;
3. To investigate, in collaboration with sub-project no.8, the role of new technologies in the area of languages for students of other disciplines.

1.3.2 *Meetings of sub-project Scientific Committee*
1. Venice, IT, 12 - 13 December, 1997.
2. Dublin, IE, 6 March 1998.

1.3.3 *Workshops*
1. **Postgraduate courses and teacher training in the area of new technologies and language learning**. **Venue:** Venue: Università Ca' Foscari, Venezia, IT, Centro Linguistico Interfacoltà. Saturday 13 December 1997. **Participants:** 31. **Workshop content.** The workshop took the form of a series of presentations on the activities of the members of the sub-project in Year 2, followed by discussion and the drafting of recommendations.
2. **New technologies and languages for students of other disciplines**. **Venue:** University College Dublin, IE, 7 March 1998. **Participants:** 80. **Workshop content.** The workshop, coinciding with the IRAAL conference on "Languages for Specific Purposes and Academic Purposes" (Dublin, 6-8 March 1998), was organised in conjunction with the Scientific Committee of TNP subproject 8 Language Provision for Students of Other Disciplines. The workshop took the form of a series of presentations on the activities of the members of the sub-project in Year 2 in this area, followed by discussion and the drafting of recommendations.

1.3.4 *Outcomes*
There were four outcomes as a result of the activities of the committee in Year 2.

1.3.4.1 Postgraduate courses and teacher training in the area of new technologies and language learning. Following the papers delivered at the Venice workshop a set of recommendations was drafted. (Full report available at http://odur.let.rug.nl/projects/tnp-ntll/Venrap.html. These papers and recommendations are summarised in Appendix 2.1.)
1.3.4.2 New technologies and languages for students of other disciplines. The presentations and recommendations from the Dublin workshop are summarised in Appendix 2.2. (Full report available at http://odur.let.rug.nl/projects/tnp-ntll/Dublinreport.html)
1.3.4.3 Pilot Programme 1. Project Name: ICT for language teachers Development of a course in Information and Communication Technology for

Language Teachers. Project Number: 56627-CP-1-98-LINGUA-LA. The project summary is available in Appendix 2.

1.3.4.4. Pilot Programme 2. Project name: New technologies and language learning: pedagogical approaches and practical applications

Project Number: 56563-CP-1-98-LINGUA-LA. The project summary is available in Appendix 2.

1.3.5 *Recommendations*

Following the workshop focusing on how new technologies will change language teaching, four recommendations were made. These were:

1. The need for training of language teachers in ICT.

2. The need to develop a unified European frame of reference for widely used, but often highly ambiguous notions such as language centres, and the posts and qualifications associated with them.

3. The need for continued dissemination of research and developments from other disciplines. This cross-fertilisation of ideas was considered essential for using new technologies in language learning.

4. The need for a WWW list of addresses of interesting web sites presenting activities in NTLL which are not already well known.

The topic of the second workshop was the potential of the new technologies for teaching and learning languages for specific purposes. Three main recommendations can be singled out from the discussions that followed the workshop. These were:

1. The need for research in LSP, especially action research conducted by practitioners themselves which implies that a reasonable amount of their teaching time could be devoted to research.

2. The need for incorporating the new media into teacher training and student curricula, especially to achieve a good level of comprehension of the LSP.

3. The need for materials for languages other than English to be made available in ICT.

1.4 Activities and outcomes in Year 3

1.4.1 *Aims and objectives for Year 3*
(i) to identify key European documents relevant to language learning and assess their implications for future developments in new technologies and language learning;
(ii) to propose strategies for the greater integration of research and practice in new technologies and language learning;

(iii) to evaluate examples of current best practice in the areas of self-directed learning and distance learning in languages in higher education and put forward proposals for future developments in these areas.

1.4.2 *Meetings of sub-project Scientific Committee*
1. Vienna, AT, 11-12 December, 1998.
2. Groningen, NL, 6 March 1999.
3. Jyväskylä, FI, 1 July, 1999.

1.4.3 *Workshops*
1. **Current developments in ICT and language studies**. **Venue**: Groningen, NL. **Participants**: 26. **Workshop content**. The aim of the workshop was to encourage information exchange between various projects, and three academics gave presentations on major projects in which they are currently involved.
2. **Self-directed learning and distance learning in languages in higher education. Venue:** Jyväskylä, FI. **Participants:** 36. **Workshop content.** The workshop focused on the potential for European co-operation in the area of open and distance learning. The UK-based Merlin project was presented as an example of good practice, and the potential for developing such projects at European level was discussed.

1.4.4 *Outcomes.* This report forms the main outcome of the activities in Year 3 of the project. Summaries of the presentations and discussions in the two workshops are to be found in Appendix 3.

2.   THE PLACE OF ICT IN LANGUAGE POLICY DOCUMENTS

2.1   Introduction

At national and international level, there is general agreement that Information and Communication Technologies have an increasingly important role to play in language learning, and thus also in the development of greater European integration. The great majority of documents relating to education in general, and to language learning in particular, at both national and European level, emphasise the importance of developments in ICT. However, even those with expertise in the area would find it difficult to identify a coherent and explicitly stated common policy, linking research, development and practice, emerging from the many documents which describe and determine the policies to be implemented.

The aim of this chapter is therefore to carry out a brief survey of the main documents which have been published since 1995 in relation to higher education and language learning, in order to identify the attitudes to ICT contained in them and the policies which they advocate, either explicitly or implicitly. The documents surveyed are of two kinds: those of relevance to language learning and teaching in general, namely The SIGMA Report, The *Green Paper: Education, training and research: Eliminating obstacles to transnational mobility* (1996), the *White Paper on Education and Training: Teaching and Learning - Towards the Learning Society* (1995), and The Council of Europe's *Common European Framework* (1996); and those which focus specifically on Information and Communication Technologies, namely the Policy Document of EUROCALL, the European Association for Computer-assisted Language Learning, and the Policy Statement on New Technologies of the European Language Council.

This brief survey will enable us to see to what extent the deliberations of the experts in the area are exerting an influence on the policies and recommendations contained in the more general documents.

2.2   ICT in documents relating to language teaching and learning

2.2.1 *The SIGMA Report*
(http://www.fu-berlin.de/elc/NationalReports/natr-eur.htm)
The Sigma Report which was prepared in 1995 by a committee of academics from several European states, includes detailed chapters on languages in higher education in 15 European states, with specific information on degrees in modern languages, languages for students of other disciplines, training for translators and interpreters and language teacher training. As the sections concentrate on the content of the programmes and on European links between programmes of study, there is no obvious place for new technologies to be included, and the relatively small number of references to new technologies tend to be concentrated in the final two sections, which are devoted to new needs in language studies and measures proposed to meet these needs. In these sections,

a need for greater attention to be paid to new technologies is mentioned in the reports of several countries.

It is interesting to note, in the sections of the reports devoted to postgraduate studies, that there are no references to postgraduate programmes of study in Information and Communication Technologies and language learning. Such programmes were rare when the Sigma national reports were being drafted, but are now in operation in a number of universities (See Section 3.3).

Of greater benefit to the vast majority of language learners, however, would be the development of units of study in ICT and language learning, or an integrated approach to the teaching of languages in which ICT would play an important role within all aspects of language studies. A number of important initiatives are taking place in this area, and it is certain that current and future projects similar to the Sigma Report would be obliged to include Information and Communication Technologies as a chapter or section heading.

2.2.2 *Green Paper: Education, training and research: Eliminating obstacles to transnational mobility* (1996). The paper advocates language learning, as the lack of knowledge of foreign languages and cultures is seen as a major obstacle to transnational mobility. As a line of action, it is suggested that European citizens should be encouraged to learn at least two community languages.

There are two explicit references to Information Technology in the document. It is noted that "virtual mobility generated by the access to new information technologies, such as teleworking, complements mobility. However, it is important to observe that the tools of the information society cannot replace actual physical mobility" (1995:1)

The second reference concerns the access to information on mobility:

All useful information for people in mobility should be available over the INTERNET as well as through European databases such as EURES, ORTELIUS, EURODESC, CORDIS, NARIC, EURYDICE. There should be a wider use of tools provided by the Information Society.

Since the publication of this paper, it is increasingly accepted that IT can serve as an important tool for the preparation of mobility and can increase the motivation for mobility. Activities such as transnational virtual project work can sensitize students and professionals to problems of intercultural communication in transnational teamwork and at the same time encourage them to meet their foreign counterparts in person.

 In conclusion, while it is interesting to note how the paper accurately predicts the growing importance of virtual mobility as an enhancement of real mobility, it is evident that IT does not feature prominently in the paper as a whole and, in particular, that it is not mentioned in the context of language learning.

2.2.3 *The White Paper on Education and Training: Teaching and Learning - Towards the Learning Society* (Office for Official Publications of the European Communities, Luxembourg 1995) contains a small number of references to the role of Information and Communication Technologies in teaching and learning, and thus does not include direct recommendations as to developments in institutions of higher education in this area. Nevertheless it is significant that the fourth general objective, Proficiency in Three Community Languages (1995: 67-69) contains very strong and convincing statements on the need for foreign languages and makes the following remarks concerning ICT:

1. All this presupposes the availability of top-quality education drawing on modern materials, equipment and methods customised to meet the needs of the diverse groups involved.
2. Innovatory language-teaching methods (in Example No 4 under the headline "European quality label - Aims") must be encouraged.

Previously, in connection with the question *How can a person be employable* and under the headline *All the opportunities offered by the Information Society must be seized* (1995: 36ff), the authors state:

Teachers must also be given the opportunity to adapt to new technologies and to their consequences. The penetration rate of educational multimedia at school is still too slow. There are several reasons for this. **The quality of the products available today is not yet good enough to prompt teachers to use multimedia techniques. The development of multimedia educational software which the European Commission is supporting through the creation of the Task Force on educational multimedia software is, therefore, particularly important.** In addition, teaching staff do not always have the right type and the right amount of hardware. Finally, teachers are not, in the main, sufficiently well-versed in the use of educational multimedia techniques.

This correlates with a significant passage under the first general objective *Encourage the acquisition of new knowledge*, viz.

Education and training must draw on **the new communication technologies** and harness their full potential. In the long run every class should have the necessary equipment allowing young people access to the world of computers. This means, in particular, that Europe must adopt new high-quality teaching instruments adapted to its educational and cultural traditions. (1995:53)

In conclusion, while the number of references to ICT in the White Paper is small, it shows considerable enthusiasm for developments in Information and Communication Technologies.

2.2.4 *Modern languages: learning, teaching, assessment. A common European framework of reference* (1996). This document is, to a certain extent, a policy document, but it is also a very useful document to be used and adapted by teachers, language text book writers and policy makers. While references to ICT are not totally absent, they are relatively few in number.

Since the Common European Framework is basically a reference document for the elaboration of language syllabuses, curriculum guidelines, examinations, textbooks etc., the role of the Internet as a learning tools is particularly important. A reference to this relevance is included in the first chapter. Similarly, Information and Communication Technologies have an important role to play in the ten specialised User Guides for different target groups in Chapter 2, although no explicit reference to them is present.

Chapter 3 includes a detailed explanation of what communicative competence entails and a description of the different types of language activities. The type of collaborative learning implicit in certain aspects of ICT, particularly the Internet, is of particular relevance here.

Chapter 4 includes a kind of checklist, a framework of parameters and categories to be taken into account by teachers, learners and examiners. In the sections dealing with domains and situations and, specifically, when the document gives details on the physical conditions where the learning/teaching process takes place, the Internet could have a particularly important role to play. Explicit references to the importance of multimedia, CD ROM, etc. are found in this chapter, in the context of receptive activities in section 4.4.2, and with specific reference to audio-visual reception activities in subsection 4.4.2.3. In this chapter too, a subsequent section is devoted to written interaction, including a reference to e-mail correspondence.

In Chapter 5, which is devoted to tasks and texts, the emphasis is placed on the importance of taking into account the media in which each type of text is produced. Once again the relevance to the technological context is clear, although no explicit reference is made.

In Chapter 6, some general methodological options are offered, and direct exposure to authentic use of the target language through the use of computer programmes, CD ROM etc., is recommended. In addition, the production of different types of texts (such as e-mails) is mentioned, together with a reference to computers and the kind of use to be made of such instructional media. It is noted that this use may range from no use of ICT at all, to medium or extensive use of such resources as language/video/ computer laboratories or the access to international computer networking of schools, classes or groups of students.

Scaling and levels, the issues dealt with in chapter 8, could also be related to the kind of technology used to evaluate such levels in the sense that computer-based measurements can be said to be partly responsible for the move away from qualitative methods and the increasing acceptance of quantitative procedures based on an Item Response Theory (IRT) analysis. This has led to the development of computerised tests which are currently the subject of a number of research projects (for example DIALANG and the Universidad Autónoma de Madrid's computer-based test for English vocabulary and grammar). The latter uses the references of the Common European Framework, adapted to suit the University's own needs. Thus in the context of assessment (the subject of Chapter 9), it is interesting to note that the Common European Framework can

be of considerable use in projects involving ICT, even though there is no specific reference to these matters in the Framework itself.

In conclusion, it is clear that Information and Communication Technologies have an essential role to play in the context of the issues dealt with in the Framework, although this relevance is not always explicitly stated in the document itself.

2.3   ICT in documents with a specific focus on this area

2.3.1 *The Policy Document of EUROCALL.* The European Association for Computer-Assisted Language Learning, which was founded in 1993 with the help of funding from the European Commission, has developed a Policy Document which sets out its view of the role of ICT in the context of language learning. The brief document is reproduced below in full.
(http://www.hull.ac.uk/cti/eurocall.htm)

1. Information and Communication Technologies and multimedia applications should be integral parts of all modern language curricula. They provide teachers and learners with authentic materials and cultural information and help to promote intercultural awareness and mutual understanding. They should serve as learning tools and classroom resources rather than instructional devices. EUROCALL will strive towards ensuing that their exploitation is embedded in a principled and harmonious approach to language teaching, taking the interests and the learning styles of students as their point of departure.

2. Since Information and Communication Technologies facilitate international contacts amongst teachers and learners, EUROCALL will support activities which focus on concepts of their exploitation and examples of good practice in order to provide an educational framework so that teachers and learners can fully benefit from the educational potential of telematics.

3. The use of Information and Communication Technologies for distance learning, both at national and international levels, should be promoted in order to make educational provision more flexible and accessible to a wide range of users. It is EUROCALL's intention to engage in activities which will further this aspect of CALL & TELL (Technology Enhanced Language Learning).

4. The key to the introduction and acceptance of Information and Communication Technologies lies in teacher training. Information about and training in appropriate uses of modern technologies as well as handling of the necessary technical equipment is essential. EUROCALL will provide an information network so that access to technical support and information on how to integrate such media into their daily classroom practice becomes available to all teachers of modern languages. Furthermore, in addition to the conferences, EUROCALL will support members in their efforts to run practical workshops and initial and in-service teacher training programmes, and distribute examples of good practice via the EUROCALL database.

5. EUROCALL will continue its efforts to examine possibilities for and foster continued co-operation between colleagues involved in the development of

Information and Communication Technologies and their pedagogical application amongst its members. It will also encourage the formation and strengthening of special interest groups within EUROCALL devoted to promoting CALL & TELL in foreign language learning.

6. EUROCALL will give continued support to and co-operate with existing networks and organisations world-wide in the area of language learning and media exploitation.

2.3.2 *The Policy Statement on New Technologies of the European Language Council* (http://www.fu-berlin.de/elc/Policygroups/tech-eng.htm). Drafted in 1995, the year in which the founder members of the European Language Council began to plan the creation of that Association, the Policy Statement concentrates on the new needs created by developments in ICT. The document is summarised below.

New needs are emerging for all participants in the language learning process:
- (i) for learners, particularly in relation to autonomous learning;
- (ii) for teachers, who need to understand the potential of new technologies encourage learners to develop new learning strategies and provide appropriate guidance;
- (iii) for administrators, who must provide the appropriate technological infrastructure, learner support systems and opportunities for staff development;
- (iv) for researchers, who require recognition and support for their work in the sphere of new language teaching methodologies.

The policy statement therefore focuses on the following key areas: learner autonomy and support systems, teacher training, technological infrastructure and research.

1. Learner autonomy and support systems. There is an urgent need to clarify and to explore the following areas:
   - (i) the concept of autonomy as opposed to self-instruction (see Little, 1991: 3);
   - (ii) the need to develop learners' freedom to take charge of their own learning (Holec, 1981: 3);
   - (iii) the ways in which multimedia can provide the rich learning environment without which the learners' choice is restricted and their freedom stunted;
   - (iv) the development of support systems which can provide the learners with the guidance necessary for making the most of that environment;
   - (v) the new roles of the teacher in an autonomous, multimedia learning environment, mainly as consultant as well as participant and co-learner in the learning process (Dam, 1995: 5).

2. Teacher Training
   It is recommended that policies be put in place, within institutions of secondary and higher education and at national and international level to

ensure that the infrastructure necessary to underpin and encourage the development of expertise in new technologies is provided.

3. Technological infrastructure, learner support systems and staff development
4. There is a danger that new technologies will be rejected by teachers if administrators fail to provide the essential infrastructure, namely:
    (i) an adequate budget for the acquisition and constant upgrading of hardware;
    (ii) an adequate budget for the acquisition and constant upgrading of software and accompanying materials;
    (iii) adequate space and furniture for facilities incorporating new technologies;
    (iv) adequate staff to support self-access facilities. This implies a mixture of trained support staff with a technical background, a resources management background and appropriate language skills - and/or combinations thereof;
    (v) training for teachers in operating the hardware and using the software;
    (vi) training for teachers in teaching methodologies that incorporate computer technology and distance learning tools;
    (vii) materials preparation time for teachers, especially in the initial stages of setting up new facilities.

5. Research
   Despite considerable development in recent years, there is still a need for theoretical and empirical research in this area to be integrated into the structure of higher education in Europe. In many states, research in second language acquisition sits uneasily between the traditional divisions which separate modern language departments with a strong literary focus, and faculties or colleges of education. No clear path exists which can lead from an initial interest developing at the undergraduate level and being continued as a student pursues research at the postgraduate level. Furthermore, such research may not be recognised in the context of the teaching profession, both at secondary level and in higher education. It is therefore not surprising that developments in research in new technologies and language learning owe as much to individual enthusiasts as to national and international strategies, and that scholars can claim that there is a "dearth of sound empirical research into the relationship between second language acquisition and the use of technology on which to base new learning models"(Hagen, 1993:108). For such research to develop, policies must be introduced at university, national and international level to encourage the development of research in this area to underpin innovations in language teaching and learning.

2.4   Conclusion

As stated in the introduction to this chapter, the aim of this brief survey is to enable us to see if the deliberations of the experts in the area are exerting an influence on the policies and recommendations contained in the more general

documents. To a certain extent the answer can be said to be positive, in that in all the general documents developments in new technologies are encouraged. However, as we have seen, the references to the role of ICT tend to be very brief and general in nature, and there is little evidence that experts in Information and Communication Technologies and language learning have been involved in the drafting of the major documents surveyed. The importance of developing ICT and language learning as an area of research and study, for example, which is necessary if the developments recommended in all the documents are to proceed, is emphasized in the two specialized documents, but absent from the general documents. It is thus to be recommended that greater efforts should be made to ensure that the work of specialists in ICT and language learning is taken into account in the formulation of policy at national and international level.

3. THE STATUS OF RESEARCH IN ICT AND LANGUAGE LEARNING

3.1 Introduction

As an emerging discipline, Computer Assisted Language Learning (CALL) poses three major problems for both the academics in higher education interested in the area and for those controlling the structures within which those academics develop their careers:

(i) CALL researchers make a close link between research and development, which traditionally has not been a preoccupation of faculties of humanities, with the result that major activities involving the development of new products tend not to be recognised.

(ii) Research in the area of CALL is a relatively new phenomenon in higher education, dating back only to the 1960s, and it too can fail to be recognised as research by those responsible for promotion and the evaluation of research, often because it tends to include a substantial applied element. To further complicate matters, the concept of research has different connotation in the different European cultures. For example, the German word *Forschung*, which refers exclusively to an academic institutionalised context, has a narrower meaning than the English one, and the word *recherche* in French has a broader sense and may include analysis of materials or processes which is excluded in the Research Assessment Exercise (RAE) that takes place every few years in the UK. The RAE defines *research* as follows: 'Research' for the purpose of the RAE is to be understood as original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sectors; scholarship*; the invention and generation of ideas, images, performances and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and analysis of materials, components and processes, e.g. for the maintenance of national standards, as distinct from the development of new analytical techniques. (*Scholarship embraces a spectrum of activities including the development of teaching material; the latter is excluded from the RAE): http://www.niss.ac.uk/education/hefc/rae2001.

(iii) Even in situations where CALL research is recognised, it is not always easy to decide in which area of a traditional institution of higher education it should be classified, modern languages, applied linguistics or education. Moreover, definitions of research in CALL are a recent phenomenon, and it is not clear to many where such research can be situated in relation to existing disciplines such as second language acquisition and cognitive psychology.

The integration of theory and practice is necessary if CALL is to develop as a discipline and influence practice in language learning, and there is a need for significant developments to take place if CALL is to be recognised and accepted in the context of higher education in the area of languages.

However the outlook is not entirely negative. For example, the number of journals in the area continues to increase, including Web journals. The USA led the way, with the publication on the Web of the *Language Learning and Technology Journal*, which has a strong research orientation: http://polyglot.cal.msu.edu/llt. In Europe, there is the francophone electronic journal *ALSIC* (*Apprentissage des Langues et Systèmes d'Information et de Communication*): http://alsic.univ-fcomte.fr. There are also well-established, refereed printed journals such as *ReCALL* (EUROCALL and the CTI Centre for Modern Languages, University of Hull - shortly to be taken over by Cambridge University Press) and *CALL* (Swets and Zeitlinger). Both these journals encourage the publication of papers focusing on research and practice.

The aim of this chapter is to identify current developments in the recognition of CALL research and to evaluate the progress made. Three recent and current initiatives in the area of CALL research are described:

(i) a major publication on CALL which aims to define and describe *CALL as a discipline* in its own right;

(ii) a *joint political initiative* by a number of associations to promote the recognition of research in CALL;

(iii) the increasing number of *postgraduate courses in CALL*.

3.2   CALL as a discipline

The publication of a seminal work on CALL as a discipline was the culmination of several years of research undertaken by Michael Levy (Levy, 1997). The main focus of Levy's book is the CALL Survey, an analysis of over 100 questionnaires returned by CALL researchers and developers during the period 1991 to 1993. The book includes a chapter on CALL in its historical context (Chapter 2) and an important chapter on the interdisciplinary nature of CALL (Chapter 3), the latter being full of insights into the relationships between CALL and a variety of other areas: second language acquisition, cognitive psychology, artificial intelligence, expert systems, computational linguistics, natural language processing, instructional technology and design, and human-computer interaction. As the title of the book suggests, Levy's aim in this publication was to find out if there was common ground among CALL researchers and developers and to what extent there were emerging common themes and patterns of development (Chapter 6). Like many other writers in this area, he bemoans the lack of reward or recognition for work in the area of CALL, lack of incentives, lack of institutional support, and prejudiced value judgements among those who hold the purse strings.

3.3   Joint political initiative

The politics of CALL was the theme of Graham Chester's keynote lecture at the EUROCALL 99 conference (Chesters 1999). In this paper Chesters outlines the need for CALL practitioners 'to remain constantly aware of the political context in which they operate, so that they can the better exploit opportunities to win funding, gain status for their activities and generally succeed more often in the prime aim of enhancing the practice of language learning' (p. 7). As Chesters points out, 'language learning is all too often seen as a discipline that is at second level - more to do with skills and accidents of birth than true intellectual challenge' (p. 9), which in turn leads to research in this area being undervalued. Significantly, the European Commission's funding programmes offer much more generous funding to research projects focusing on the technological aspects of human language, i.e. the area which used to be known as Language Engineering and which, since January 1999, is referred to as Human Language Technologies (DGXIII), while projects focusing on language materials development,. e.g. those funded under DGXXII programmes, explicitly exclude research. This is a state of affairs that has been a bone of contention for CALL practitioners for a number of years and which figured prominently in a seminar on research in CALL that took place at the EUROCALL 97 conference. In his report on the seminar Little alludes to the 'role that EUROCALL might play in helping to develop a research culture appropriate to CALL' (1998: 128).

Since the publication of Little's report, EUROCALL has joined forces with the two leading CALL professional associations in the USA, CALICO and IALL, one of the outcomes of which was a Research Colloquium at the University of Essen, 30 April and 1 May 1999, attended by 20 CALL theorists, researchers, developers and practitioners from Europe and the USA. One of the outcomes of the Colloquium was the drafting of a joint policy statement by Nina Garrett, Yale University, which describes what CALL experts understand their discipline to be about and, above all, how research, development and practice are interrelated. The draft policy statement will be discussed at the EUROCALL's Annual General Meeting, 16 September 1999, and an amended version will be published.

3.4   Postgraduate courses in CALL

The first WorldCALL conference, which took place at the University of Melbourne in July 1998, included a symposium entitled 'What should we teach graduate students about CALL?' Presenters from the UK, the USA and Australia described postgraduate courses including a CALL element at their own universities, and the ensuing discussion focused on the need for more courses of this type to be developed, thus providing a link between undergraduate studies and 'true' research leading to a PhD qualification. As part of the action plan emerging from the EUROCALL Symposium held at the University of Essen (see ii. above), a list of existing postgraduate courses in CALL and courses in which ICT and language learning figures as a major element has been drawn up. The list is available at http://ourworld.compuserve.com/homepages/GrahamDavies1/courses.htm and will be regularly updated. Around 30 courses of this type are already documented.

As examples of good practice in this area, information on a number of such initiatives is provided in Appendix 4.

3.5   Conclusion

Despite the many problems faced by those involved in the area of research and development in CALL, the three initiatives described above are indications that important progress is being made in the definition of the area, the provision of courses at postgraduate level to train future researchers, and the *professionalization* of CALL as a discipline. It is widely recognised by CALL practitioners that theory and practice in this area are closely linked. One cannot simply adopt a specific theory and derive practice from it on the assumption that the theory cannot be questioned. Levy (1997: 5) notes that in CALL theory does not necessarily drive development and that many projects 'begin at a lower level of abstraction more immediately determined by conditions governing actual practice and problems arising directly from it'.

Garrett (1998: 9) also stresses the importance of practice in determining theory:

We [CALL users and practitioners] are the only ones who can control and shape technology use. [...] We have to use our practice - our day-to-day integration of technology, our understanding of the necessary design links between pedagogical goals and technological implementation - to drive the redefinition of language teaching as a whole in ways that are both valid and acceptable to teachers.

Appendix 5 provides a living example of the interrelationship between theory and practice, namely the Merlin Project, which is based at the University of Hull: http://www.hull.ac.uk/merlin. This involves the creation of an Internet-based collaborative learning environment, originally developed as a joint research project between the University of Hull Language Institute and BT Laboratories. In the course of the development of this project, theory and practice have gone hand in hand.

4   RECOMMENDATIONS

4.1   Sources from which the recommendations were derived

The recommendations from year 3 arise partly from the examination of the place of ICT in language policy documents (see chapter 2), partly from the study that was made of links between theory and practice (see chapter 3) and partly as a result of discussions on the activities of the Scientific Committee which took place in four workshops at the 2nd conference of the European Language Council, which was held in Jyvaskyla, Finland, (1st-3rd July 1999). The recommendations that arose from the activities and deliberations of the Scientific Committee in Year 3 fall into four categories:

- those that refer to the learner
- those that refer to the professional
- those that are concerned with the technology
- those that concern European policy.

These are included in the list of recommendations which is given below.

In general, the recommendations from Year 3 are of two types, namely

- those that are related to language policy documents
- those that are related to research in ICT and language learning.

The latter category includes recommendations concerning links between research and practice in the area.

4.2   ICT and language learning policy recommendations

We recommend that the European Union should continue to promote equal opportunities and access to ICT and that there should be greater co-operation between Eastern and Western countries. The types of research projects that should be funded are collaborative, cross-disciplinary, evaluative, integral and involve skills development. Finally, we recommend that, in order to assist teachers in using material on the Internet, the European Union should promote clarity and flexibility in copyright regulations across Europe where the use of Internet-based resources is concerned.

4.2.1 *Implementation of ICT in language teaching departments.* We recommend that, when implementing ICT in language learning, technical, pedagogical and administrative power centres should always be involved, and that social aspects should always be considered. Technical power centres should be warned of the inadvisability of bringing computers into schools without equipping teachers with the necessary skills and knowledge to enable them to use them properly. Pedagogical power centres should be made aware that thorough and accurate information-gathering processes are essential, and that administering questionnaires may not always lead to accurate information-gathering. Administrative centres are often willing to provide funding for machines, but not for training teachers. They must be made to realise that, in

order for ICT to be implemented effectively, teachers need to be trained in its use. As far as social aspects are concerned, each teacher must be viewed first and foremost as an individual, and networked teacher communities should be established before introducing ICT.

4.2.2 *Policies concerning language learners.* With regard to language learners, we recommend that more focus is placed on "learning to learn". Learners need to be taught strategies that will enable them to cope with ICT and new learning environments. Web-based meeting places should be set up, where students of languages other than English can hold discussions and provide mutual support. It is felt that, in order to make these meeting places successful, language learners need guidance in collaborative learning techniques. Finally, we recommend that new assessment techniques should be devised to reflect the new learning environments that are brought about by developments in ICT.

4.2.3 *Policies concerning professionals in the area.* Four types of professionals can be identified, these are teachers, advisers, managers and researchers.

Teachers. With regard to language teachers, we recommend they should receive full recognition within University hierarchies and pay structures. The current situation is that, in comparison with literature teachers they often have relatively low status and are not considered to be full academic members of staff. Teachers should be supported in and trained in the use of ICT.

Advisers. The European Union needs to recognise the emergence of a new profession in the area of language learning and teaching; that of the "language adviser". The role of the language adviser is to guide learners, helping them develop the necessary strategies for language learning, teaching them how to use the resources (ICT and others) efficiently, and helping them develop individual learning programmes. We recommend that modules in language advising are set up on existing teacher-training courses and that information concerning the role of language advisers is disseminated so that language teachers do not perceive them as a threat. We also recommend that a European audit be carried out into the various perceptions and needs that different European countries have in the area of language advising.

Managers. As far as managers are concerned, it is recommended that they should be encouraged not to see ICT as an excuse for reducing staff numbers. They should be made aware of the fact that the introduction of ICT can often lead to increases in staffing requirements.

Researchers. Researchers into the role of ICT in language learning must have a clearly defined area of research. At present, research into the potential and applications of ICT in language learning appears to have a lower status than research into other types of language teaching in the eyes of both assessment boards and funding bodies. This situation needs to be remedied. In may European countries it is difficult to get funding for research into language learning and teaching that involves the use of ICT. This is thus an area where European funding has a particularly important role to play.

4.2.4 *Policies concerning the role of ICT.* There should be a policy of dissemination of information concerning the role of ICT in language learning, with an emphasis on the fact that it should be pedagogically driven and needs-led. ICT should be seen as support for teachers and as a guidance tool for learners. Information concerning both the potential and limitations of ICT should also be disseminated. Its potential in reading, writing, listening and speaking skills.

4.3   Research

Several kinds of research projects which we recommend should receive greater national and international funding. These are classified below according to two criteria. Section 4.3.1 presents the different types of research projects, and section 4.3.3 presents the different areas of research that we feel should be supported.

4.3.1 *Types of research projects that should be supported and funded.* We recommend that the following types of research projects should be supported:

Projects that place emphasis on the "research" component. Although national and international bodies appear to be willing to fund development projects in ICT in language learning, it does not appear to place equal importance to projects which have a considerable research component. As research is a necessary prerequisite to any development programme, we strongly recommend that it be promoted by the European Community.

Collaborative research projects. Priority should be given to research projects which are collaborative. Projects which combine partners from relatively more and relatively less economically developed areas of Europe are to be particularly encouraged, especially when they involve the transfer of skills and expertise from more developed areas to less developed areas.

Cross-disciplinary research projects. One recommendation that we would like to make very strongly is that the European Union and other funding bodies support and fund research which is cross-disciplinary. Such research projects might combine language teaching with subjects such as applied linguistics, cognitive psychology, education, communication and media studies and information sciences. The reason why we recommend this so strongly is that many national funding bodies do not have the necessary infrastructure to support these types of research. Many boards deal either with "arts" or with "science" or "education" and so on and tend to categorize researchers. Projects which are cross-disciplinary do not fit into any one category and thus do not often attract funding. In other European countries the system is different. Cross-disciplinary research is encouraged on a national level and appropriate funding bodies do exist, but the universities themselves do not encourage their individual departments to collaborate. The European Union therefore appears to have a clear role to play in supporting and funding this type of research.

Evaluative research projects. We recommend that, in order to attract national and international funding, research projects should contain an evaluative component. For example, such projects might focus on the evaluation of the effectiveness of a particular ICT-based teaching environment, the appropriateness of such an environment for a particular group of learners, or the ways in which it would have to be adapted to suit the learning cultures of other European countries. Furthermore, we recommend that, in order to gain access to funding, project developers must be able to demonstrate that they are capable of evaluating their own research.

4.3.2 *Areas of research that should be promoted.* We identified a number of areas where not enough research is being carried out at a European level. We recommend that the European Union should support and fund research in these areas, which are:

Research into the effectiveness of CALL material. This includes projects that evaluate the language learning effectiveness of material found on the World Wide Web, web-based meeting places and e-mail, as well as CD-Roms and language learning packages. It could include research into learners' attitudes towards ICT in language learning and individual differences in these attitudes. Particular emphasis should be placed on empirical research.

Research that focuses on the skills development. This includes projects that examine the effectiveness of "learning to learn", strategy development programmes. in the context of ICT and self-access learning environments. Research into the relationship between learner autonomy, self-directed learning and ICT also falls within this category.

Research that looks into the role of guidance in independent and collaborative learning. This includes projects that examine the role of the teacher or the language adviser in promoting autonomous, self-directed learning. A new role for the teacher is emerging as a result of the introduction of ICT in language learning. This role needs to be rigorously researched in order to derive maximum effectiveness from the new learning environments.

4.4   Conclusion

In conclusion, we recommend that the European Union should continue to make it its policy to prepare teachers, learners and administrators for the new learning environments that are developing as a result of the introduction of ICT in language learning. There will inevitably be changes in the existing relationships between teachers, learners and language learning material. These changes need to be managed effectively and sensitively, which is why we recommend that the European Union should be willing to support and fund research projects which promise to help to ease the transition.

REFERENCES

(1995) *White Paper on Education and Training: Teaching and Learning - Towards the Learning Society.* Luxembourg: Office for Official Publications of the European Communities.

(1996) *Green Paper: Education, training and research: Eliminating obstacles to transnational mobility.* Luxembourg: Office for Official Publications of the European Communities.

(1996) *Modern languages: learning, teaching, assessment. A common European framework of reference.* Strasbourg, Council of Europe.

Chesters G. (1999) 'On the politics of CALL', *ReCALL* 11, 1: 7-12.

Dam, L. (1995) *Learner Autonomy: From Theory to Classroom Practice.* Dublin: Authentik.

Demaizière, F. (1996) *Multimedia et enseignement des langues.* Paris: Les Langues Modernes.

Garrett N. (1998) 'Where *do* research and practice meet? Developing a discipline', *ReCALL* 10, 1: 7-12.

Hagen, S. (1993) 'Technology and learning.' In *Foreign Language Learning and the Use of New Technologies.* Brussels: LINGUA-DELTA, 108-112.

Holec, H. (1981) *Autonomy in Foreign Language Learning.* Oxford: Pergamon.

Levy M. (1997) *CALL: context and conceptualisation*, Oxford: Oxford University Press.

Little, D. (1991) *Learner Autonomy: Definitions, Issues and Problems.* Dublin: Authentik.

Little D. (1998) 'Report on Seminar on Research in CALL, EUROCALL 97', *ReCALL* 10, 1: 127-128.

Appendix 1: Summary of reports in Year 1

1.1.   Autonomy and self-instruction in language learning: the current situation in European institutions of higher education. Jeannette Littlemore and Yves Chevalier, with contributions from Joseph Rézeau and Herbert Van Uffelen (full report available at http://odur.let.rug.nl/projects/tnp-ntll/reports.htm)

Introduction. This section consists of a definition of learner autonomy and its relationship to self access and new technologies.

Part 1. Based on findings from questionnaires, this part provides an account of the attitudes existing in higher education in Europe towards the notions of learner autonomy, self access and new technologies. There is a great deal of variety in the responses. Some institutions have reflected a great deal on the various ways of defining and promoting learner autonomy. However, many of the institutions questioned, although equipped with new technologies and self access centres, seem to lack insight into the theory underlying their use. Some institutions see self access as an integral part of the students' learning programme, others see it as something separate from the day-to-day teaching curriculum, treating it as a kind of optional extra. Some of the institutions questioned have a high level of usage of self access centres by students, while others have had difficulty motivating students to use them.

Part 2. The second part of the report is supported by descriptions of three in-depth interviews, one each with the following types of institutions (all of which were represented in the questionnaire responses):
   (i)   An institution which shows little interest in the concepts of learner autonomy, self access and the new technologies;
   (ii)   An institution which has self access facilities and which uses new technologies, but which does not have a vision of how its language teaching provision might evolve in the light of increased learner autonomy;
   (iii) An institution which employs self access and/or new technologies, and which seems to have reflected carefully on the notions of learner autonomy and the changing roles of learners and teachers.

Part 3. This section consists of an examination of the implications of learner autonomy, firstly for the provision of self access materials and secondly for the role of the teachers and learners. This part of the report is based on reports of interviews carried out with two institutions where learner autonomy plays an important role.

Conclusions and recommendations
Conclusion. The conclusion describes the overall findings from the questionnaires and interviews, and certain recommendations are made based on these findings.
Problems which have been identified include:

- That there are widespread discrepancies between theory and practice.

- That these discrepancies vary from country to country and between institutions.
- That computer based teaching materials are not specifically made with the interests of educational institutions in mind, and that they are not market-led.
- That educational institutions do not have enough information about the advantages and disadvantages of the various kinds of hardware and software available.
- That time and money are both severely lacking in many institutions.
- That there is a need for technical support which is not often met.

Recommendations. The recommendations arising from the report include:
- That knowledge of the meanings and implications of learner autonomy and self-directed learning must be more widespread.
- That institutions must be aided in their selection of hardware and software.
- That teachers should be trained to create their own computer-based materials, using teacher authorship programmes etc.
- That adequate time should be allowed for teachers to familiarise themselves with computer-based materials and use them to create self access materials.

1.2 Key areas in new technologies and language learning
(Full report to be published in 1999. Synthesis report available at
http://odur.let.rug.nl/projects/tnp-ntll/reports.htm)
The key areas identified are as follows:

- The World Wide Web in language learning and language teaching,
- Learner autonomy and the challenge of tandem language learning via the Internet,
- Concordances in the classroom: the evidence of the data,
- New technologies and the less widely used and less widely taught languages,
- Evaluating authoring systems for language education,
- The impact of Language Engineering on CALL,
- Videoconferencing for language teaching,

Recommendations arising from the discussion of these issues as presented at the workshop in Lille, 5 July 1997, are included in Section 1.2.5 in the main body of the report.

Appendix 2: Summary of reports in Year 2

2.1 Postgraduate courses and teacher training in the area of new technologies and language learning. Following the papers delivered at the Venice workshop a set of recommendations was drafted.

Titles of papers

- Paolo Balboni: Using Computers to Teach Languages: "Why" First, "What" and "How" Later.
- Graham Davies: Postgraduate Courses in New Technologies and Language learning
- Angela Chambers: In-service Teacher Training in New Technologies and Language Learning.
- Franca Poppi : Fostering Authonomy: Implementing Change in Teacher's Attitudes.
- Gino Schiavinato: Un projet de test adaptif multimédia en langue étrangère.
- Rodolfo Delmonte: "Slim": Interactive Multimedia self-Learning Linguistic Software.
- Maddalena Angelino, Marina Biral, Valentina Zangrando: "Quattro passi nell'italiano": a Distance Learning and Teaching Experience
- Massimiliano Cartura: "Itals": un projet de formation des enseignants d'italien dans le monde.

Recommendations for developments in postgraduate studies in new technologies and language teacher training.

- 1-year postgraduate European programmes of study in Language Teaching and New Technologies should be set up.
- Smaller (c. 60 hrs), polyvalent units of study in New Technologies for language teachers should also be developed.
- A unified European frame of reference should be established for widely used, but often highly ambiguous notions such as *language centres*, and the posts and qualifications associated with them. Once established, this could be used to set up a European co-operation project, including staff exchange to facilitate creating common job profiles.
- Following the papers on testing, speech technology, the Internet, etc. it was recommended that there should be continued dissemination of R&D from other disciplines. This cross-fertilization of ideas was considered essential for using new technologies in language learning.

2.2 New technologies and languages for students of other disciplines. The papers given in the first part of the workshop focused on linking theory and practice. In his paper Lines of convergence in LSP: new pedagogical approaches, the first presenter, Michael Perrin (Université de Bordeaux II) addressed some of the fundamental issues in LSP teaching. He began by outlining the history of LSP and its role within linguistics. Various sub-disciplines converge in the study of LSP. The most important are: discourse studies, terminology, genre studies. LSP has become a discipline in its own right. Perrin advocated a new approach within

the field of language didactics. LSP should offer a new line of career for young university graduates. He reported on a new diploma for LSP (DAU) at Bordeaux University which encompasses the study of linguistics, didactics, culture and new technologies. In his conclusion, Perrin hinted at the problem of language dominance. The thriving force in LSP is English, although other languages still play a minor role.

The discussion following the paper touched on the issue of reconciling research and teaching practice. It was agreed that there is a great need for research into LSP, especially from a didactic perspective. Language didactics in general seem to have status when it comes to funding research programmes. It was also suggested that LSP teachers themselves should be more involved in research. In view of the enormous teaching load of language teachers this seems to be rather difficult to put into practice. Therefore it will be essential to reduce teaching loads for teachers doing action research.

The second paper by Graham Davies (Thames Valley University) dealt with The potential of new technologies in teaching and learning languages for specific purposes. Davies confirmed that English is the dominant language in LSP teaching. He reported that his own university, Thames Valley, all LSP teaching has disappeared for all other languages than English. There seems to be a tendency among authorities responsible for funding to recommend the use of modern technology rather than paying for costly teachers' hours. Davies argued that the (stick it on the web" mentality is a rather short-sighted solution. He then outlined areas in which the new media have found useful applications: vocational training for highly specialized purposes, e.g. CD-Roms for airline staff, channel, tunnel train drivers, ski instructors; CD-Roms for specialized vocabulary; concordance programmes; communication skills.

Davies also suggested useful Internet sites for language learning. He emphasized that there is still a need for good material. Production costs, however, are still very high and there is hardly any profit for developers and publishers.

In the discussion following the paper, workshop participants agreed on the need for better authoring systems for teachers to produce tailor-made materials. It was also felt that there is a lack of materials for all languages except English. To prepare teachers for the use of new technologies in language teaching, it is essential to integrate specific course modules into teacher training curricula.

In the final paper Ole Lauridsen (The Aarhus School of Business) introduced an interactive multimedia language learning programme on CD-ROM for business Danish. The programme was designed as a self-study course for professionals who want to prepare for business contacts with Danish partners. It emphasizes oral skills in the following fields: office communication, company presentations, product presentations, job interviews. Core elements of the programme are case studies which are presented in authentic video and sound sequences showing typical examples of business communication. Users can work with listening, writing and speaking exercises. All texts are transcribed. The programme also contains a glossary and dictionaries for the three elements, namely grammar,

area studies and LSP for business. The programme is also available for business German.

Recommendations for developments in new technologies and languages for students of other disciplines.
The discussion focused on needs in three areas

- a need for research in LSP, especially action research conducted by practitioners themselves, who would receive recognition for such activities
- a need for incorporating the new media into teacher training
- a need for materials for languages other than English

2.3 Pilot Programme 1

Project Name: ICT for Language Teachers - Development of a course in Information and Communication Technology for Language Teachers.
Project Number: 56627-CP-1-98-LINGUA-LA

The project aims to address a need that has already been identified by the project partners, namely: the design of a specialist syllabus and delivery of a WWW-based specialist course in information and communications technology (ICT) for language teachers, with an emphasis on the implementation of new language teaching methodologies. The main target group is language teachers already in service, although parts of the syllabus would also be suitable for teachers undergoing initial training and for teachers following short intensive courses (see Part II, B.2). It is anticipated that the syllabus and the delivery mode developed and piloted in this project will lead in the longer term to a recognised international qualification, e.g. a Diploma or MA Degree. The partners in this project have been active in this area for a number of years, and it is clear from their work in connection with related projects that the provision of general ICT training for people engaged in language teaching is inadequate and that there is an enormous unsatisfied demand for subject-related training. What is needed is a specialist-led approach to ICT training for language teachers. As more and more specialised software training tools become available, e.g. parallel concordancers and authoring packages for training pronunciation and techniques of translation, general ICT trainers find themselves less and less able to satisfy the needs of an increasingly demanding language teaching profession. This project therefore seeks to set up a modular course to address the above need, using the WWW as the main delivery mode, backed up by local seminars and workshops, printed materials, email and computer conferencing. Video-conferencing is a further possibility that might be considered at a later stage. The project aims to pilot ICT training courses for 150 language teachers/trainers in GB, IT and FI, i.e. 50 per country, delivering the course materials in EN, IT and FI.

2.4 Pilot Programme 2

Project name: New technologies and language learning: pedagogical approaches and practical applications. Project Number: 56563-CP-1-98-LINGUA-LA

The project aims to develop a sixty-hour in-service module for teachers and trainers in European languages as a second/foreign language.

Main activities. The course will familiarise participants with key areas in new technologies and language learning such as the following: computer-assisted language learning, including dedicated, generative and authoring packages; the Internet as a learning tool; reference tools, including on-line dictionaries, lexica etc., both CD-based and via the Internet; the computer as a research tool, including data-bases and library resources; concordancing as a learning and research tool; introduction to natural language processing; introduction to machine translation and machine-assisted translation. More importantly, the course will provide guidance in the use of the technologies in the light of recent theoretical and empirical research in this area, focusing on areas such as learner autonomy, self-access, language advising, learner strategies and learning to learn.

Outcomes and products: Outcomes will be of two types; firstly course participants will be able to integrate information and communication technologies into their teaching; and secondly the application of concepts such as learner autonomy and learning to learn will provide them with transferable skills which they can subsequently apply in their own professional and personal development. Products will take the form of substantial course documentation, available both in paper form and on the project website.

Appendix 3: Reports on workshops in Year 3

3.1 Workshop on New Technologies and Language Learning

TNP Sub-project 3 (New Technologies and Language Learning) organised a workshop in Groningen, NL, on 5 March 1999 to encourage information exchange between various projects. The first speaker, Valère Meus, Universiteit Gent, BE, showed how his University's Language Centre is evolving into an advanced computerised resource centre for language learning, including a uniform web-based interface for accessing language learning materials, digitized audio materials, and specially designed MM-desks. He emphasized the need for teachers to be able to create their own materials, which involves training programmes and time for development. Gerrit Bloothooft, Universiteit Utrecht, NL, spoke on the activities of the TNP in Speech Communication Science, of which he is co-ordinator, and the TNP in Advanced Computing in the Humanities, which is closely affiliated with it. He pointed out that, although in academic education for speech communication sciences and NLP itself CALL is not involved, there is a rapidly growing common research interest. In this respect, it was noted that these TNPs had established links with the research organisations, ELSNET and ESCA. Ton Koet, Hogeschool van Amsterdam, NL, reported on a project aimed at setting up a European MA programme in Information and Communication Technology and Language Learning. The programme, in which the European Credit Transfer System (ECTS) will be used, incorporates Technology, Teaching Methodology, Language Acquisition, Design and Research.

3.2   Workshop on language learning and the Internet

Topic: Language Learning over the Internet; the potential and the limitations. (Debra Marsh, Head of MERLIN Unit, University of Hull,GB.) Project Merlin (Multi-media Educational Research into Learning via an Information Network) began in September 1995 as a research and development project with the aim to develop an Internet based platform to deliver language courses to learners all over the world. The Internet can provide exciting and challenging opportunities for language learners to engage in authentic communication with native speakers or other learners of the target language all around the world. The World Wide Web (WWW) offers valuable authentic resource in the target language and access to a great deal of cultural information to help students gain L2 awareness and understanding of target language community. In recognising the potential of the new information communication technologies, we also need to be fully aware of its limitations. These are not simply confined to technical limitations but arise from our very limited experiences of teaching and learning supported by a web-based environment.

This workshop examined some of these limitations and provided a forum for discussion and exploration to find a way forward through European collaboration to further develop our understanding of the processes of teaching and learning in these new environments.

Appendix 4: Postgraduate Studies in CALL: examples of good practice

4.1   UMIST, Manchester, UK.

Part-time MSc Computer-Assisted Language Instruction (CALI) (French or German), Department of Language Engineering, Centre for Computational Linguistics.
The part-time Masters in Computer-Assisted Language Instruction is intended for language teachers in secondary and tertiary education, who would like to use CALI-based methods in their classrooms; corporate language trainers; industrialists, e.g. companies lacking in linguistic knowledge and experience, especially those engaged in international transactions; prospective PG candidates, mostly language graduates, seeking an MSc course preparing them for PhD research in this area. The course approaches computer-assisted language instruction from three major theoretical backgrounds: language teaching methodology, (computational) linguistics, computing.

Admission. Applicants will normally have a good honours degree or an equivalent qualification. They must have a very good command of written and spoken English and a good knowledge of French or German. An interest in computing is essential, but no prior knowledge in this area is required.

Tuition. The course comprises a taught element (6 modules) and a dissertation. It is a part-time course lasting 30 months: 2 course modules for each of the 3 teaching semesters (16 months) and a dissertation (14 months). The teaching pattern of the modules is either 3 hours per week (evenings) over 10 weeks / one teaching semester, 1 residential week or 2.5 week-ends or a mixture of the two. Teaching involves lectures, seminars, tutorials, computer laboratory classes, individual project work, group work and private study. In the language-specific modules, most of the tuition is conducted in the foreign language. Students interact closely with tutors during laboratory, supervision and advisory sessions. Additional support is given by email and electronic lists for group discussion.

Currently, the following modules are offered on the course:
- Information Technology for CALI
- Multimedia for CALI
- CALI for written language (French or German)
- CALI for spoken language (French or German)
- Computational linguistics and CALI
- Computers and Translation
- Lexicography and Terminology

(The module outlines are published on the Web: http://www.ccl.umist.ac.uk/teaching/msccali)

Learning outcome
By the end of the course, students are expected to be able to use CALI appropriately and efficiently in their professional activities, have become

reasonably creative in their CALI work, and capable of independent thought about CALI issues. This means:

- understanding IT for language work and CALI
- evaluating resources and making informed choices
- integrating and developing CALI material
- designing CALI environments for specific language teaching purposes
- developing CALI multimedia environments for more advanced applications
- using and developing open learning resources
- increasing knowledge in the linguistics of one or two foreign languages
- engaging in further research in CALI issues

Award of MSc degree. For most students, this MSc will be part of their life-long education and training. It is therefore organised to suit the needs of students in a career or students who need to support their studies with paid occupation. A certificate bearing the module title is awarded upon satisfactory completion of each module and students can opt to just enrol for selected modules as part of their continuing education or mid-career training. A certificate in CALI (French or German) is awarded upon the satisfactory completion of the taught part of the course. The award of the degree of Master of Science (MSc CALI) is awarded when the dissertation has been assessed and approved and any other outstanding course requirements have been fulfilled.

Web: http://www.ccl.umist.ac.uk/teaching/msccali

4.2 Universidad Politécnica de Valencia, ES.

The Department of Languages offers a Doctoral Programme aimed at satisfying the needs of teachers/students who are working within two main academic disciplines: EAP/ESP and Computer Assisted Language Learning. The Department of Languages was first conceived and continues to grow serving the language needs of the Engineering and Science Academic Community of the Universidad Politécnica de Valencia. As a consequence of this, many of the lecturers have acquired skills in both EAP/ESP and CALL/ Computational Linguistics. There is also within the structure of the programme a strong line of investigation into the application of new technologies (multimedia, Internet, DVD, etc.) to the teaching of foreign languages.

The doctoral programme consists of the following core subjects:

Oral exposition of scientific information (Dr. Luz.Gil Salom)
English as a Tool for accessing scientific documents (Dr. Begoña Montero Fleta)
Computer Resources for the Teaching of Foreign Languages (Dr. Ana Gimeno Sanz)
Corpus Linguistics (Dr. Keith Stuart)
On-Line Course Design (Dr. Keith Stuart)
Systematic investigation of scientific information on the Internet
(Dr. Antonio Hervas Jorge & Dr. Rafael J. Villanueva Micó)

4.3 UNED, ES

UNED offers postgraduate courses, teacher training courses and a summer course.

Postgraduate courses
Nuevas Tecnologías aplicadas a la traducción y enseñanza de las lenguas (New Technologies applied to translation and the teaching of languages) directed by Prof. Dr. German Ruiperez.

Internet en la enseñanza e investigación (The Internet in research and teaching) By German Ruiperez and Pablo Ruiperez.

Teacher training courses
Internet en la enseñanza e investigación (The Internet in research and teaching) By German Ruiperez and Pablo Ruiperez .

INTERNET y humanidades by Prof. Dr. Ricardo Mairal.

Traducción y enseñanza asistida por ordenador (Translation and computer asisted learning) by German Ruiperez.

Summer course
El futuro de Internet y multimedia en en la traducción y enseñanza de las lenguas (The future of the Internet in language teaching and translation) by Maria José Lopez-Chollet.

4.4. Université de Bordeaux II, FR.

In the "DEA national" offered at the University one of the four lines of training and research is entitled New technologies for Language learning and teaching. The full lists of "notes de recherche du DEA" and "thèses de doctorat en anglais de spécialité et didactique de la langue" is available on the website at http://www.langues-vivantes.u-bordeaux2.fr. A significant number of the theses are on the subject of ICT.

Appendix 5: Case study - linking research and practice in ICT and language learning

5.1. Introduction
Several scholars in the area of CALL have noted the importance of integrating theory and practice. One cannot simply adopt a specific theory and derive practice from it on the assumption that the theory cannot be questioned. Levy has noted that in CALL practice often comes before theory and influences it. Reflecting on the link between theory and application, he notes: "theory must be sensitive to the context of the application if it is to be any use to the practitioner".(Levy, 1997) Garrett also stresses the importance of practice in determining theory:

We [CALL users and practitioners] are the only ones who can control and shape technology use. [...] We have to use our practice - our day-to-day integration of technology, our understanding of the necessary design links between pedagogical goals and technological implementation - to drive the redefinition of language teaching as a whole in ways that are both valid and acceptable to teachers. Garrett, 1998)

The aim of this paper is to emphasize the necessity of linking research, development and practice through a case study, namely a recent project involving the development of a web-based learning environment.

5.2 Case study: language learning over the Internet; the potential and the limitations. Debra Marsh, University of Hull,GB.

5.2.1 *Introduction.* Computers have been used in second language teaching for over twenty years and today there is a range of language teaching programmes available on the market. Unfortunately many of these programmes reflect the limitations of technology which is unable to handle the uncertainties and ambiguities of natural language. Many language teachers do not recognise them as exemplifying good teaching and as a consequence computers until very recently have remained peripheral to the core of classroom teaching.

In 1993 Laurillard and Marullo in their paper entitled "Computer-based approaches to second language learning" did little more than allude to experiments taking place with the new communication tools, such as computer-mediated conferencing and video conferencing (p.156). In 1999, only six years after the publication of this paper, the Internet and its associated technologies have experienced a phenomenal growth. No technology has ever before entered so rapidly into our daily consciousness and daily use.

The original concept for the Internet was developed during the Cold War, as a way of defending America's communication channels against nuclear attack. The first network of four computers was established in 1969 and by 1972, this had grown to 37, as scientists and researchers began to appreciate the advantages of rapid communication. Through the 1970s, additional networks were developed and the introduction of the Joint Academic Network (JANET) in the UK in 1984,

and the National Science Foundation Network (NSFNET) in 1986 has laid the foundations of what we now know as the Internet. The potential of this communications network to provide exciting and challenging opportunities for language learners to engage in authentic communication with native speakers or other learners of the target language all around the world is of particular interest to language teaching professionals.

The literature and the research cite many advantages of the on-line medium for education and many are of particular relevance to a communicative approach to language learning and the encouragement of independent and collaborative learning. Kaye in his book *Collaborative Learning Through Computer Conferencing* (1991) provides a number of examples to support the view that the many-to-many and asynchronous nature of computer conferencing suggests that the on-line environment is conducive to group interaction interactions than to the more conventional teacher directed class (p.7). Harasim (1990) suggests that computer mediated communication provides unprecedented opportunities for educational interactivity (p.42) and Kaye in an earlier paper (1989) suggests the medium is potentially a powerful tool for group communication and co-operative learning. (p.10)

The Internet today offers far more than communications tools. The World Wide Web (WWW), often mistakenly referred to as "the Internet", is in fact only one recently invented way of using the Internet. For the language teacher and language learner the WWW offers authentic materials in the target language and access to these resources, which can provide a wealth of cultural information to help students gain L2 awareness and understanding of target language community.

5.2.2 *Project Merlin - language learning over the Internet*. It was within the context of an emerging technology, which would inter-cultural communication and ready access to authentic resources that Project Merlin began in September 1995. It began as a research and development project to be carried out by members of the Language Institute at the University of Hull in collaboration with and funded by British Telecommunications plc. The aim of this project was to develop an Internet based platform, which would deliver language courses to learners all over the world. The University of Hull team had at the time very little experience of these new information communication technologies (ICT) but was all well qualified and experienced EFL teachers and teacher trainers with a particular interest in independent and collaborative language learning. The BT team was the blue-sky technology experts and was to be responsible for the design of the prototype web based learning environment Merlin. This team had the necessary expertise to work with the latest technologies to create a virtual language classroom and connect learners all over the world. Designing and developing a Web-Based Learning Environment. A major task for the Project Merlin team was to explore ways of exploiting the potential of the Internet and WWW for language learning and teaching while at the same time recognising the limitations that the very nature of the discipline threw into the development of any technological supported language learning. Research has shown that learning is always affected by the environment in which it takes place and that the impact of the context on language learning is

considerable (Williams and Burden 1997). The principles governing the design and development of a web-based learning environment had therefore to ensure that the technology would provide the appropriate environmental conditions for learning to take place. This could only be achieved if the design and development were to be needs led and driven by the pedagogy, the teachers and student feedback rather than the a latest innovations in blue sky technology. It was very important that the teams focused not only on supporting and making more effective the learning process for remote based learners but also of supporting effective teaching in the virtual classroom.

A number of specific needs of the remote based language learner and the tutor working within a virtual environment were identified.

Communication (audio and text) between the learners and their tutor and between the learners themselves.

Flexibility for the learners to work independently at their own time and pace and according to their own particular study style.

Simplicity of design to ensure clear navigation and guidance through the learning resources for both student and teacher

Accessibility in terms of equipment specification

Ease of use to ensure minimum training requirements in the use of the technology

Although Merlin itself has undergone a number of major changes in terms of interface design and functionality over the past four years all design and development is still based on the original principles.

A Notice Board provides a sense of working as part of a community, giving instant access to messages from the group facilitator and information about other members of the group. Learners have their own private Mailbox to send messages to any individual in the group and open discussion on particular topics takes place between the group in the Exchange conferencing areas. Messages in both the Mailbox and the Exchange can be sent as written text, an audio recording or a combination of both. A Pathway provides a clear structure to guide the individual through the learning resources. Templates allow structured material and tasks to be assigned to the Pathway by the tutor, without the need for any specialised programming skills. The tutor is also able to create additional on-line resources with the aid of easy-to-use templates. These include a Case study facility, Lecture Presentations to store and deliver PowerPoint presentations and link accompanying audio files and the Image Library where photo images can be stored and linked to explanatory text. The Personal workbook allows the individual learner to submit work to the tutor for feedback and monitoring and the Group workbook encourages collaborative work and peer support. The Resource Centre provides an unlimited amount of Internet based resources available to the group on an open access basis.

5.2.3 *Designing and developing a Web-based language course.* The next task for the teams was to design and develop the intermediate level English for Communication course. Without a doubt the Internet and WWW offer valuable opportunities for language learning and teaching. However, this powerful resource needs to be managed and appropriate frameworks put in place to ensure that effective teaching and learning will be the result of its application.

The University of Hull team identified the following principles that would underpin the design and development of the web based intermediate level EFL course.

- provision of structure and flexibility
- encouragement and support of student self-awareness
- support for individual learner learning styles and needs
- encouragement and support for independent and collaborative learning
- provision of progress monitoring, feedback and assessment
- support for individual tutor teaching styles and creativity

Structure and flexibility
The English for Communication Pathway is a graphical representation of the course structure to guide the learners through the learning materials, the independent and collaborative activities and the tasks to be monitored and assessed. It provides for a sense of direction and progress as the learner moves forward from one stage to another.

The Pathway has 7 stages. Stage 1 provides a Getting-to-Know You and familiarisation phase, Stages 2- 6 provide the language development and the final stage includes the review and assessment. This is a fifteen-week course and for ease of registration, continuity and scheduling tutor time all students are expected to start and finish on the same date. These start and finish dates were the only deadlines to be met. The learners were expected to study for between six and eight hours a week but there were no fixed times when they are expected to be on-line and they are deemed responsible for their own time management.

Each Stage is divided into three steps and a final Checkpoint task, which is submitted, to the tutor for feedback. The learners are encouraged to work through each step in order but in their own time. The Checkpoint task is an individual piece of work, which assesses the learners' language competence in the language areas covered in the Stage. The Checkpoint task assesses the learners' written and spoken ability and focuses on the use of language for meaningful communication. On successful completion of the Checkpoint task the learners may move forward to the next stage of the Pathway

Student self-awareness
It is important to strike a balance between providing opportunities for the learners to take control over their own learning while at the same time supporting those learners who are not ready or who feel unprepared to take on this responsibility for themselves.

When the learner selects a step, he/she is presented with a question and a choice. The learner is required to self-assess his/her own language competence and decide whether or not he/she should reply Yes or No to the question posed. In this example, the question asked is Can you talk and write about the past? If the answer is No, then the learner should select I need some practice. If the answer is Yes, then he/she should select I'll have a go!

Individual learning styles and needs

In choosing I need some practice the learner is presented with a language practice menu from which he/she can select activities best suited to his/her own needs and learning style. He/she is presented with a range of different media from which to work and all the tasks have been selected by the tutor to cater for the needs of the group. The student may have the choice of a task based on an external resource, which in this case was a mainstream EFL course book; a task based on an external Internet resource or a self-assessed web-based language learning activity.

Independent and Collaborative Learning All the activities in the language practice menu require the learners to work independently, and take responsibility for their own self-assess and monitoring. The Have a Go1 tasks all encourage the learner to use the language introduced and practised in a meaningful communicative situation. There are three Have a Go tasks per Stage; one of this involves interaction and collaboration with other members of the group.

Monitoring, feedback and assessment
The Have a Go! and Checkpoint tasks are submitted to the tutor. The Have a Go! tasks monitor the learners understanding of the language presented and practised on each individual Step. The Checkpoint tasks monitor the learners understanding of the language presented and practised in the Stage. The learner is therefore supported regularly throughout the course and receives regular feedback on his/her progress.

Individual tutor teaching styles and creativity
It is recognised that learners are individuals with their own needs and preferred styles of learning. Similarly it has to be recognised that teachers are individuals and that teachers have their own individual teaching styles and preferences. The EFL course and Merlin have been provide flexibility and allow for tutor creativity in a way that has never been catered for in technology based learning and teaching.

The tutor is able to edit a number of parts of the Pathway in order to accommodate the learning needs of the group and his/her own teaching style. These include the Stage Focus, the Step questions, the language practice menu, the Have a Go tasks and the Checkpoint tasks.

An international trial and learning outcomes
In March 1997 the first prototype web-based learning platform, Merlin, was launched to support a 15-week trial of the English for Communication intermediate level language course. 35 students from 17 different language backgrounds and cultures took part in this trial which aimed to establish the potential and the limitations of the medium to support language learning and teaching. The focus was to measure the learning outcomes for the triallists and compare these with the learning outcomes demonstrated for the same period by a control group of learners attending a full-time classroom-based intermediate EFL course at the University.

A comparison of the pre-trial and post-trial language assessment results of the on-line trial participants and the Hull based control group were indeed

encouraging and produced sufficient date to suggest that language learning could be supported over the that an improvement in language performance and competence could be achieved.

The learners from both groups took a pre-test which covered grammar, vocabulary; reading; writing, and listening. In addition to this the Merlin supported learners' speaking skills were assessed during the initial weeks of the course. This initial assessment of both groups was used as a baseline against which to measure learning outcomes over the 15 weeks The same learners then took a post-test at the end of the fifteen week period. This post test covered the same four areas in the pre-test In addition the Merlin learners were asked to complete a post-course speaking test. Performance in all parts of both tests was measured on a ten-point scale and a minimum increase of two points on pre-test performance indicates significant improvement.

5.2.4 *Student learning outcomes.* 55% of the learners on the English for Communication course who completed the final course assessment improved on their initial assessment performance by two points in all areas. None of those who were following the full time University of Hull based EFL programme achieved a two-point improvement on all areas.

43% of the learners in the English for Communication group and the full time EFL programme group who completed the assessment of grammar and vocabulary achieved a minimum increase of two points. For the reading section this was 85% and 67% for the triallist and control group respectively; for the writing section 67% and 33% respectively; and for the listening 55% and 33% respectively. Only the triallist group was assessed initially and finally for speaking performance. The percentage of learners achieving a minimum increase of two points in this area was 50%.

The data suggests that an on-line learning environment appears to be better suited for the purposes of focusing on the development of language performance rather than language competence, in particular for the skills of reading and writing and that such an environment can benefit the weaker learner.

The pre-test indicated a wide range of reading ability in the on-line trial group with scores ranging from one to seven out of ten. Those learners scoring two or below on the pre-test made a marked improvement over those scoring three or more initially. The average point improvement for the group with lower initial scores was seven, whereas the average improvement of those scoring three and above initially was only three points. This suggests that the reading practice during the on-line course - although improving all the scores of all tested learners was of particular benefit to poorer readers.

This benefit to weaker learners was also the case for improvements in speaking. In the pre-course test, the on-line group of learners' scores ranged from four to eight. Those scoring below six improved on average by three points, whereas those scoring above six in the initial assessment improved on average by only one point. It could be said that for the on-line group CMC can not be attributed to this improvement in speaking as these learners also had access to

synchronous audio conferencing. However, of interest is firstly, the fact that there appears to be no noticeable correlation between the number of personal recordings and audio conferences for each learner and their improvement in speaking section and secondly, an improvement in oral skills through the use of text-based CMC has been recorded in, for example, Sanoui (1995), Marsh (1997) Mozzon McPherson (1996).

5.2.5 *The Project Team's learning outcomes.* The data from the pre- and post trial language tests appeared to confirm that the Internet offers tremendous potential for supporting the virtual language classroom and all involved in the project were very excited to find that the learners' language performance had indeed improved. However, it would be a mistake to assume that by simply taking the Merlin learning environment and the English for Communication language course will replicate the same encouraging results different group of learners and a different teacher. Experience has shown that without due consideration for the need for learner and tutor development and support in adapting and working with this new medium and often new approach to teaching and learning then any potential the Internet and WWW may offer to language learning and teaching is lost and the limitations are in evidence.

5.2.6 *The learner.* One of the most important, or so it was considered at the time, pre-trial selection criteria was the learners' own self-assessment of their windows and Internet competence. The majority of triallists were confident windows and Internet users, the less competent were as to be expected among the very early dropouts. It is significant to note that the pre-selection criteria did not place an equal importance on learners' previous experience of open and distance learning on-line nor did it ask for the learners' self- assessment of their ability to be an effective independent learner. Very few of the trial participants had followed a distance learning course of any sort and not surprisingly not one had ever followed an Internet based course. For the majority of these learners, all their experiences of language teaching and learning had taken place in the classroom with teachers who were at best exponents of the communicative approach to language teaching and learning and at worst from the traditional grammar-translation school.

Data from the post- course questionnaires quite clearly suggests that in part the significant drop out rate in the early stages of the course can be attributed not to the learners deficiencies in technical competence but to the fact that these learners appeared to have had problems adapting to the need to take on more responsibility for their own learning and the lack of structuring by the tutor of participation in the course. The first trial of the English for Communication course attempted to promote and encourage independent learning within course striker itself and indeed the Stage 1 of the Pathway was designed to familiarise the learners with some of the concepts and implications for learning of working on-line but clearly this was not enough for those learners who dropped out. Subsequent courses in EFL and other disciplines indicates that in many circumstances learners need to be prepared to employ effective learning strategies before they have even logged on to the computer.

An ability to employ good language learning strategies, such as those identified in the literature and a willingness to be active, independent learners appears to be the key to success in the on-line context. Once again the data from the trial identified a constant correlation between the degree of activity and participation_ by the learner and the degree of improvement in their language competence and performance and that these active learners showed a more significant improvement in language proficiency than those learners who were following the 'traditionally' taught face to face course

The evidence suggests that these learners demonstrated a willingness to initiate interaction with not only with the tutor but also with their peers and spent time working independently with the resources. That most of the active learners, and consequently those learners who made the most progress in language proficiency were very good self-managers of time either by setting regular time aside for the course, or setting goals to achieve within sessions. These learners were also were visibly responsive to tutor feedback by paying attention to the tutor's comments and showing in their subsequent work that they had taken the feedback on board. Of particular note is that the most active learners in the group were often capable of self correction and one of these learner in particular became very self aware to the extent that on submission of her assessed tasks she would also submit her own corrections on these tasks. Not surprisingly the evidence also suggests that the most active learners were also successful in employing social strategies which helped them develop their language skills. All these learners worked well with their peer group, recognised the value of collaborative working in the learning process, showed an ability to empathise with their peers and to ask question not only of their tutor but also of the group within which they were working for clarification, verification and correction.

5.2.7 *The tutor.* Teaching in the on-line context demands skills of the teacher that have nothing to do with technical know-how and understanding. In the classroom there are number of different functions which a teacher is expected to fulfil At any given time he or she may be expected to control, organise, assess, facilitate, prompt or participate. The teacher as controller is the teacher centre stage and the choice of when, how, what and why is often in her hands alone. She is expected to lead the class, pace the learners' learning and provide appropriate learning materials. In the on-line environment, where the pedagogy is founded in the learner centred approach and the learners are expected to take on the role of managing their own learning, then the teacher's role becomes more like that of a facilitator.

Individuals have to know and understand that they have an equal role to play in the learning process, all interaction and reasons for interaction in the group forum should be non-threatening and individuals should be allowed to participate in all interaction at their own pace. The individual participant needs to be allowed to take his or her own time to enter the on-line community and entry for the first time to this community must be as non-threatening as possible and it is the tutor/facilitator who plays a key role in establishing these 'rules o behaviour' to initiative promotes and maintains the sense of community.

The tutor on this first trail had been involved in the development of this language course and learning environment from the project's conception. Her feedback on her experiences and observations during the fifteen weeks were obviously invaluable but is has to be recognised that the evident success of the approach adopted by this tutor to teaching on-line can not simply be replicated across the board with all tutors unless a significant programme of teacher development and support is proved.

5.2.8 *Concluding remarks.* The title of this paper is Language Learning over the Internet: The Potential and the Limitations. Project Merlin recognised the potential of the Internet for language learning; it also recognised the limitations and sought a different means to overcome these. The technology only presents limitations if we try to replicate totally the face to face experience and if we try to replicate the learning and teaching processes to which we are accustomed in the classroom. The solution is to look for new and innovative approaches to teaching and learning to take full advantage of the opportunities and challenges the Internet offers language learning and teaching. If we do not seek the innovative and if we do not address the issues raised with regard to learner and tutor support and development, then the technology will always present limitations and never fulfil its full potential.

Bibliography

- Harasim, L. (1990) *Online education: Perspectives on a new environment.* New York: Praeger.
- Kaye, A. R. (1989) "Computer Mediated Communication and Distance Education." In Mindweave (pages 3 – 21).
- Kaye, A. R. (1991) *Collaborative Learning through Computer Conferencing.* New York: Springer Verlag.
- Laurillard, D. and Marullo, G. (1993) Computer-based approaches to second language learning. In Scrimshaw (pp. 145 –165).
- Marsh, D. (1997) Computer Conferencing: Taking the Loneliness out of Independent Learning Language *Learning Journal,* No. 15.(pp. 8-15)
- Mason, R. D. and Kaye, A. R. (eds) (1989) *Mindweave: Communication, Computers and Distance Education.* Oxford: Pergamon.
- Mozzon-McPherson, M. (1996) "Italian via email: from an online project of learning and teaching towards the development of a multicultural discourse community ." *Alt-J ,*Vol. 4(1) (pp 40-50)
- Sanaoui, R. (1995) " A Computer Network for Prospective Teachers of French as a Second Language." In Warshauer (pp. 33-35).
- Scrimshaw, P. (1993) *Language, Classrooms and Computers.* New York: Routledge.
- Warshauer, M. (1995) *Virtual Connections*. The University of Hawaii.
- Williams, M. and Burden, R. (1997) *Psychology for Language Teachers.* Cambridge: Cambridge University Press.

Centre for the Advancement of Language Learning. A US Site: http://call.lingnet.org/

La Page Francaise: http://www.werple.net.au/~langs/french.html

Australian Defence Force School of Languages, LANGS. Web site provides good language and area studies collection in the thirteen languages it teaches, from the Pacific rim and Southeast Asia: http://www.werple.net.au/~langs/lote.html

Chinese Multimedia Tutorial:
http://www.inform.umd.edu:8080/EdRes/Topic/Humanities/.C-tut/C-tut.html

The Virtual CALL Library: http://www.sussex.ac.uk/langc/CALL.html

BBC Education's Language site, providing sample TV, audio and written material in French and German, tips on language learning and teaching, information on BBC courses and resources, and links to other resources:
http://www.bbc.co.uk/education/languages/

On-Line Dictionaries for all Languages:
http://www.facstaff.bucknell.edu/rbeard/diction.html

Easy links to online radio stations in many languages:
http://www.sunsetradio.com/index.html

Links to newspapers organised by country from A-Z: http://www.discover.co.uk/

The Internet for Language Teaching (CILT):
http://vtc.ngfl.gov.uk/resource/linguanet/websites/wwwteach.html

Internet Activities for Foreign Language Classes:
http://members.aol.com/maestro12/web/wadir.html

Web for Schools. Schools all over Europe Collaborating to Produce Educational Projects: http://wfs.eun.org/index1.shtml

Key–pal opportunities for students:
http://www.ling.lancs.ac.uk/staff/visitors/kenji/keypal.htm#project

International E-mail Tandem Network:
http://www.ling.lancs.ac.uk/staff/visitors/kenji/keypal.htm#project

English as a Second Language Home Page: http://www.lang.uiuc.edu/r-li5/esl/

Web-based activities for Foreign Languages:
http://www.furman.edu/%7Epecoy/lessons.htm

Radio on the Internet: http://home.comfm.fr/sites/rdirect/index.html

Television on the Internet: http://home.comfm.fr/sites/tvdirect/index.html