Information and Communication Technologies in Vocationally Oriented Language Learning

Tony Fitzpatrick, Andreas Lund, Bernard Moro
and Bernd Rüschoff

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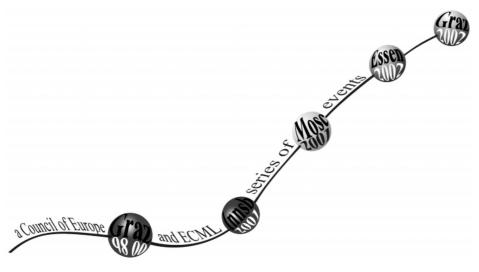© Council of Europe, September 2003
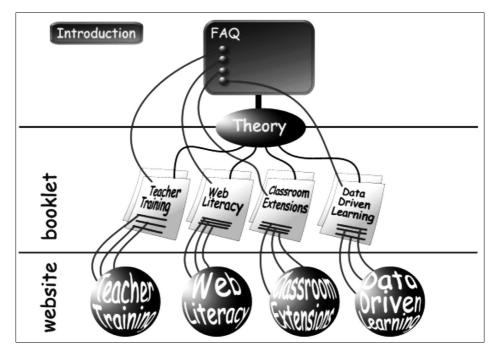Printed in Kapfenberg

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Preface

The booklet and CD-ROM represent a compilation of the results of the ECML project 'Information and Communication Technologies in Vocationally Oriented Language Learning'. The project originally began with a workshop held in Graz in 1998 - it set out to show how Information and Communication Technologies and their multimedia applications can be established as an integral part of modern language curricula in vocationally oriented education and training, and how it can encourage more flexible and accessible educational provision.

As the project life cycle continued the GrazVOLL website, featured on the CD, has developed in a linear fashion and provides a journey through the 5 different events linked to the project, culminating in the final workshop held in 2002. The 'Resources pathway' on the CD leads directly to the individual events and contains a well-balanced mix of background materials, papers and theoretical deliberations as well as concrete examples of good practice.

Resources pathway

The printed booklet provides a background to the project, an overview of the rationale and methodological principles applied and a summary of the results achieved and lessons learned. The main chapters deal with theoretical considerations and practical solutions to new technologies and language learning and the four focuses: teacher training, web literacy, classroom extensions and data-driven learning. The booklet is also available in interactive format on the CD via the 'Rationale pathway' and also includes an additional FAQ section bringing together some of the most frequent questions asked by colleagues interested in introducing ICT in their teaching.

Due to the limitations of print, links to the relevant section of the site or external hyperlinks are denoted only with an arrow. The CD version of the booklet provides hyperlinks directly to the relevant resource.

Rationale pathway

1.   Introduction

This arrow ↓ indicates resources on the CD, while ↑ indicates external resources.

↓**Graz 2000** — This was the first in the series and acted as the first "bookend" of the series, the second bookend being the final workshop. These central events brought together colleagues from all over Europe, nominated as experts in this field by their national authorities. Their task was to exchange views and experience and establish a work plan which would help them to draw together examples of good practice which they could adopt and adapt to their own local, regional or national contexts. From the very outset it became clear that, as the field we are working in is so new, the levels of computer literacy and media competence amongst participants were very disparate. And this situation repeated itself time after time in the workshops to come. Often seen by the animators as an impediment to progress with regard to materials development, the positive aspect of this phenomenon was that it was a constant reminder of the reality which would await colleagues during training sessions they were to organise in their own environment.

↓**Innsbruck 2001** — The first of the regional workshops, this event was set up by one of the Graz participants, Franz Mittendorfer. Thanks to the generosity of his organisation and the Austrian authorities, he was able to invite three of the participants from the initial workshop (from Norway, Switzerland and Russia) to act as observers and evaluators and thus to see how some aspects of the materials and approaches developed in Graz could be implemented. The participants were teachers of English at vocational schools in Austria, one of the chief target groups for the ICT in VOLL IMPACT series. This early development serves as a good example of current thinking at the time, and a comparison with later materials produced by Franz Mittendorfer's group (presented in the Essen workshop) shows quite clearly the progress made and the changes of perception with regard to the use and application of such materials and ICT in general. All three observers produced reports on the workshop and can be consulted on the website.

↓**Moscow 2001** — Initiated, planned and executed by Graz participant and teamer, Irina Smoliannikova, at the Moscow State Linguistics University, this workshop addressed important multipliers in leading positions in tertiary education with a VOLL bias from throughout Russia. Animated by three of the original Graz workshop animators and co-funded by the Goethe Institut and the UNESCO Institute for Information and Technologies in Education, this event brought together experienced trainers who were fascinated by the idea of applying their considerable pedagogical skills and knowledge to ICT contexts, illustrating that the technology can be very profitably used if there is a principled approach behind it.

↓**Essen 2002** — In many respects, the Essen event represented an important turning point in the workshop series. Hosted by the University of Essen and funded by the German Federal Ministry of Education and Research, the workshop was organised by

Professor Bernd Rüschoff in the state-of-the-art multi-media laboratories in his teacher training department. Not only were the facilities provided ideal, but the Essen workshop participants proved to be an experienced and competent group, many of them having attended the first Graz workshop, who brought with them with insights gained from trying out approaches and materials themselves in their own training contexts. Thanks to the constitution of the group, there was a clear step forward at a conceptual level. This change of focus is documented in Andreas Lund's article later in this booklet and is referred to specifically in Bernard Moro's contribution. The workshop illustrated clearly the advantages and importance of bringing together professionals who are familiar with current technology and who have had practical experience in implementing concepts and designs of the nature propagated at the outset of the workshop series.

↓**Graz 2002** —This, the final workshop in the series, provided the stage for colleagues to put together and document the results of the work they had engaged in the three-year period since the initial event in Graz 2000. Again, there was the difficulty of accommodating new colleagues, a number of whom were barely computer-literate. In fact, the ratio of "old-timers" to newcomers was one to three. In addition, the time pressure created by the fact that this workshop was shorter than the others and that more material had to be floated on the website placed a considerable burden on the Animators and the Web Master. Nevertheless, it was possible to achieve the objectives set and to provide an interesting collection of outcomes which mirrored the progress and development which had been effected throughout the series.

1.1   Background information on the contributors
   ## (in alphabetical order)

The animating team

Tony Fitzpatrick is Director of the International Certificate Conference (ICC), a European network for language learning and language teaching in adult, continuing and vocational/professional education. He has been associated with the work of the Council of Europe (CDCC) in modern languages since 1977, acting as adviser on a number of multi-media projects ("Follow me", "Digui Digui", "Viaje al Español", etc.) and as organiser of a number of international workshops. He was involved in the CDDC series of VOLL workshops as of Director of Studies, Course Organiser or Animator. He is the author of a number of standard textbooks used in Germany for the teaching of English to adults as well as a number of ESP courses (e.g. "Bid for Power", "Technical English for Industry") and has recently edited a report on Information and Communications Technology in foreign language teaching in Europe for the European Commission.

Andreas Lund is Research Fellow at the University of Oslo (ICT and language teaching) and former teacher of Norwegian and English, general and vocational studies at Brekkeby Secondary School, Skien, Norway. His experience includes adult education, teaching applied ICT in languages in Teacher Training and he lectures at postgraduate teaching institutions. At Brekkeby he worked with experimental vocational forms, integrating ICT into language learning.

Bernard Moro is Professeur Agrégé and works in the language centre of the University Pierre Mendès-France in Grenoble. Before his appointment in Grenoble, he was an English teacher and professional illustrator of children's magazines, teenage publications and advertising graphics. He works in the French education system, training teachers in ICT and general didactics specialising in the use of IT in the language class. He is currently conducting didactic research on both the Internet and the use of web-based platforms. He has produced software applications for language classes and co-authored an English language textbook („Flying Colours") for upper secondary pupils. From ECML Workshop 13/98 on TELL in VOLL he has been the webmaster for the GRAZVOLL website which he designed, implemented and constantly updates. He has also produced a section on "Web Literacy" on the ECML site for language teachers in French and English.

Bernd Rüschoff is Professor of English at the University of Essen and incumbent professor of the first chair for the use of information and communication technologies in foreign language learning and teaching in Germany. His main interests of research lie in the application of ICT in foreign language learning and teaching and he is responsible for the initial and in-service training of language teachers. Current chairman of EUROCALL, he is one of the leading German experts in the field of TELL and is sometime advisor to the German Federal Ministry of Education and Science in the use of modern technologies in language teaching.

The Teamers

(The expression "teamer" was coined for those colleagues who attended the first workshop as participants, but later took on the role of co-tutors with the original Animators.)

Debra Dianne Ali-Lawson is Lecturer for Business English and Head of Department (languages) at the University of Applied Sciences Bern, School of Business and Administration in Switzerland. She has considerable experience in translating and VOLL teaching, including teaching assignments at the Swiss College of Agriculture in Zollikofen, at Swisscom and at the University of Applied Sciences in Fribourg, School of Business. She is also active as a free-lance teacher-trainer, and in the past has been an examiner and test constructor for the International Certificate Conference. Within the context of ICT in VOLL IMPACT, she co-animated the Teacher Training section.

Enrica Flamini works in the Italian Ministry of Education in Rome with special responsibility for teacher training and especially the use of ICT in language teaching. Within the context of ICT in VOLL IMPACT, she co-animated the Teacher Training section and further developed the template on the evaluation of materials.

Franz Mittendorfer is a teacher of English and Head of the English Department at the Center für berufsbezogene Sprachen, Pädagogisches Institut Salzburg. His main areas of work are Teacher Development, Curriculum Design, English as a Medium of Instruction and ICT in Vocationally Oriented Language Learning. He has co-authored a textbook series and a multi-media programme for teachers and learners of languages for professional purposes. Within the context of ICT in VOLL IMPACT, he co-animated the section on platforms and blended learning applications.

Irina A. Smoliannikova is Research Fellow at the Department of Linguistic Pragmatics and Intercultural Communication (theory and methods of language teaching to interpreters and language teachers) at the Moscow State Linguistic University (MSLU) where she carries out research in the field of language education in terms of cross-cultural interaction. She teaches English in pre-service teacher training and gives seminars in the Theory and Practice of Intercultural Communication, supervising students' teaching practice. Her special field of research and professional interest is educational technologies, computer assisted language learning (CALL), constructivism, e-learning, ICT as providers of sociocultural environment for FL students in the development of communicative competencies, language and culture awareness. She was the organiser of the ICT-VOLL IMPACT workshop in Moscow, where she directed the work of the DDL group.

Olav Talberg is an assistant professor at Oslo University College, Faculty of Engineering, and is currently teaching English for engineering students. Within the context of ICT in VOLL IMPACT, he co-animated the section on platforms and blended learning applications.

1.2   Acknowledgements

As co-ordinator of the series of workshops and in the name of the animators, teamers and participants, I would like to thank the staff of the European Centre for Modern Languages for their professionalism, good humour and continuing support over a period of almost five years. Without their help and guidance we would not have been able to stage what was a rather complicated series of workshops, dependent on fairly sophisticated technology.

Special thanks go to Michael Armstrong for his expertise, competence and unfailing patience in finding solutions to what, at times, seemed insuperable technical problems. We are also grateful to Josef Huber for his good sense and professional advice on a number of methodological and pedagogical matters.

But, above all, it was the team spirit, professionalism and sense of commitment of the three animators of the workshop series, Andreas Lund, Bernard Moro and Bernd Rüschoff, which maintained the momentum of the workshops from the beginnings in 1998 to the final workshop in September 2002 and which made the events so successful. The amount of time and effort they devoted to the workshops and their preparation, despite very heavy professional commitments elsewhere, went beyond anyone's expectations in this field. We also owe a great debt to Bernard Moro. Without his creative talent and his highly competent and efficient management of the website, our work would not have been visible and comprehensible to interested colleagues outside. It is the website which remains as a reminder of the efforts of so many gifted and dedicated colleagues. My personal thanks go to the animating team for a very rich and rewarding learning experience and for the support, advice and friendship they offered to me.

The animating team was particularly gratified that colleagues from the early workshops came forward as volunteers to help animate / co-tutor later workshops, both in the central workshops in Graz and in the regional workshops which they also organised themselves. The fruits of their contributions are clearly to be seen on the website, not only in terms of what they themselves have written but also in the contributions of the workshop participants, who received help and guidance from them during the workshops and in the editing of their articles / materials.

Last but not least, we would like to thank all the participants at the workshops for the spirit of co-operation which they developed during our short time together and for the extremely hard work which they invested in helping to make the workshops and the website so successful

We would like to acknowledge the kind permission of the Directorate General of Education and Culture of the European Commission for permission to quote extensively from contributions by the present authors in: *"The Impact of Information and Communications Technologies on the Teaching of Foreign Languages and on the Role of Teachers of Foreign Languages"*, a report commissioned by the Directorate General of Education and Culture, Brussels, 2002.

Tony Fitzpatrick
Frankfurt am Main
January, 2003

2. New Technologies and Language Learning: theoretical considerations and practical solutions.

Bernd Rüschoff with Andreas Lund

Abstract

This paper discusses the challenges to language learning and its methodological principles posed by the new technologies. It will be argued that the integration of new media into language learning is a necessary step to ensure the acquisition of the kind of language skills and competencies needed for living and working in the knowledge society. Innovative use of such technologies will lead to more flexibility in the content and organisation of learning; new media must be looked at not simply in terms of traditional self-study materials but rather in terms of tools for learning. New information and communication technologies and their role in language learning processes are the topic of this paper, but the "Observe-Hypothesize-Experiment" paradigm as proposed by Michael Lewis (1993) will be discussed as an appropriate basis for the creation of a technology-enhanced rich learning environment for language learning in the new millennium. Six metaphors for the arrangement and organisation of the language classroom in line with such a paradigm will then be referred to in order to present the functionalities and resources developed in the course of the *ICT in VOLL* project and made available via the *GrazVOLL website* up to now.

2.1 Introduction

New technologies have become the predominant influence on the way we live and work at the beginning of the new millennium. Some view the changes effected by global networks and information technologies with some apprehension. Others consider the innovative potential of world wide co-operation via e-mail and internet as well as unprohibited access to information and digital resources by means of telecommunications and other forms of electronic publication to be of benefit for both the professional and the educational world. Our society, which has now become what is best described by the term 'knowledge society', is undergoing tremendous changes. Such changes are linked with challenges which need to be met not just by business and industry but even more so by educational institutions at all levels. As new technologies are nowadays used as tools in almost all trades, they also need to be exploited in order to initiate changes in the way we teach and learn. A principled approach is needed in

order to translate the potential of new technologies into new methodological approaches and changing organisational frameworks for the learning and acquisition of any subject. This is true even more for the learning of foreign languages, as language competencies and intercultural skills will more than ever be part of the key qualifications needed to live and work in the knowledge society.

This is the starting point of the *ICT in VOLL* project, as its aim is to consider the potential new technologies have to offer for the creation of innovative learning environments for language training for professional and specific (vocationally oriented) purposes. However, the current project set out not just to discuss all relevant aspects in theory. In addition, each phase of the project from the beginnings at the first workshop at Graz in the year 2000 was geared towards setting up a resource to be made available to the VOLL community in order to put theory into practice. Currently, the *GrazVOLL website* contains a well-balanced mix of background materials, papers and theoretical deliberations collected or put forward by members of the project team and concrete examples of best practice developed by participants and workshop animators during the workshop series.

On a theoretical level, the principles of the knowledge society in terms of its basic characteristics and the resulting challenges for (language) learning will be discussed together with an assessment of constructivism as the appropriate paradigm for language learning in the new millennium. Papert's concept of *constructionism* was adopted as a possible basis for putting theory into practice and defining a set of criteria for assessing different kinds of models and materials with regard to using new technologies in vocationally oriented language learning. As far as practice is concerned, a resource dedicated to the integration of new technologies into innovative scenarios for language learning can, of course, not be restricted to a mere description of technical features or existing courseware and software tools. Consequently, the theoretical principles and the methodological framework for materials development and the implementation of technology-enhanced language learning scenarios were a constant feature of the deliberations and sessions dedicated to practical group work. The essential concept of appropriation with reference to teachers' ability and willingness to adopt and utilise the new media plays a central role in deliberations concerning informed use of the media available.

Most of these aspects are documented on the *GrazVOLL website*, so I shall not repeat this discussion in the course of this paper. Instead, I shall just briefly stress a few of the didactic principles which guide our work in addition to reiterating one or two of the necessary didactic consequences based on one of the key principles of constructivism, i.e. "… we cannot [simply] put ideas into student's heads, they will and must construct their own meanings. …" Following this, I shall use Legutke's (1991) six metaphors for a rich learning environment as a starting point to demonstrate how the resources and structure of the *GrazVOLL website* reflects a a state-of-the art approach of the integration of ICT into VOLL.
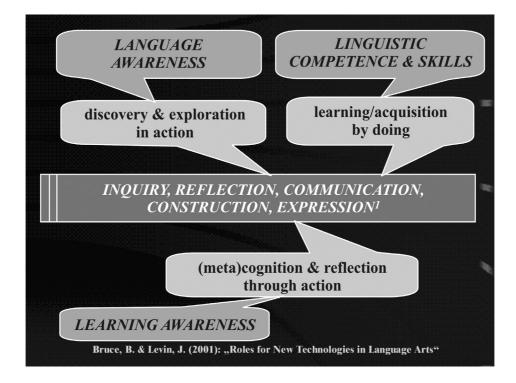
2.2 Didactic principles

New technologies have become the dominant feature which influences living and working at the beginning of our millennium. The resulting challenge to education has been discussed by Costa and Liebmann who explain *"that with knowledge doubling every five years - every 73 days by the year 2020 - we can no longer attempt to anticipate future information requirements. If students are to keep pace with the rapid increase of knowledge, we cannot continue to organise curriculum in discrete compartments, ... the disciplines as we have known them, no longer exist. They are being replaced by human inquiry that draws upon generalised transdisciplinary bodies of knowledge and relationships."* (Costa & Liebmann, 1995: 23).

As a result, the traditional skills of information gathering and storing as well as the mere learning of facts will no longer be sufficient in order to live, work, and learn in the coming centuries. Consequently, the ultimate aim of teaching and learning will be to assist learners in their need to develop strategies of knowledge processing. Therefore, the traditional transmission model of learning must be replaced by models which emphasise information processing and knowledge construction as acts of learning most suited for the acquisition of the kind of skills needed for the knowledge society. Education and teaching in the knowledge society can no longer be reduced to *"the act, process, or art of imparting knowledge and skill"* as Roget's Thesaurus proposes, but learning must be recognised as an act in which a learner plays the role of an active constructor of knowledge. Criteria based on such principles need to be considered when evaluating the effectiveness and value of technology enhanced materials for language learning.

Learning is currently viewed as an active, creative, and socially interactive process and knowledge is regarded as something children must construct and less like something that can be transmitted or transferred (e.g. Florin, 1990). Learning based on constructivist principles will allow learners to tap into resources and acquire knowledge rather than force them to function as recipients of instruction. As far as new technologies are concerned, this means that making use of new technologies in language learning simply in the format of computer-based instruction packages with traditional grammar and vocabulary drills is not the best way of exploiting their real potential for innovation. Unfortunately, the majority of materials available to date follow a traditional, often even behaviourist drill and tutorial paradigm, which – quite understandably – leads a number of colleagues to reject the use of technology enhanced courseware.

Innovation by means of new technologies in language learning needs to search for other kinds of applications and follow more accepted models of learning. As far as foreign language learning is concerned, research into the processes of language learning and acquisition suggests that mere training in structural (grammatical) and vocabulary knowledge will not result in real linguistic competence and language proficiency. However, apart from basic communicative competencies as well as

linguistic competences and skills in the traditional sense often favoured in the communicative classroom of the 80s, strategies of language processing and learning competence as well as language awareness are regarded as an essential part of the overall aims of any language curriculum. The basic principles and aims of such an approach to language learning can be visualised by the following graphic:

LANGUAGE AWARENESS

LINGUISTIC COMPETENCE & SKILLS

discovery & exploration in action

learning/acquisition by doing

INQUIRY, REFLECTION, COMMUNICATION, CONSTRUCTION, EXPRESSION[1]

(meta)cognition & reflection through action

LEARNING AWARENESS

Bruce, B. & Levin, J. (2001): „Roles for New Technologies in Language Arts"

Such competencies, often discussed in the context of learner autonomy, are of utmost importance for language learning. In addition, learning and acquisition by doing as well as processes of discovery, exploration and reflection in action are today very much regarded as an important methodological basis for a real innovation in foreign language learning. Within this paradigm, new technologies need to be exploited in such a way that the acquisition of communicative competence as well as language awareness and learning competence is ensured. Language learning as well as learning in general should be described as an interactive, dynamic process, in which new knowledge is most fruitfully acquired when learners are placed in a situation where they can explore sources and resources rather than in a context of mere formal instruction. In such a scenario, learners combine new information with previous factual (declarative) and procedural knowledge and draw new conclusions from this process. Such a process-oriented approach to learning will not simply lead to a better understanding of linguistic facts (e.g. structure and vocabulary) and more effective acquisition of language proficiency; it will also lead to more learning competence as well as language

awareness. These are the issues that need to be considered when looking at the use(fulness) of new technologies in foreign language learning.

2.3   Didactic consequence

The question remains, however, as to how the theoretical framework discussed above can be put into practice. i.e. how the principle of *"learning without being taught"* as proposed by Piaget (cf. Papert, 1980: 7) can be integrated into a technology enhanced learning environment of the future? Within the scope of this paper a full discussion of this issue is not possible, but a few issues need to be touched upon briefly.
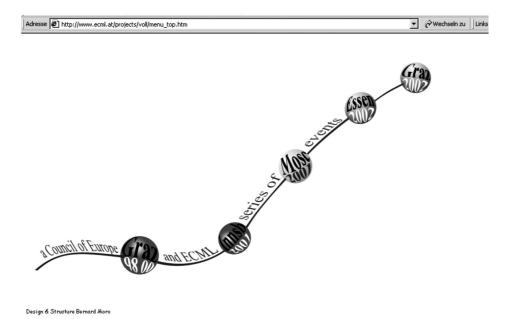
The first conclusion to be drawn from current lines of thought in didactics as well as language acquisition research is what Michael Lewis had suggested in 1993. He proposed a rejection of the traditional, often very much teacher-centred cycle of teaching and learning (often referred to as the three "Ps") in favour of more learner-oriented and task based scenarios for language learning. In his own words, one should consider a rejection of "…the Present-Practise-Produce paradigm … in favour of a paradigm based on the Observe-Hypothesise-Experiment cycle". (Lewis: 1993) This paradigm would be applicable to all three of the above mentioned aims of language learning, as learner-driven, task-based and guided processes of inquiry, experimentation, reflection, and communication would become an integral part of such learning scenarios.

As far as the development of learning awareness and language awareness are concerned, the necessity to integrate these into the general framework of aims and competences that need to be worked towards in language learning has long been recognized. This is, for example reflected in the definition of the linguistic dimension as put forward by the *Common European Framework of Reference for Languages*, which points out that the linguistic dimension in language learning is seen as consisting of a multiple of strands – including

a.   reflection upon learning progress,

b.   sociocultural competence, and

c.   functional-notional categories.

In general, learning guided by the principles outlined above would follow a constructivist framework for learning, which – as stated before – basically adheres to an understanding of learning as an active process in which learners construct new ideas based upon their current and past knowledge. Without intending to go into further detail, I would still like to share the following quote on construction-based language learning, as to my mind this statement puts the fundamental message of such an approach into a nutshell: "… knowledge is not passively received, but is actively built up by the cognizing subject. … That is, as much as we would like to, we cannot put

ideas into student's heads, they will and must construct their own meanings. …"
(Wheatley, 1991: 9) In my own words this means that for example., learners should be
given the tools and frameworks for learning to build knowledge instead of simply
consuming it. In short, this is the guiding principle of all activities, including group
work at workshops and the construction [sic] of our resource – the *GrazVoll website*.
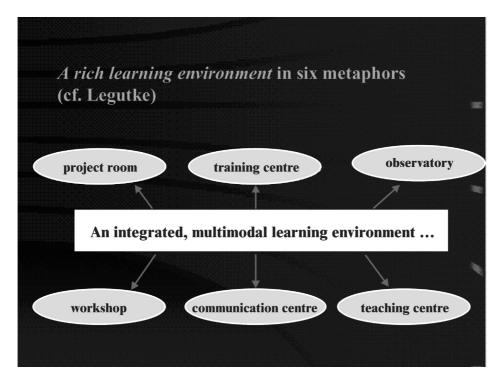
Design & Structure Bernard Moro

2.4   Technology enhanced materials for language learning & a rich new learning environment

However, returning to the topic of *ICT in VOLL* (or most other kinds of language
learning and looking at the kind of materials currently available for language learning,
it must be said that the market is still dominated by a large number of traditional
computer-based training packages. This kind of software is best described by
metaphors such as *drill & kill* or *grammar hammer*. There is still too much of the
instructional kind and too few of the learning tools or edutainment type available.
Publishers all too often rely on designing impressive multimedia enhanced packages
which hide the fact that most of the interactions provided are an adaptation of simple
traditional exercise formats to an electronic platform. The large number of vocabulary
drills, multiple choice and gap-filling exercises or similar tutorial formats bears witness
to the fact that this is true for materials on CD-ROM as well as, more recently, online
packages distributed via the internet. Quite often, technical considerations and the
power of multimedia features dominate the design of technology enhanced materials
for language learning. Multimedia options, such as sound, picture, animation, and

video are in a number of instances integrated into courseware not because such features are needed for a learning purpose or in order to assist the acquisition of specific skills, but simply because it gives the product a *sexier,* more attractive look.

The points raised so far seem to suggest that the value of existing materials for language learning purposes is rather limited. There are, however, a number of areas and language learning contexts within which new technologies are being used successfully. And this is the starting point of our activities and the criterion for including certain applications in our resource. As far as a rich learning environment is concerned, Legutke put forward six metaphors for how a language classroom could best be defined exploited in a more fruitful way. These I would like to exemplify with the following graphic:

A rich learning environment in six metaphors (cf. Legutke)

project room   training centre   observatory

An integrated, multimodal learning environment …

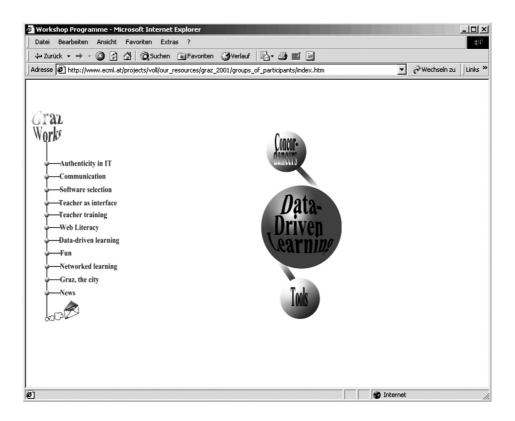workshop   communication centre   teaching centre

Basically, these metaphors call for more flexibility both in the arrangement of learning scenarios and in the way teachers organise their classroom. In short, they could be described as follows:

- both *project room* and *workshop* represent the concept that process-based and product-oriented activities are an integral part of language learning. This means that task-based projects with a clear focus on knowledge construction and a presentable outcome (product) need to become part of language classroom activities more than in the past;

- obviously, learning, practice, and revision based on innovative materials and interactive tutorials are very important to successful learning processes. This is the basic background of the *training centre* metaphor. Consequently, classroom management and lesson planning need to consider successful ways of providing learners with meaningful tasks;

- the *observatory* metaphors addresses the need for more authenticity both in task and content in language learning. Learners need to be given the opportunity to get more exposure to real-life language use, and tasks need to be defined which enable learner to interact with authentic language and reflect on authentic contexts of the use of the target language in ways meaningful and supportive to their learning;

- of course, communication and activities stimulating communicative activities in the language classroom are of vital importance. This fact is acknowledged by the *communication centre* metaphor. As far as new technologies are concerned, telecommunications now offer an opportunity to place learners in a position where they can communicate and exchange views with partners beyond the walls of their classroom.

- finally, the *teaching centre* metaphor emphasises the fact that an integration of the different types of activities hinted at in this brief definition of a modern language classroom requires a well-defined and well-designed curriculum. This also suggests that the role of both teachers and learners need to be reconsidered. The best way to describe this – apart from citing the usual labels such as the teacher as a moderator & facilitator – might be to stress the need for a kind of learning partnership between teacher and learner based on clearly defined rules and learning scenarios.

Following this first elaboration on the metaphors suggested by Legutke let us now briefly consider, how these have guided the work of the *ICT in VOLL* project so far. In addition, we would like to demonstrate how the results of previous workshops are channelled into the *GrazVOLL website* in order to provide the VOLL community with a resource geared towards enabling teachers to put into classroom practice the ideas for flexible and innovative learning arrangements reflected through these metaphors. As far as the idea of situating language learning in a kind of project room and or workshop is concerned, two areas are involved. The first is the exploitation of technology enhanced tools and resources in project-based and product-oriented learning scenarios. The theoretical principles of such approaches as well as the software tools together with samples of good practice are made available via the DDL (data-driven learning) section of the *GrazVOLL website*:
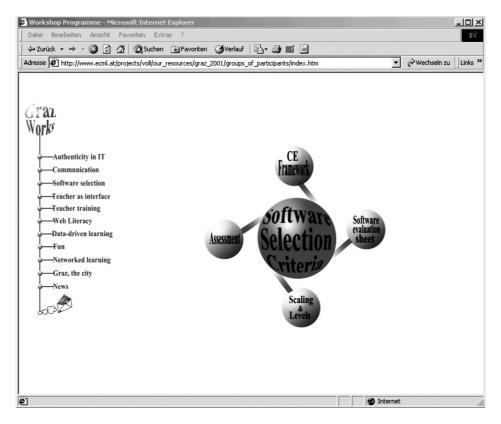
Two main aspects are dealt with – concordancing and authoring tools, as these are particularly suited for learner-centred projects.

Obviously, internet projects of the kind documented by Reinhard Donath on the http://www.englisch.schule.de/website and some of the aspects of web-based learning scenarios presented in the web literacy and networked learning sections of our own website are a good example for turning a traditional classroom into a project room and workshop. This observation underlines the fact that sometimes a clear and final designation of a particular aspect of the use of ICT in language learning to only one of the above metaphors is difficult or even artificial, as a technology enriched learning environment is by definition based on a multimodal, multifunctional, networked and diversified approach to learning.
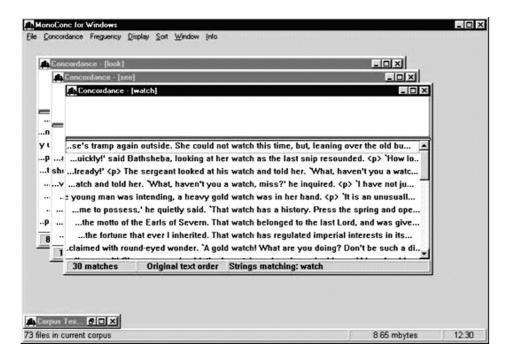
Let us, therefore, continue our tour of the *GrazVOLL website*. Many areas are to be considered when trying to fill the slot identified as training centre in the Legutke graphic. Exercise materials created by teachers using authoring tools come to mind, but the main focus of the *ICT in VOLL* project with regard to this has been based on the observation that a large part of what publishers and other providers offer in terms of technology enhanced learning materials are, in fact, training and practice materials either intended for self-study or in combination with textbooks. Here, of course, a number of questions arise as to the quality and assessment of such software (often even

referred to as learnware) and to points of reference for choosing and selecting suitable materials for one's classroom or individual groups of learners.
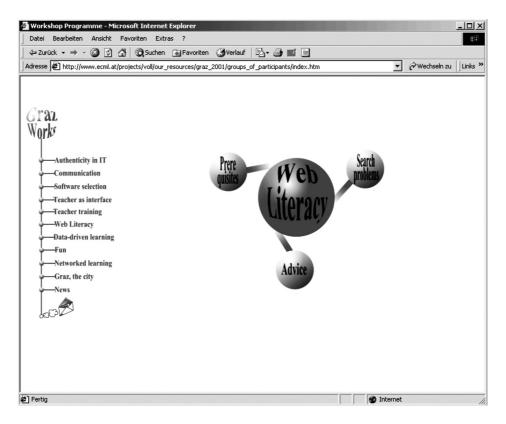

Consequently, an important section of our website focuses on software selection criteria and learnware assessment. In addition, this section tries to relate its resources to the European Common Framework for Languages in order to provide a solid basis for the criteria put forward and tested in the course of the project at the various workshops. As said above, the vast majority of technology enhanced materials for language learning still follow the footsteps of traditional, workbook-style exercises for self-study. In fact, this seems to be the type of material which automatically comes to mind when teachers are asked about the potential contribution of new media to language learning. Such materials usually package existing exercise formats into an interactive multimedia-enhanced platform. Apart from the usual diet of tutorial tasks, activities that deal with matching, text reconstruction and text manipulation exercises offer additional kinds of learning activities more in line with innovative methodology. Quite often computer-specific forms of interaction, such as drag & drop are used to provide more exploratory learning modes. And the software evaluation sheet made available via the *GrazVOLL website* proposes criteria to effectively assess and evaluate this type of learnware.

As far as the observatory is concerned, i.e. a space in the language curriculum where learners are encouraged to handle authentic materials and observe and process actual and real-life language use, new technologies offer several opportunities. When it comes to finding innovative examples of the use of new technologies in language learning, any tool that allows for the creation of discovery-based and exploratory, observation-oriented learning materials must rank very highly within a typology of TELL software. One such tool is concordancing software, originally developed as a device to assist research in corpus linguistics. Concordances used to compile context lists and to offer additional insight into the meaning of words, to experience the company words keep, and to gain full insight into difficult structures are one way of opening an observatory. Such a tool can be used with any textual corpus, i.e. a potentially unlimited number of texts compiled into a database. Its basic function is to extract lists with sample contexts of any word or structure entered into the search option:

Such lists can then be used as a basis for what Tim Johns (1994) refers to as data-driven learning. Considering the example above, a learners' task linked with such a selection of concordances would be for them to deduce themselves the exact difference in meaning, connotation, and grammatical features with regard to the verbs *look*, *see*, and *watch*. Grammatical rules can be acquired in such a discovery-based or exploratory mode, e.g. on the basis of lists with concordances of adverbs, offering learners the opportunity to discover rather than to be taught a rule concerning adverbs and word order in English sentences. Tim Johns provides a complete website with samples and links on data-driven learning (*http://web.bham.ac.uk/johnstf/timconc.htm*). In addition,

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Chris Tribble (1997) has published an interesting manual on *Using Concordances in the Classroom*.

However, another equally potent option to support the transformation of a learn room into an observatory is the exploitation of the World Wide Web and its vast, seemingly limitless resources. However, it is obviously impossible to simply let the learners loose and ask them to surf the web without guidance. Therefore, one of our groups has been working on aspects of exploiting web-based resources for language learning, including the development of guidelines and activities geared towards the skilful use of the internet.

This actually provided the basis for a very thorough study of such issues, a spin-off of the first workshop as it were, to be found in the section of our website dedicated to *Web Literacy*.

As far as the communication centre is concerned, telecommunications and telecooperative projects are of great value. Obviously, telecommunications is seen by many as the major medium for distributing learning materials in the future as well as for creating a more flexible organisational framework for learning by means of virtual learning groups and telecooperative tutoring. As far as language learning is concerned,

the internet and e-mail have already been established as a medium for learning well beyond the exploitation of online resources for classroom use. E-mail is used to integrate authentic stimuli for communication into the curriculum. Electronic pen-pals and multinational project groups and learning partnerships using e-mail and the web for cooperative learning are examples of this. In addition, the use of chat rooms and multi-user domains (MUDs or MOOs) is currently being experimented with in view of their potential for language learning.

These and other aspects are the domain of the *Networked Learning* section of the *GrazVOLL website*.

Among the examples discussed at the workshops is the transfer of tandem learning onto a telecommunication platform, where partnerships between language learners are formed and supported by a special server at Bochum University. This *International Tandem Server* (*http://www.slf.ruhr-uni-bochum.de/index.html*) also contains a section which describes the principles of tandem-based language learning in more detail.

A very important aspect when looking at the potential of new technologies and telecommunications not just for language learning but also for the development of intercultural competence is the exploitation of such resources for project work that goes

beyond the actual classroom. Reinhard Donath (1997) has described a variety of projects which focus on this. Again, knowledge construction rather than formal instruction and co-operation in a (virtual) international team are more in line with developing language competence suitable for the knowledge society than traditional instructivist modes of teaching and learning. In addition, process-oriented learning focussed on a joint product, often published on the internet, is also a tremendous motivation for learners to engage in language learning. The topics dealt with in the context of such projects range from political and historical themes, such as the *Northern Ireland Peace Process*, *Native Americans*, and *New England – where the old meets the new*, to cultural topics, e.g. literature (there are some interesting websites created by learners of English on Paul Auster or Kurt Vonnegut, to name but two examples), and the joint analysis of pop songs or video clips.

Finally, the definition of a rich learning environment, even in terms of metaphors, would not be complete without acknowledging the fact that there still is a vital role for a teaching centre. Often, particularly in VOLL related learning contexts, claims are made that new technologies would best be exploited in terms of completely self-directed and individualised self-study-based learning scenarios. However, the teacher will still be a very important player in the language learning game. Consequently, we have included a section on our resource dedicated to Teacher Training:

As one of the contributions suggests, the teacher is very much seen in a role as facilitator and moderator of the technology-enriched learning environment proposed in this presentation. The "guide on the side" is a metaphor often used, as is the idea of regarding the teacher as an important interface in ICT-enhanced learning scenarios.

2.5   Appropriation of technologies

However, as Andreas Lund points out, the metaphor of the guide on the side may often prove to be too simplistic and romantic when faced with dynamic and complex ICT-infused learning environments. Studies show that despite the indisputable potential of new technologies, teachers experience severe problems in exploiting this potential {Becker, 1994 #287; Becker, 2000 #158; Cuban, 1986 #70; Cuban, 2001 #344; Dillemans, 1998 #4; Erstad, 1998 #253; KUF, 1998 #28; Schofield, 1995 #138}.

Often, the reason is to be found in a mismatch between the 'traditional' educational setting with its goals and exam oriented curriculum in the form of a single-subject lesson on the one hand, and the transcending and transforming potential of ICTs on the other. Exploiting the full potential of ICTs, we need to acknowledge their capacity for compressing space and time and how they are becoming a part of our lifelong learning, whether at school, at work, or at home. These aspects can hardly be expected to materialise within a traditional setting as described above.

The series of GrazVOLL workshops has addressed this most important issue along with researching and developing examples and models for language learning in ICT-rich environments. Working in close contact with teachers and teacher educators tells us that what is needed is an analytical tool for approaching teachers' (and learners'!) practices with ICT. One such tool may be provided in the form of *appropriation*.

The concept of appropriation is attributed to the Russian linguist and critic Michael Bakhtin (1895-1975). Bakhtin ties appropriation to the use of language, how it is always found in the midst of social interaction, borrowing from others and projecting intentions at the same time. To Bakhtin, language is 'half alien' to us until we adopt it to our own purposes. This principle may just as well describe how we encounter technologies in schools and other institutional contexts. As ICT have been developed by technicians, usually for administrative and commercial purposes, and are often extremely complex, we as educators need to 'inhabit' these technologies, infuse them with our own intentions, thereby making them our own, i.e. *appropriating* them. Consequently, this is very much a social process where people, technologies and the settings they work in constitute an information ecology.

Another 'alien' element is the way languages change under the impact of technologies. This is in itself a vast topic. Suffice it to say that the advent of new channels (email, chat, MOOs, platforms, the cell phone), digital networks bridging linguistic communities, and (possibly as a result) a plethora of linguistic subcultures challenge

and change the standardisation of languages {Crystal, 2001 #297}. The language teacher at the beginning of the new millennium faces fundamental changes in subject matters as well as in teaching practices.

At the heart of appropriation are transformation and dialogism; we transform the technology as well as our practices in dialogue with others. Such processes require creative participation from those involved in the appropriation process. This is the constructivist element that has served as an underpinning for the workshop series. Whenever we engage in interaction with people and ICTs, we appropriate and construct insights, knowledge, skills. But since they, like Bakhtin's language, may be half alien, we need to inhabit them with our intentions. Insights, knowledge, skills become transformed according to our needs and purposes. When this does not happen, resources offered by other people and artefacts remain uncultivated and 'alien'.

At the end of the workshop series, appropriation has become a key concept when analysing and discussing people's encounters with ICT. When we try to apply it to the more tangible process of relating to ICT, the following dimensions point to how we appropriate them. With rapid change and development in language and learning/teaching approaches as well as technologies, the appropriation processes of teachers might be one of the major roads to explore in order to advance and improve our understanding of what goes on in the classroom of the 21st century. In their article, *Appropriating Tools for Teaching English: A Theoretical Framework for Research on Learning to Teach*, Grossman et al {Grossman, 1999 #163} define five dimensions of appropriation that reflect degrees of in-depth understanding. In the following, the five 'levels' are kept, but altered in order to accommodate the complexity and dynamics of the ICT-rich environment. Consequently, the following should be regarded as dimensions, a repertoire of comprehension and application (a similar model is to be found on the website at <http://www.ecml.at/projects/voll/graz_2002/ttraining/theory/index.htm> with links to examples).

- **Failed Appropriation.** This type assumes an attempt (not necessarily premeditated or deliberate) on the part of the agent, but resulting in lack of appropriation. Regarding ICT, such a lack of appropriation might be explained by the complexity or instability of the technology, its incompatibility with the teacher's framework (curriculum, policies, teaching schedules) for teaching and learning a language, cultural mismatch between teacher and learning environment etc. Constraints dominate affordances.

- **Nominal Appropriation.** Regarding ICT, this would suggest awareness of different types, appropriating a 'label', but without any understanding of features that might prove conducive to language learning. For instance, taking 'pedagogical software' at face value or not realising the often idiosyncratic and sometimes plain faulty results of using spell and style checkers, would exemplify nominal appropriation. In the case of foreign language teaching, a teacher expressing

affinity to a communicative approach while practising a drill-and-practice variant would amount to the same.

- **Instrumental Appropriation**. Regarding ICT, this would suggest some instrumental skills and a surface understanding of the concept behind it. The sum of the skills and the view does not add up to the conceptual whole of the tool, e.g., what word processing or the Internet means beyond facilitating certain mundane chores. Instrumental appropriation is often at the heart of technology-driven projects and programmes, and has for a long time dominated in-service training.

- **Conceptual Appropriation**. Teachers who grasp the conceptual underpinnings of ICT would be likely to use the tools in innovative ways and/or in new contexts. Such teachers would design ICT-rich settings and situations conducive to learning where technologies are integrated in disciplinary, cross-disciplinary and social relations. However, grasping conceptual underpinnings does not necessarily materialise in full, instrumental appropriation of the tool.

- **Cultural Appropriation.** The term *Cultural Appropriation* that is suggested here, places emphasis on the synergy of conceptual and instrumental appropriation while adding the notion of culture. Teachers who manage to culturally appropriate ICT may not only adapt to and engage in current practices and discourses but also can transform and transcend these as well. They overcome the tensions posed by the traditional setting and the potential in the tools and manage to suffuse new technologies with their own intentions and purposes. In the case of foreign language teaching it means that teachers would know how ICT might infuse and change social practices (like language acquisition) and design paths and activities that are conducive to learning the language. This level would mean a reflective approach to ICT.

Such a set of appropriation dimensions might help generate insights into teachers' use of technology and hypotheses on how best to promote fruitful exploitation. Although not stated explicitly in the above dimensions, it is implicit that appropriating ICT will fail if they are not introduced with their conceptual underpinnings, or removed from the social context in which they are meant to serve.

2.6   Summary

This paper has shown how the tremendous changes initiated by the new technologies necessitate a re-thinking of the way we teach and learn. This is particularly true for language learning, as language and intercultural competencies are of extreme importance for living and working in the knowledge society. A growing demand for language learning, however, cannot be met by courses and software following a traditional, behaviourist and instructional methodology. It is argued that a constructivist paradigm for learning, focussing on learning in terms of knowledge construction rather than knowledge transmission, is better suited for a kind of language learning that leads to the development

not only of communicative and structural skills but which also integrates language awareness and learning competence as equally important aims into its curriculum.

Following an assessment of the current state-of-the-art of Technology Enhanced Language Learning, the *ICT in VOLL* project and the *GrazVOLL website* was presented as a powerful resource (under development) which is used as a focal point of all the activities of the project in order to put our process-oriented and product-focussed approach into practice at each event of the series of workshops.

In summary, it must be stated that over the past decade, language learning theory has seen a shift from a highly guided to a more open learning environment, with constructivism as a new and very much learner-centred paradigm for learning. Learning is seen as a self-structured and self-motivated process of knowledge construction and the learner is regarded as a self-governed creator of knowledge. In addition to the undeniable need to achieve instructional goals, the development of cognitive and strategic abilities suitable for the knowledge society is defined as one of the principle aims of a learning process based on knowledge construction and discovery learning. As far as new technologies and their use in language learning are concerned, this paper has shown that technology enhanced materials do have a lot of potential to assist the process of innovation which is needed in this field as much as in any other area of education. However, in order to achieve this aim, such materials need to be made use of less in a role as instructional systems and exploited more in a role as tools for teaching and learning.

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3.   Teacher Training

Tony Fitzpatrick

From the outset it was clear that the field of teacher training was eminently important, if the results of the series of ICC in VOLL IMPACT workshops were to be transmitted to and "appropriated" (see ⬇Andreas Lund's explanation of this term) by practising teachers. A number of recent studies[1] on the use of ICT in foreign language learning and teaching have emphasised the importance of teacher training in this domain in terms not only of computer / media literacy, but also of the whole range of "new literacies"[2] (scientific, digital, critical, linguistic, cultural) and skills. (See the FAQ section of this publication.)

Thus, the Teacher Training group was formed to draw up a framework and templates to provide a basis for comparison of different offers in the field, while offering guidelines for those wishing to set up their own training sessions.

In a preliminary research exercise, it was established that the ⬆ICT4LT website provides a very comprehensive introduction to all aspects of ICT in foreign language teaching, so it was resolved that any work undertaken by the Teacher Training group should endeavour, wherever possible, not to replicate materials which had been dealt with more effectively elsewhere. Two aspects seemed of paramount importance: to concentrate on VOLL topics and to attempt to present coherent and comprehensive concepts for short term workshops which combine social interaction and hands-on, interactive encounters with the new media.

Being generic in nature, there is very little on the ICT4LT-site that is specifically VOLL oriented. In this respect the GrazVOLL-site is different in that we claim that it is 'vocationally oriented'. But what does this term mean? For us, VOLL is language learning which is oriented towards a wide range of vocations and professions: e.g. nursing, the transport industry, a large number of engineering and crafts areas, as well as various areas of the business world. All of these vocations differ from one another, demanding different (language) skills, and we believe that foreign language learning should be based on these differences in order to meet the immediate and long-term needs of the learners.

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1   For an overview of these, see "The Impact of Information and Communications Technologies on the Teaching of Foreign Languages and on the Role of Teachers of Foreign Languages", a report commissioned by the Directorate General of Education and Culture, 2002, available on the following website: www.icc-europe.com

2   For a description of these, see "The new role of the teacher" in Section 1: Overview of the use of ICT in FL teaching and learning in the above-mentioned report.

The following inventory, provided by teamer [1]Olav Talberg, illustrates which aspects he believes are important in VOLL teaching:

Learners should be given the opportunity to:

- Present and explain their vocational training and background to a native speaker of the target language, because training systems are often so different compared with their own);
- Prepare and deliver company presentations (their own and others'); make comparisons – organisation-wise and with respect to product range;

- Make presentations of products and tools; prepare manuals, ads and sales material;

- Elaborate job descriptions and describe job processes; explain safety and health regulations; work on job-related manuals;

- Deliberate on and communicate about customer (client) relations (using role plays, case studies and viewing film excerpts);

- Compare and contrast 'Culture' and attitudes in the workplace

- Discuss various aspects of trade union affairs;

- Learn about aspects of the target culture, e.g. DIY in England, hobbies, etc.;

- Learn how to socialise in the target language (using role play, videos and feature films);

- Discover important aspects related to politics and national economies; regions, their economy and the people;

- Explore leisure activities and interests of their peers in the target language culture(s), including aspects like role models.

Although by no means an exhaustive list, we believe that the above sketches out the areas of immediate importance and which are relevant and applicable across a wide range of vocations and professions.

It may argued that VOLL lends itself most readily to the use of ICT as VOLL learners are very often completely familiar with the kinds of media applications to be used. A dearth of materials in specialist areas cries out for Internet research, where materials for even the most exotic sounding vocations are readily available.

In the event, the ↓original template to be completed for teacher training activities, which was conceived by the teacher-training group as a checklist and guide to good practice, turned out to be rather wooden and scarcely usable in practice. Despite several appeals to participants at the first Graz workshop, it proved impossible for them to apply it to their current situations. The ↓second template, developed during the final workshop to provide a structure for the description of already existing modules, proved

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1   The expression "teamer" was coined for those colleagues who attended the first workshop as participants, but later took on the role of co-tutors with the original Animators.

to be more flexible and a practical instrument which helps colleagues who require a short, systematic overview of the training module described to find their way around. In many ways, the development from one template to another reflects the essence of the final comments made by Bernard Moro in his contribution on Web literacy. There is a clear shift from an emphasis on technical aspects to forefronting pedagogical aspects. This, we believe, is a natural and inevitable process which we experienced throughout the series.

Over the period of two years of the workshop series, it became clear that the approach adopted by the Graz animators and teamers was one which could act as a blueprint for modules designed by participants for their colleagues "back home". Bernard Moro describes one such event and relates it to the overall model developed by the GRAZVOLL team.

⬇A typical Teacher Training IT workshop. Basically, it may be described as a *learning by doing, sharing and reflecting* approach, where participants are involved in activities which they relate to their own working environment, using the tools introduced by the animating team. The workshops are thus both process and product-oriented. The products presented on the website illustrate the kinds of outcomes which emanate from this approach. They are not presented as perfect models to be copied, but rather as illustrations of the uses to which ICT can be put in a VOLL context. In publishing such materials on the GRAZVOLL site, the team hoped to encourage colleagues beyond those participating in the series to use the tools available and adapt them to their own teaching contexts.

Unfortunately, in the first workshop the teacher-training group were chiefly preoccupied with the establishment of a matrix for the ⬇evaluation of ICT materials for VOLL (later further developed as a text and a Power Point Presentation by Enrica Flamini ⬇software evaluation Enrica [PPT] and ⬇Software Evaluation Enrica). As a result, the original template for teacher training was not applied systematically to the observation of the activities in Graz as a teacher training event. However, as mentioned above, the materials which were produced during the workshop, as well as the original and modified texts by the Animators, provide a wide range of raw-material for teacher training modules and can and have been used in subsequent training sessions by workshop participants.

Case-studies

Apart from the ongoing presentation of modules, materials and applications on the website, which documented the progress of the workshop series from Graz 2000 onwards, the teacher-training sphere of the Graz 2002 workshop brings together case-studies which have been elaborated by workshop participants in the course of their home-based activities. The chief task during the final workshop consisted of formalising the formats of their different modules, using the second template referred

to above. This exercise proved useful from several points of view. First and foremost, it provided an excellent opportunity for exchange of ideas and materials, but it also encouraged colleagues to think in terms of the standardisation of presentation of course content. By providing the summaries and links to actual training materials, they have offered samples of good practice which we hope will stimulate others to add to the collection by submitting samples to the GrazVoll webmaster. We offer an overview of these case-studies here with this in mind.

⬇Jump on the trainING!

This teacher training workshop is an example of a module devoted to familiarising teachers with one typical and powerful application. It illustrates how to use the "Hot Potatoes" authoring programme to create interactive exercises in foreign language teaching. The rationale for introducing the software is related to the need for VOLL teachers to create their own VOLL specific materials as such materials are not often commercially available. The workshop guides teachers through the processes of creating sample exercise themselves. Each of the six exercise types available from Hot Potatoes are presented and illustrated with samples of business English exercises. The module provides hands-on experience for trainees who are encouraged to apply the exercises introduced to topics of relevance to their own VOLL environment. It demonstrates how ICT can help to awaken the motivation of vocational students to learn a foreign language.

⬇Terminology translation online

provides a good example of how useful ICT can be in training for highly specific VOLL needs. It targets teachers who are engaged in the training of translators and interpreters who plan to work in various European organisations. The training module shows how to optimise translation strategies in specific VOLL fields and takes the area of environmental studies as an example. Translators have to acquire expertise in a multitude of professional areas without having had any specific training in these areas. (In this respect, their situation is similar to that of the VOLL teacher.) ICT, in the form of search engines, robots, online and off-line databases as well as dictionaries and access to original EU legislation provide trainee translators and interpreters with powerful tools and useful sources to optimise their work procedures. In this module teachers are taught how to introduce and incorporate the use of these tools into their training programmes. Online references are provided to sites with which the authors of this modular are familiar.

⬇Teaching CALL for VOLL

is based upon materials developed by a task force appointed to encourage the use of computers in secondary school English teaching in Slovenia. It is a three-day teacher

training workshop for teachers in vocational education to introduce them to the use, adaptation and creation of electronic materials in VOLL. It sets out to show teachers how to adapt and revise existing materials for specific purposes (for different vocational sectors, for heterogeneous classes, etc) and how to plan lessons efficiently by exploiting ICT. It also aims to extend teachers' knowledge of methodology related to ICT supported English lessons. Specific software applications are introduced and a blended learning approach is recommended.

This workshop outline provides a clearly defined programme with links to sample lesson plans which have already been elaborated in conjunction with the proposed programme. After the course, participants are encouraged to act as multipliers, providing training for their colleagues at a regional and local level. The scheme represents a "play within a play" (inner track learning), where teachers in training are learners who later become experts and instructors themselves.

⬇VOLL needs in IT

This case study (in German and English) gives a rationale for the use of ICT in VOLL and provides a practical example of integration of distance training elements into VOLL training schemes. Taken from a complete training course introducing language teachers to VOLL, the unit described illustrates how the subject area of "needs analysis" may be dealt with in a distance language course. Step-by-step, *VOLL needs IT* presents a balance between theory, practice and the application to real situations as well as a balance between individual work and exchange with others (with fellow trainees or other parties). The authors provide a clear outline of how trainees will work online, off-line and in contact groups, showing the advantages of a blended approach to learning.

⬇Training tutors

This contribution is also delivered online and presents an approach to training language teachers who themselves intend to teach business English or similar VOLL courses online. "*Training tutors*" has been developed by a German Adult Education Association in co-operation with a publisher and gives a rationale for Web-based language learning, highlighting the advantages of place- and time-independent self organised learning combined with learning within a group. It provides information and practical exercises related to the organisation and particular skills needed for teaching online. The authors maintain that only an Internet-based learning environment can train these skills effectively, and that trainee tutors must themselves experience processes typically encountered in Internet based learning to be able to teach competently online.

Lessons learned

Teachers open to technical change

A very positive aspect in our work has been the clear indication that our colleagues in VOLL seem to be very open to technological change with an increasing number of Internet users amongst teachers who have attended workshops. Our experience in running the workshops, together with the case studies of samples of good practice, illustrate that the use of ICT increases motivation amongst teachers and learners alike and leads to improved performance and motivation on the part of the learners.

Prerequisites for the adoption and use of ICT in VOLL

The main reason for not using ICT seems to be insufficient access to hardware and lack of technical support. Contrary to the belief of many administrators, we found that very few language teachers dislike or fear ICT once they have seen their possibilities. But, for ICT to be introduced successfully in VOLL teaching and learning contexts where multimedia laboratories are in use, some prerequisites are:

- ready access for all learners

- the presence of a full-time technician devoted to servicing and maintaining the functioning of the multimedia laboratory

- the employment of a full-time webmaster

- adequate training for all new teachers and in-service training for others

- meaningful use of the multimedia laboratory classes for intensive practice

- learner-centred approaches to learning

- commitment by senior management to the implementation of ICT in language learning classes with vision, support and proactive leadership

European co-operation and trend towards blended learning

The participants in the workshops all believed that ICT will play an increasingly important role as the new media become increasingly integrated into everyday life. They foresee greater co-operation and collaboration at a

European and at a global level, particularly in VOLL as advances in technology and increased user-friendliness of equipment are breaking down resistance to ICT use in and outside the classroom. But they also believe that the present fascination with technology will fade, giving way to an emphasis on improved pedagogy which will facilitate *"blended" learning,* which will become increasingly time- and place-independent. There will be a shift from passive consumption of ready-made programmes to independent building of content, tailor made for specific groups or individuals. However, not enough attention is being devoted to questions of how the new media can systematically aid language acquisition and learning.

Change in learning and teaching patterns

With regard to pedagogy and methodology, we have seen that *a "shift of paradigm" is necessary in teacher / learner roles.* In the course of our workshops, and based upon research conducted in parallel with our activities, we became aware that the introduction of the new media into VOLL calls for a change in learning and teaching patterns. Co-operative, collaborative procedures are called for to harness the wide range of possibilities the new media offer. Teachers are called upon to abandon traditional roles and act more as guides and mentors, exploring the new media themselves as learners and thus acting as role models for their learners. The case studies show that there is closer interaction between teacher and students when the new media are employed.

New culture of learning

We believe that the new media will lead to a major change in the *culture of learning*, because of the learning efforts and learning possibilities linked to the new media. The new media:

- call for and facilitate more independence on the part of the learner, more self-directed activities and the organisation of learning processes;

- encourage interactive work;

- facilitate direct feedback;

- call for a change in the role distribution of teacher / learner, where learners take on teaching functions;

- enable contents to be continually updated with minimum efforts;

- provide faster access to teaching materials.

- provide greater opportunities for individual forms of learning;

- but also demand more social learning in group and team work.

Teachers' attitudes

However, we have noticed in our training activities that new teaching and learning media do not automatically lead to a new culture of learning; they simply offer the opportunity for change. Teachers' attitudes to the new media and appropriate concepts for their use and for the orchestration of learning will decide whether the desired outcomes can be achieved and whether a major shift in the culture of learning is possible.

The pluralisation of learning spaces beyond the teaching institution is changing the character and contents of institution-based learning and allows us, as teachers, to accommodate the complexity and individuality of learning. We have observed that there is a considerable growth in the importance of learning processes outside institutional contexts, but we still believe that the chief place for learning will remain the school / teaching institution.

New media not a panacea

We do not see the new media as a panacea for teaching /learning problems, and they cannot, in our view, replace present models of language learning. ICT alone cannot provide a comprehensive basis for language learning but must be integrated into present, proven and successful practice. ICT should complement and add to current models and contribute to changes towards this concept of a new *culture of learning*.

Demands made by new media

The new media not only facilitate this changed *culture of learning* in institutional contexts, they also demand such changes. They provide new opportunities and challenges by:

- offering a wider range of teaching contents (especially teaching methods);
- enabling more self-directed learning, offering a

range of choices, individual learning pathways and freer forms of learning;

- offering teachers and learners the chance to plan and organise courses together (empowering learners to influence the choice of teaching contents);

- freeing learning and teaching from the limitations and constraints of the traditional classroom by opening up and using spaces outside the school/ teaching institution;

- facilitating communication between learners and between learners and the teacher via the Internet.

ICT competencies required of language teachers

Language teachers working in a media-rich environment will, like their counterparts in other disciplines, need to:

- recognise the individual learning problems of learners;

- check the truth of information content offered or develop such critical forms of analysis amongst their learners;

- make a careful and considered choice concerning the use of the media;

- develop efficient search techniques and be capable of conducting effective research with the help of the computer;

- be able to use standard software confidently and competently;

- make wise and critical choices of information found.

Consequences for teachers

In ICT-rich environments, teachers must above all:

- improve their didactic competencies linked to media;

- provide less information and instruction, but offer more consultation in learning processes;

- monitor learning processes rather than direct them;

- offer and organise group work to a greater extent.

This means that teachers need to focus on the design of situations, sequences and activities conducive to learning languages *by encouraging learners to participate in collaborative efforts.* Indeed, the management of learning scenarios, where learners and teachers complement one another's skills, expertise and knowledge in collaborative efforts, must form the basis of the education of the language teachers of tomorrow.

Roles of teachers

Facilitator and guide

As facilitators, teachers must in many ways know more than they would as directive givers of information. Facilitators must be aware of a variety of materials available for improving students' language skill, not just one or two texts. The language textbook is no longer the sole source of information. Multimedia programmes offer sound and vision, showing how native speakers interact; electronic dictionaries and encyclopaedias are available for instant reference; online newspapers provide up-to-date information on current affairs in the countries of the target language; (official) websites offer background information on policy, tourism, political views. Teachers need to know how to teach learners to use all this material effectively.

As facilitators, teachers have to be flexible, responding to the needs that students have, not just what has been set up ahead of time based on a curriculum developer's idea of who will be in the classroom. Teacher training is a key element to success in this more flexible language classroom, so that teachers can use multimedia and other resources effectively.

Integrator (of media)

Teachers must not only know and understand the functions of different media available in a media-rich environment, they should also know when best to deploy them. In the joint construction of projects with their learners, they need to guide learners in the use of word-processing, graphics and presentation programmes. Integration of audio-visual elements will bring home to learners the fact that the foreign

language environment of the target language is as vibrant and multi-faceted as the society in which they live.

Researcher

To keep abreast of developments in the countries of the target language in an increasingly complex world, teachers need to know how and where they can access information for their own and for their learners' use. Knowledge and competent use of search engines and reliable information sources are essential. For those concerned with mainstream education, the propriety and reliability of information sources must figure as one of the main criteria for the selection of background material. Familiarity with the use of electronic tools for language analysis (e.g. concordancers) will enable teachers to further develop their own linguistic and professional competence and increase their confidence in the use of the language.

Designer of (complex) learning scenarios

In order to orchestrate successful learning scenarios, teachers need to learn how to put together tasks and materials to guide their learners to successful execution and conclusion of their projects. Unlike work with conventional teaching materials (textbook, workbook, audio and video materials), which have been graded, pre-assembled and collated in a chronological order, the design of learning scenarios is much more complex, requiring higher order skills involving researching and evaluating source materials, setting overall aims and objectives and breaking down tasks into meaningful and manageable sequences.

For the teacher tackling this for the first time, the task is very daunting indeed. Encouragement, help and advice is needed in terms of examples of good practice which may be emulated or serve as sources of inspiration for similar undertakings. If this new role of language teachers is accepted and encouraged by educational authorities, the implications in terms of duties and responsibilities need to be considered. Lesson preparation time increases as these tasks are taken on and this fact must be honoured in teaching contracts, if teachers are to adopt and accept the approach.

Collaborator (with other teachers)	The investment in time and effort implied above requires a sharing of responsibilities and tasks among teaching staff, if there is not to be a general rejection of new technology because it confronts them with an impossible workload. Collaboration with colleagues will lighten the burden and make the efforts more fruitful and rewarding. Obviously, co-operation within a specific teaching institution will prove more efficient, producing tailor-made responses to the local situation, but the new media provide possibilities for exchange between institutions and beyond (national) borders. Teachers of the less widely taught and used languages could well profit from such internet exchanges, helping them to overcome the sense of isolation many experience in their teaching situation. New management patterns must emerge to ensure fair distribution of workloads, and revised job descriptions will be necessary to share and co-ordinate the tasks in hand.
Orchestrator (technology, learners, curriculum)	Teachers will need to develop fairly sophisticated management skills in order to be able to provide a healthy balance between the different elements which make up the new learning environments. Mastery and confidence in the use of technology needs to be applied to the learning inclinations and abilities of individual learners whilst covering the prescribed syllabus or curriculum which is often set by outside authorities. Because of the immediacy of ICT, many decisions have to be made on an ad hoc basis and time budgets need to be constantly reviewed if optimal results are to be attained. Present indications are that traditional time frameworks of 45-60-minute lessons drastically need revising, if the potential of the new media is to be exploited to the full.
Learner	For many teachers, opening up the classroom to the outside world presents as much a threat as an opportunity. Their authority is challenged in a world of constantly changing patterns, when it is often difficult to establish, for example, the difference between "correct" and "incorrect" language use. In the protected environment of the textbook they have recourse to the authority of the author(s) and publisher. In the wild

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mangroves of the real world they must constantly be searching for new patterns confirmed by reliable data from trusted sources. A further challenge is often presented to them by learners who possess more advanced computer skills than they do. However, if they are prepared to enter into the adventure of ongoing learning together with their pupils, they will find it a rewarding and fruitful experience. A prerequisite is that they are prepared to act as the experienced guide for their learners and not as the all-knowing guru who controlled and dominated the classroom of yesteryear.

Evaluator

If task-based, project oriented work in the foreign language classroom using the new media is to become the norm, or at least form an important part of activities, then models of evaluation need to be revised radically. Standard multiple-choice examinations are, for example, hardly likely to test the learners' newly acquired skills in (foreign language) Web literacy. A portfolio-based approach to assessing language competence and skills acquired would seem to be a more appropriate way of recording progress in the target language. As the skills to be acquired by learners are largely identical to those to be mastered by teachers-in-training, this form of evaluation should be practised in initial and INSET training courses, providing teachers with first hand experience of the system and with direct relevance to their own situation.

Summary

Teacher training is a key element to success in the more flexible ICT language classroom, so that teachers can learn to use multimedia and other resources effectively.

The teacher tackling the design of complex tasks needs encouragement, help and advice in terms of examples of good practice which may be emulated or serve as sources of inspiration for similar undertakings. If the new role of language teachers is accepted and encouraged by educational authorities, the implications in terms of duties and responsibilities need to be considered. Lesson preparation time increases as these tasks are taken on and this fact must be honoured in teaching contracts, if teachers are to adopt and accept the approach.

New management patterns must emerge to ensure fair distribution of workloads, and revised job descriptions will be necessary to share and co-ordinate the tasks in hand.

In short, we believe that the positive potential of ICT in FLT & FLL has been recognised, the technology and materials are available, but ongoing training is essential if we are to reap the benefits of the rich learning environment which ICT offers for foreign language learning

# 4.	Reflections on the GrazVoll series: pathways to Web Literacy

Bernard Moro

Starting in 1991, I participated in the Sèvres-Grimstad-Karlsruhe series of workshops implemented by the Council of Europe. In Sèvres I was a participant, while in the next two events I was part of the animating team. I remember how impressed I was by the quality of the input, both from animators and participants throughout the series.

It soon became evident that the only traces left of the workshops would be paper-based. The problem, as most will agree, is that paper-based information tends to disappear after a few months. Of course, there were the reports, but reading a 100-page report on pedagogical theories or experiments is a challenging task, which even participants, not to mention non-participants, in the events would probably hesitate to undertake. Admittedly, there was an effort after the Karlsruhe workshop, at the end of that series, to burn a CD-ROM containing all the contents, but the idea came almost as an afterthought, so that, when collating results, there was such a multiplicity of different formats – from simple, handwritten contributions to heavy executable files – that designing the structure was very difficult, while running it seamlessly was just impossible. It would also appear, ten years on, that CD-ROMs are scarcely more permanent than paper.
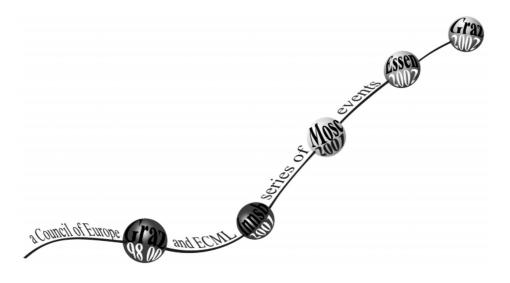
So one of the key rationales for such events – dissemination – was jeopardized, and all the productions and reflections from teachers and teacher-trainers at the zenith of their thinking and experience was lost.

This was the backdrop to the GrazVoll project in its planning phase. Because I was beginning to construct a website for the lycée at which I was teaching, and because I was becoming more and more familiar with the process, I thought of the advantages of preserving all the products of the next workshops in clean, electronic form. Once sufficiently finalized they could be floated online for all to tap at leisure: the theoretical reflections, pedagogical experiments and breakthroughs, didactic models or examples of good practice. Being fluent in graphic design, computer science and language didactics, I was in a position to do this alone, without having to bring a whole team together.

So at the outset of the Graz series I proposed, in addition to my task as an animator, to construct and service the website. The idea was to create a visual chart, prior to the event – complete with menus, navigation bars, arrows and fonts – as well as a valid structure operating seamlessly, like an empty shell ready to accommodate the output of the various groups once in situ.

Naturally, on the ground there were last-minute changes, but, as a whole, everything worked according to plan, so that most groups could actually see what they had produced floated online for the last plenary session of the workshop. The chief problem was that, during the last hours of the event, dealing with the sudden input from the various groups at the same time was extremely onerous and stressful, as all were, understandably, anxious to have their products ready and up and running, for all to see.

But the rewards were not disappointing. Showing the site allowed participants to both directly disseminate what they had learned, and discover and explore what other groups had done. It provided a basis for discussion, criticism and further implementation at their own regional level. It was proof in itself that, with IT, things could be done quickly and effectively. Over the years, as the series developed into other workshops, the site provided a gateway for personal information to new participants while offering them a guided tour of the line of events and contents to date, prior to their involvement. It gave perspective and coherence to separate events.

The Council of Europe and European Centre for Modern Languages were the major locomotives driving the series. The ECML in particular was instrumental in bringing together the team of experts / animators. For the intermediate events of Innsbruck and Moscow, however, other sponsors came into play. The Austrian regional event staged by Franz Mittendorfer was mainly funded by his organization, the CEBS, while the

Moscow happening was organized by Irina Smoliannikova and subsidized by the Moscow State Linguistics University, the Goethe Institut and the Unesco Institute in Moscow.

The Graz 98-00 sphere is actually a fusion of the first two events. This is what it looks like.

The graphics were meant to convey the idea of something gathering momentum, a snowball effect of sorts, to be continued.

Most areas of interest changed their titles because their key-animators moved logically from one field to another as their experience grew and their theoretical approach took on more clearly defined contours.
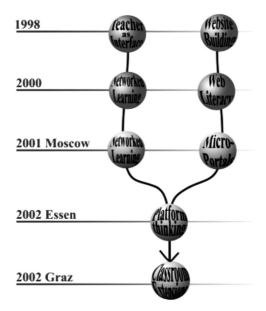
For example, Andreas Lund moved from *The Teacher as Interface*, a workshop based on the idea that the language teacher points at web-based potential resources and helps his students cope with, and tap them, to the notion of *Networked Learning*, where the teacher assumes an even more discreet role, letting students work and learn by establishing web-based networks. This continued in Moscow, but evolved in the following event in Essen into the concept of *Platform Thinking*, finally to become *Classroom Extensions*, a far more comprehensive view, embracing all the previous

concepts, at the final event in Graz. Similarly, Bernd Rüschoff first pointed at the troves of authentic material available on the net – *Authenticity in the Use of IT* – to focus on the more dynamic, operational view of *Data-Driven Learning*, which endured until the end.

Software Selection Criteria, a key ingredient at the onset, logically evolved into *Teacher Training*, with increasingly pragmatic contributions towards the end of the series.

Later we will focus on *Web Literacy*, which was my own particular area of interest.

Because the workshop as an event did not exist in a vacuum, but in a geographical environment, there was a sphere entitled *Graz the City*, where both prior to and during the happening, participants could find a wealth of information provided by key area websites. As those participants were normal human beings, they also managed to have *Fun*, and that translated into some interesting contents, too.

Communication was of crucial importance as our essential goals were first to continue operating as a network, and even more important, to disseminate. A key feature in this menu, a forum space had been made available on the parent ECML website, but as is the case with most forums, not every contribution was of lasting interest. So, on a regular basis, I followed the exchanges and copy-pasted the items I felt were valuable to the whole community to the GrazVoll website in a dedicated area called *communication / experiments*. This turned out to be an appropriate move as the forum – which was outsourced from a specific external website – crashed at some point with a complete loss of data, except for what I had copy-pasted onto our website.

The *Experiments* section was meant to feature all the positive and negative experiences our colleagues were ready to share, and there are extremely interesting contributions to be found. One I find particularly exemplary, by Debi Ali-Lawson, is a superb mixture of pedagogical determination, in-class pragmatism and imagination in the face of restive technology. This is what we need to advance and help our colleagues advance.

What was particularly interesting was how seemingly different trends gradually came together to coalesce in the final event.

While Andreas Lund's area of expertise took on its own momentum – on the left here, already described earlier — with my group I started a workshop entitled *Website Building*, whose objective was to learn by doing, namely, by getting participants to help me transport the contents produced by other groups into the empty shell I had prepared for the website that was to serve as a reporting tool for the whole event.

Some two years later I became aware that many teachers using IT, although already quite well versed in the field, had little knowledge of the Internet, its traps and how to efficiently retrieve information. So I offered a workshop on *Web Literacy*, guiding my group to a sense of awareness and providing help as they built web pages targeting the issue, an obviously constructivist approach. However, in the modest time slot available, we could not complete a comprehensive application capable of addressing all web-related problems. But that initiated what became a genuine spin-off from that event, a fully-operating website bearing the same name of "Web Literacy", now available in French as well, and complete enough to enjoy sponsorship by the ECML, at:
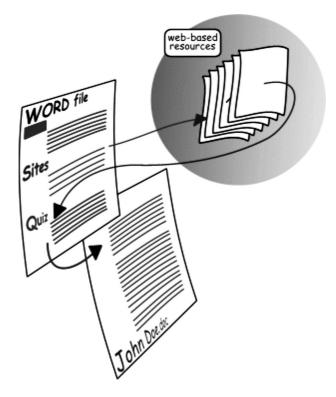
http://www.ecml.at/projects/voll/literacy/

Over these two events, as we began to encounter colleagues from further afield in Europe, I came to realize that the IT competence of the colleagues we were addressing was minimal, whilst the time factor was diminishing more spectacularly, with fewer working days during events and more input to squeeze in.

As a result, my ambitious plans had to be revised. Instead of training people how to use a web page generator, e.g., FrontPage, I thought I should train them in the use of a tool they already felt comfortable with, e.g., Word, while trying to make the best of its amazing potential. Most computer users are familiar at best with 10% of what this software can do. So with minimum technology-oriented input, trainees realized they could inject their pedagogical competence into the tool and make it work very efficiently. I functioned merely as a resource person to help them build their applications. The concept I coined for this was *Micro Portals*, implemented in Moscow.

Working with Word, my Russian colleagues created documents that their students could use as instructional itineraries amidst web-based resources. First, they explored Internet areas that they felt were of interest for a specific Voll target group, like, for example, trainee aeronautics engineers. That implied first acquiring good Web Literacy competence, which they could do on their own, taking full advantage of the guidance on the Web Literacy website I had created. In other words, what we had done before

with a completely different set of colleagues allowed us to save precious time in Moscow. So, basically, they took their students into a journey through information, by preparing appropriate hyperlinks to the material required. Then —still in the same Word document to which the students could simply return from the Web by pressing the Previous button— they provided suggestions, questions and directions, allowing them to construct knowledge from raw information materials. Students' output could then be saved as a Word document bearing their individual names.
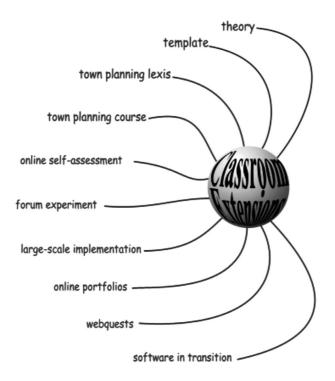

Though simple, this approach involves a whole variety of competences that students can acquire; the teacher can also pitch his or her approach into either a strong, carefully signposted framework, or leave learners ample space to experiment, depending on their degree of autonomy. In other words, what matters is not the tool, but how it is used. The focus is pedagogy, not technology. My Russian colleagues quickly grasped this, attacking it with zeal and enthusiasm, building extremely interesting routes into the web. At that stage, I suddenly realised that this type of work by the teacher was very close to —was indeed exactly— what Andreas Lund had earlier called ⬇The Teacher as Interface, i.e., as someone who points at resources and invites learners to build their own knowledge from them.

At that moment in Moscow, Andreas Lund was directing a group called ⬇Networked Learning, who were experimenting on how to use web-based platforms in a

collaborative way with classes. One colleague, having finished her micro-portal, suddenly vanished from my workshop in the afternoon of the last day to join Andreas' group and carry her application for aeronautics engineers to his platform. She had made *the* link, and brilliantly demonstrated her contribution as the result of our two separate inputs.

Our pathway now clearly paved, Andreas and I joined forces in Essen in a group we coined ⬇Platform Thinking. Our apprehension was that there were so many very advanced participants in the field of IT-based pedagogy with even more knowledge and skills than we on how to use platforms. Those who were interested but had little competence in the domain came to me, while Andreas coordinated the think tank that created what is probably the most exhaustive theoretical description of the platform concept to date.

This all culminated in the final event in Graz, where, again, Andreas and I joined forces in what, the group decided, was best classified as ⬇Classroom Extensions – meaning any IT-based devices, including software such as ⬇Promotics, that extend the learning environment in both time and space — rather than as platforms in the strict sense of the word. But we felt, along with all of the groups operating in Graz, that we had published enough theory, and we wanted to provide an inventory of samples of good practice, describing them in detail for our European colleagues to use, emulate or criticize at will. All participants set to work and in two days a most extensive presentation of case studies on to how to use IT in a VOLL context was floated, an amazing feat, given the time slot available.

The following diagram shows what our group came up with. The links from town planning lexis down to software in transition are case studies. *Template* is the organization we used to present them, *Theory* a reminder of the Essen platform description.

theory

template

town planning lexis

town planning course

online self-assessment

forum experiment

large-scale implementation

online portfolios

webquests

software in transition

Classroom Extensions

In terms of lessons learned, there is first and foremost the idea that IT is undoubtedly very rapidly gaining ground. Mostly because using the software is now so much easier than it used to be. In other words, IT, both soft- and hard-ware, has come of age. Users, too, have improved their basic skills. Even in the remotest parts of Europe teachers now have access to computers, whether at home or at the workplace. Computer usage is far more democratic than before. This also helps.

Another lesson I wish to clearly state is that there is no longer any point in training people in html-page building. Most platforms now require no such skills and allow non-specialists to use web-based environments with a basic knowledge of Windows and Word.

But chiefly, my final conclusion to this series of workshops is that the most effective approach is definitely one where you focus on pedagogy, using the tool rather than concentrating on the technology with pedagogical applications. This may seem a subtle or trivial nuance, but in our area of activity it is crucial. This implies that training should be directed by language teacher-trainers, not by experts in technology.

5.   The Complexity of Learning Environments

Andreas Lund

The following contribution is meant to serve as an introduction to one of the strands that developed during the series of ECML workshops from 1998 to 2002. This strand starts out with topics such as ⬇Networked Learning and ⬇The Teacher as Interface in Graz 1998, resurfaces in Moscow 2001 with more emphasis on online literacy and the impact of technology on online languages, merges with Bernard Moro's work on web literacy in the use of learning environments, ⬇platforms, in Essen 2002, and finally winds up in a series of ⬇classroom extensions in Graz 2002. Altogether, this cocktail of online and offline practices has tried to capture what happens to teachers, learners, languages and technologies *when they interact in education, work and social interplay*. As the title of this section suggests, what we see is an added complexity in learning environments that, of course, mirror the increased complexity of the working world. While the two have tended to be separated in traditional education, it is a central idea in the current text to view language learning as situated, thus focusing on designs of learning situations that are close to real life situations.

For those who now want to approach this particular topic and its exemplification throughout the series of workshops, here is an attempt at a guided tour. It will partly explain the idea behind the work you see, partly try to put it into perspective, and partly comment on potential and shortcomings seen from the advantageous position of hindsight.

Starting out with the 'Networked Learning' module in Graz 1998, the idea was to give an overview of online resources that could function as extensions of the physical, co-located classroom. The rationale was that in working life, ICT were instrumental in compressing space and time, thus changing work practices. Moreover, many of these work practices were carried by language alone, across constraints of time space, and cultures. Finally, work in the 21st century often relies on collaboration and the ability to communicate and exchange complex ideas, instructions, plans etc. Consequently, the Graz '98 group collected and made an evaluation of some online applications that could foster authentic communication. The result shows nine 'satellites' floating around the thematic planet of Networked learning.

Of particular interest at the time was NiceNet, the virtual classroom. Participants signed in to experience a virtual classroom from the inside, and took part in online conferencing, link sharing and other facilities while exploring the potential. The text within the satellite gives instructions as how to create a classroom and sign up. Since 1998, NiceNet has continued to attract thousands of learners and teachers through its free, no-ads policy and general ease of use. For those who do not want to invest in more sophisticated but extremely costly applications, NiceNet continues to be an excellent alternative.

However, online communities are not self-supportive, there is need for substantial subject matter and teacher moderation if communication is to rise above mere small talk. An excellent source to be tried out is the United Nation's educational InfoNation linked from the virtual classroom web page. The material here is suitable for making comparisons, hypothesising, asking and answering questions and focussing on a particular area of vocational vocabulary.

To summarise, the Networked Learning satellite proved to be a first outing into the many possibilities and challenges that face learners and workers of today. What

emerged as a particularly interesting perspective, the role of the teacher at the interface of online and offline environments became a second topic for this first workshop.

Entering ⬇The Teacher as Interface satellite from the main module of the Graz '98 workshop takes us into the report written at the workshop, including the presentation of the group's design of an online action maze called ⬇Magical Mystery Tour. This little online adventure came about as a collaborative effort that aimed to create a learning environment that combined offline and online resources, and that – as a consequence-led to change in teacher and learner roles.

While much has been written about "cyberspace" as a different dimension where things are not like the real world, this design takes a different view. Online practices will only work in education if they absorb good offline practices while at the same time offering new and exciting opportunities for authentic language use. In the case of the magical Mystery Tour, this principle was applied in order to create the simulation of an excursion abroad and the preparations that go into it. Using the Internet, search engines, word processing templates and integrating email as an option, the design aimed at a "rich" learning environment where targeting certain linguistic skills was secondary to a repertoire of language use in an authentic task. (however, we could not help indulging in the little mysteries linked by graphics on the pages).
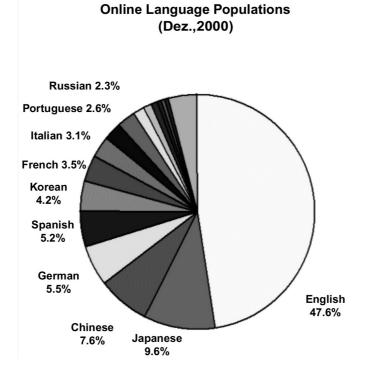
The group also concentrated on teacher roles in such environments. While much has been written about technologies and learners' use of technologies, less research has been devoted to how teachers practise in technology-rich environments. What is more, it is hardly conducive to our understanding to isolate teachers, learners and technologies and their binary relations as objects of study; it is more productive to concentrate on the relations between all of them, considering how these are dynamic, complex and not fully understood by practitioners and researchers alike. The Graz'98 group framed the teacher as working at the interface of two complementary educational settings: the offline (usually classroom) and online dimensions. This particular constellation offers new potentials for the teacher designing a series of new style tasks and assignments that involve authentic material, the processing of this material, and synchronous and/or asynchronous communication. As a result of the affordances ICT bring about, the complexity increases. A teacher often finds him- or herself orchestrating a series of actions involving advanced subject knowledge as well as mediating technologies. This complexity is both taxing on teachers and challenging the traditional educational unit of one subject = one lesson. Consequently, much teacher hesitancy, resistance to or abandonment of ICT can be found in these factors. In many ways, the Graz '98 workshop sowed the seed that materialised in the ⬇Appropriation theory at the final Graz 2002 workshop.

The Moscow 2001 workshop pursued some of these ideas but also addressed another, more linguistic, aspect of ICT; how languages themselves change when mediated by technologies (see below ⬇The Power of Babel). The first strand is found within the Moscow sphere under "networked learning". Once again, a virtual classroom in the form of NiceNet was explored and exploited, this time by letting participants fill the

empty shell with their own designs as well as discussing the experience of collaborating in such environments. Participants linked resources and made these part of assignments like, for example, studying headlines and sub-headlines in foreign language newspapers. The particular literacy that is needed for such activities was at the same time covered by Bernard Moro, and one participant found the natural link by participating in both groups (see Bernard Moro's contribution).

The group also ventured into what later came to be known as the ⬇Platform strand by accessing Virtual U, a virtual learning and administrative environment which was currently being tried out at the University of Oslo. Participants were given access to this platform and could test some features of this environment. (The link is no longer functional as the University has moved on to more sophisticated platforms since then).
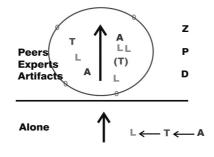
The second strand in Moscow, introduced under ⬇Andreas input addresses the more linguistically oriented changes that are currently taking place as new technologies increasingly permeate education and working life. The presentation, in the form of sequential and hyperlinked html slides (the graphics provide links as well as the underlined text) is titled :*"The Power of Babel"* as an indication of how a plethora of new communicative practices, genres, and hybrid forms manifest themselves both on and off the Internet. The presentation is mostly self-explanatory, but a brief summary will serve to illustrate the point:

**Online Language Populations
(Dez.,2000)**

Russian 2.3%
Portuguese 2.6%
Italian 3.1%
French 3.5%
Korean 4.2%
Spanish 5.2%
German 5.5%
Chinese 7.6%
Japanese 9.6%
English 47.6%

58

As the pie charts show, speakers of English constitute by far the most numerous group of the 'online population'. However, there is an important trend towards the fact that some languages are on the rise, notably Chinese, Japanese, Korean and Spanish. There is a relative decrease in the number of English speakers, but on the whole the English-speaking population continues to dominate, although the challenge from other languages will grow as we approach the year 2005. The number of web pages in the world also reflects the dominance of English, but here, too, other languages will challenge English. In particular, the number of multi-lingual sites will continue to grow, whereby a mouse click will turn a web page from one language into another. One example is the ↑Norwegian School Net which can be translated into French, German and English.

As languages continue to move online, we see the emergence of new practices and genres. E-mail has long been there with its mix of written and oral discourse, the possibility to easily quote the interlocutor, and the use of emoticons; for example **;-)** means that this is said with irony. In addition, conventions first seen in chat forums, on discussion lists, in MOOs (Multi-user domains, Object Oriented), and other networked environments continue to make their impact on languages, so that the notion of literacy changes. The combination of technical literacy, critical literacy, and cultural literacy needed to negotiate electronic environments have come to be known as multi-literacies, a real challenge for educators. On top of that, the cell phone with its SMS (Short Message System) conventions of abbreviations, hybrid languages and compressed form has become an everyday phenomenon for young people as well as adults.

Such environments afford new possibilities: We can, in fact, electronically build language communities, sustain them in interaction as long as we care, and then dismantle them when they no longer serve their original function. Moreover, we can import authentic tasks and assignments into these communities. Examples were given during the presentation. For instance, the United Nations' database called ↑InfoNation provides an excellent opportunity to compare countries across categories like economy, health and environment, and teachers can exploit this service to design tasks that can be negotiated and discussed in an online, collaborative environment. Amongst other things, participants made use of authentic headlines from online newspapers and websites created by manufacturers of aviation parts in a similar manner. Suffice it to say that, as practically every business- and service-oriented venture today is represented on the net, they can be used in authentic language exchanges.

The relative importance of the textbook and workbook will decrease, leaving teachers to design activities conducive to language learning. This requires a particular type of expertise that is not so much technical, but is informed by insights into how humans interact with and around technologies. This animator believes that the sociocultural view of learning can be of help in understanding how ICT both afford and constrain language learning. Through the lens of Computer Support for Collaborative Learning (CSCL) we see how learners in interaction with peers and experts and technologies have the potential to move beyond the limitations set by the individual learner struggling with input from teachers and materials. This is commonly referred to as the Zone of Proximal Development, ZPD (after the Russian scholar Vygotsky).

While the key question of the 20th century can be framed as *"What's inside your head?"*, that of the 21st century might well be, *"What is your head on the inside of, and how do you make sense of it?"* The answer is not evident, but it seems obvious that a reconsideration of what constitutes language and language learning in the face of globalisation and networked environments is in place.

As Bernard Moro points out, a merger took place in Essen 2002. The previously separate strands represented by ⬇networked learning and ⬇micro portals converged in a joint effort in exploring the notion of platforms. It was felt that these multimedia, collaborative and online learning environments represent a new and sophisticated development in learning technologies with a lot of potential for language learning. However, they are often complex in themselves and they increase the complexity of the learning processes, which means that teachers and learners must understand them conceptually as well as in practice. The participants in the ⬇Platform Thinking group represented substantial expertise in, and experience with, this type of application, and we felt there was a need to systematise the knowledge distributed among the participants. A search on the net convinced us that no comprehensive analysis of platforms was readily available elsewhere. Again, the results as presented on the website are fairly self-explanatory. The group's idea was to provide a guide to and an overview of this type of learning environment. This work was also seen as significant since most further education institutions and gradually all levels in institutionalised education buy into these rather expensive applications, not to mention all the collaborative platforms developed for specialised areas of working life like, for instance, virtual offices and hospitals. Development within this particular line of online environment is rapid, and with broadband networks we can see sound and video based communicative practices supplementing what has so far been text based exchanges. Again, the link to authentic working practices is immediate as collaborative problem solving and negotiation becomes feasible regardless of time, place and culture.

This brings us up to the final workshop in Graz, 2002. In many ways, this is a return to where the topics of extended classrooms and teachers working at the interface of online and face-to-face settings started out. The guiding light over these years has always been the attempt to capture what we saw as new and exciting opportunities for language learning as we transcend the constraints of the physical classroom and translate these opportunities into tangible examples. However, it is more an upward spiral than a

circle. While the example of ↓Webquests is in many ways reminiscent of the ↓Magical Mystery Tour that was designed during the very first Graz '98 workshop, it is so much richer and shows a greater repertoire of possibilities. The ↓online portfolios represent a way of thinking about assessment and learner autonomy and responsibility that is gaining ground in many countries. And ↓the large-scale implementation addresses one of the most crucial questions of all: what happens when a whole institution or organisation aims at transcending the physical learning environment? Recent history is full of painful experiences. How institutional appropriation of technologies can be supported and sustained is one of the truly challenging issues as we look ahead.

Software also changes under the convergence of online and offline practices. ↓Promotics is an example of a course in vocational English with a software design that combines the CD-ROM with the World Wide Web. The presentation on the GrazVOLL website also includes a rare glimpse behind the scenes of the design process. And once again, we touch base with Bernard Moro's work as his ↓town-planning scenario is yet another example of how we seamlessly move in and out of virtual places.

To conclude, the extended classroom with its opportunities and challenges has proved that learners and teachers have definitely moved into learning environments that bridge the gap that traditionally has been felt between authentic practices and in-school activities. Bridging this gap is done by exploring and exploiting the interface between the physical, co-located classroom and the virtual, distributed, online environment. There is no dichotomy with a particular set of practices that apply to only one modus. Rather, in order to make sense of the increased complexity it is necessary to view the two as complementary entities that together constitute truly rich learning environments, close to the modern world of work.

Mailing lists **Net meetings**

Virtual Classrooms **Chat**

MOO

BOTs

Discussion lists

Virtual offices **Collaborative tools**

"New technologies are the perfect aid to assist teachers in their "need to broaden their scope for creative pedagogical initiatives." (Little et al.)

"In teaching a second language we must design forms of work in which the student's attention shall be directed to the subject matter and away from the form in which it is expressed." (Harold Palmer)

6.   Data-Driven Learning (DDL): the idea

Bernd Rüschoff

It has often been pointed out that the advent of technology enhanced learning materials requires a re-thinking of the methodological framework of language learning. Furthermore, it is now widely recognized that computer tools can facilitate the implementation of a methodology for language learning that focuses more than in the past on authenticity in contents, context, and task. New technologies may solve a large number of practical problems, particularly in the area of exploiting authentic resources. After all, authenticity in content, task, and classroom interaction is "a crucial issue" in language learning methodology. (cf. van Lier, 1996:123)

This is, in fact, the basic idea of data-driven learning. It can be summed up in the following bullet points:

▪ A focus on the exploitation of authentic materials even when dealing with tasks such as the acquisition of grammatical structures and lexical items;

▪ A focus on real, exploratory tasks and activities rather than traditional "drill & kill" exercises;

▪ A focus on learner-centred activities;

▪ A focus on the use and exploitation of tools rather than ready-made or off-the-shelf learnware.

Before going any further into the background of DDL, we invite those readers more familiar with the German language to visit the GrazVOLL website and look at a text in German describing the ↓rationale behind data-driven learning.

The ideas underlying data-driven language learning as well as those guiding some of the other sections of the GrazVOLL resource are, in fact, firmly rooted in some of the current guiding paradigms. Most obviously, concepts described as task-based learning (TBL) form a relevant backbone of aspects explored and exemplified in the DDL-section. Let us briefly discuss task-based learning and see how it fits into our concept.

Task-based language learning is an approach which was developed in the 1980's by the Indian language teaching specialist N.S. Prabhu. Although TBL was mainly used in learning environments in which second and not foreign languages are learned (e.g. India), the most important concepts of this approach have been discussed recently within the language teaching profession. Jane Willis, for example, has made the task-based cycle an important part of foreign language classes. There can be no doubt that TBL has some relevance when discussing the exploitation of new technologies for language teaching purposes in general as well as DDL in particular.

TBL is based on the idea that the acquisition of language and linguistic competence as well as language and language learning awareness can best be realised through tasks which encourage the learner not to focus explicitly on the structure and the rules of the new language. Learners will acquire the form of the foreign language because they are engaged in exploring aspects of the target language on the basis of authentic content. The types of activities developed in the course of the workshop series based on ⬇<u>using concordances</u> are perfect examples of this approach. Again, a similar set of information and accompanying examples dealing with ⬇<u>Konkordanzen</u> is available in German.

The principal aim of all teaching activities must, therefore, be the creation of a learning environment in which learners are asked to carry out authentic tasks. To be able to do so they are equipped with materials which are interesting for them and which motivate them to communicate with each other. TBL methodologists define the learning aims of their approach in a way similar to the communicative approach. But for them competence is developed entirely through meaningful interaction. Although they do not deny the necessity for the learner to acquire grammatical knowledge, they would rather have this knowledge develop subconsciously.

There can be no doubt that TBL, while clearly learner-centred, is seen by its earlier advocates such as Prabhu as strongly teacher-directed. Teachers put the materials together, they prepare the activities, they organise the learning environment. Group work as a student-oriented form of learning is not seen very positively. In this context, Prabhu makes the following very interesting remark: "The principle that interaction between the teacher and the learner, or between a text/task on paper [on a computer screen] and the learner, …" This quote sums up perfectly the principle approach of the DDL-related activities within the GrazVOLL workshop series; in addition, it also hints at the subtle difference between this section of our resource and the other, no doubt equally task-based type of activities dealt with in the sections on ⬇<u>Web Literacy</u> and ⬇<u>Classroom Extensions</u>.

Consequently, we should make as much use as possible of genuine materials in the language classroom and enable learners to do as many authentic things with such

materials as feasible. Genuine materials are, as Widdowson pointed out in 1979, language samples not constructed for the purpose of language learning. (cf. Widdowson, 1979:80) Authentic tasks would then be tasks and learning projects as well as activities of knowledge construction which truly enable learners to explore the target language in it structure and functionality when working with such genuine "texts". David Little describes this approach to authenticity in language learning as creating opportunities for the learner to "psychologically interact" with the target language, "by which we mean the psychological processing of target language input in such a way that it interlocks with and modifies the learner's existing knowledge." (Little, 1989: 5) He continues by pointing out that such a process is only possible if the learner regards the learning material as having "personal significance"; it can, therefore, be reasonably assumed that authentic texts, preferably taken from sources which relate to the learners' real world and everyday life, have such a quality.

A short summary of what DDL is all about was put together by participants at the final workshop of the series. So, if readers are looking for a quick answer to the question ⬇What is DDL? as well as pointers towards additional information on the internet they are invited to visit this section of the site. Similar information on ⬇Fremdsprachenerwerb als data driven learning (DDL) was compiled by participants at the Graz 2002 workshop.

Finally, those who want something on the didactic and methodological principles underlying data-driven learning in a Slavonic language are invited to check ⬇Irina's input on the part of the GrazVOLL resource created at the Moscow workshop.

Putting theory into Practice

In order to enhance the language learner's role as an experimentor and researcher in the classroom, ⬇authoring software for the creation of tutorial and exploratory exercises as well as cognitive tools, such as ⬇concordancers, are very important. With such materials, teachers can prepare tailor-made exercises for their classes and put together worksheets and create tasks which permit the learners to actively and often consciously explore the target language. Such tasks and learning projects will help to develop learners' language awareness and understanding of the structure and functionality of the target language. Providing the appropriate data, organized into suitable units of information and supported by relevant processes must be the foremost task of educational design of any kind of language learning and teaching resource in order to contribute to the success of any learning situation.

It must be taken into consideration, though, that a number of language teachers consider the use of authoring tools either too time-consuming or potentially difficult. However, innovative tools for text and data-processing and for the creation of multimedia hypertexts have now reached a level of sophistication and user-friendliness that the didactic manipulation (as Edelhoff, 1989) puts it, and adaptation of authentic

materials for classroom use should soon become daily routine of grassroots teaching, comparable to the use of the use of the blackboard or the photocopier today. In addition, a vast amount of learner relevant materials is now becoming available in digital format, either in the format of local resources or globally accessible data on the worldwide web. In the following we present a few examples of tools and multimedia authoring facilities which we consider as useful to assist teachers in drawing on such resources.

1. Authoring Tools

The first step towards integrating more authentic, real-life-based materials into the language curriculum is the use of authoring tools, such as ↓WIDA Software's authoring suite or ↓Hot Potatoes. A number of resources for teacher training on the internet provide an in-depth introduction to authoring tools in addition to the information available on the GrazVOLL resource, most notably the section on ↓authoring tools of the *ICT4LT* project.

Such tools provide teachers with ready-made templates for most of the exercise types and interactions commonly used in self-study packages. These templates can then be filled with content and the authoring tool automatically "creates" an interactive exercise using this input. It is important to note that the creation of self-study exercises specifically geared towards a particular target group can be achieved without any knowledge in programming or script-writing. Basic computing skills are sufficient even to be able to integrate multimedia features into exercises.

Throughout the workshop series, participants created sample exercises and put together a list of resources for those who want to find out more about the potential of these tools. The following links provide a first insight into the kind of examples of Hot Potatoes exercises created by participants of ICT in VOLL workshops at an early stage of the series:
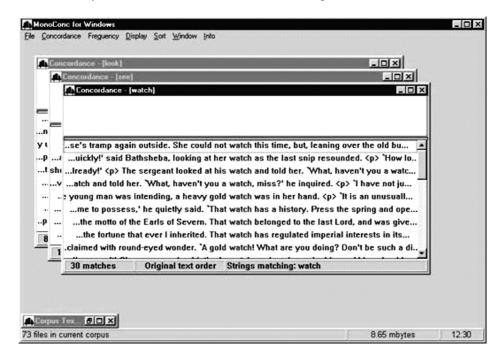
- Command & Market Economies (Matching)

- Resource Markets (Gapfill)

- Astronauts (Gapfill)

- Control (Cloze)

- Effects (Matching)

- Weather Quiz (Matching)

- Weather Quiz (Question & Answer)

- Zurück in die Zukunft (Cloze)

More ↑Sites & Exercises built with Hot Potatoes around the world can be accessed directly on the Hot Potatoes Homepage, which also provides a download feature for this free authoring tool. This list is regularly updated and added to.

The ease of using such tools is probably best reflected by a contribution in German put together by a group of computer novices at the final workshop in Graz 2002, entitled ↓Ein "Beginners" Report (mit Infos zu Hot Potatoes). Further examples are available on the websites created at ↓Moscow 2001 and ↓Essen 2002 workshops.

2. Concordancing

When it comes to finding innovative examples of the use of new technologies in language learning, any tool that allows for the creation of discovery-based and exploratory learning materials must rank very highly within a typology of TELL software. One such tool is concordancing software, originally developed as a device to assist research in corpus linguistics. Such a tool can be used with any textual corpus, i.e. a potentially unlimited number of texts compiled into a database. Its basic function is to extract lists with sample contexts of any word or structure entered into the search option:

Such lists can then be used as a basis for what Tim Johns (1994) refers to as data-driven learning. Considering the example above, a learners' task linked with such a selection of concordances would be for them to deduce themselves the exact difference in meaning, connotation, and grammatical features with regard to the verbs look, see, and watch. Grammatical rules can be acquired in such a discovery-based or exploratory mode, e.g. on the basis of lists with concordances of adverbs, offering learners the opportunity to discover rather than to be taught a rule concerning adverbs and word

order in English sentences. Tim Johns provides a complete website with samples and links on data-driven learning (↑http://web.bham.ac.uk/johnstf/timconc.htm). In addition, Chris Tribble (1997) has published an interesting manual on "Using Concordances in the Classroom".

A detailed description of concordancing and its principles is available on the GrazVOLL website in the sections on data-driven learning. The latest is the page on ↓CONCORDANCING: information – practice – resources compiled at the final workshop.

A similar resource for ↓KONKORDANZEN and their use in German is also available on the GrazVOLL website.

When looking at the examples quoted in Tribble's publication or on ↑Tim Johns' website, it becomes apparent that the use of concordancing tools in language learning comes very close to putting into practice some of the theoretical principles discussed at the outset of this paper. Grammatical rules and the meanings of words are not simply learned but constructed by the learners themselves, thus enabling learners to develop language awareness in addition to a structural knowledge of sets of meanings.

As far as tools for data and information processing and ↑data-driven learning are concerned, concordancing tools are probably the most widely usable tools if this kind used in language learning. These tools represent a special kind of application as their use does not necessarily require the use of computers with the learners themselves. Rather, it is more feasible to create innovative worksheets to be discussed in class with the use of computers rather than have learners, particularly at lower levels, use the software hands-on. Both uses have been described in great detail in a book on the subject of concordancers in language learning by Chris Tribble [Tribble, Chris (1989): Using concordances in the language classroom. Longman]

To make the use of concordances clearer to the user of the GrazVOLL resource, we have placed a number of sample exercises and concordances on the websites. These were developed at the various workshops by participants and can, for example, be found at the following locations on the site:

- ↓An introductory sample task
- ↓Samples created at the Moscow Workshop

In addition, participants have put together links into the major resources concerning concordancing available on the internet. These include links into online concordancers, access to online corpora and texts as well as links into further sample tasks making use of concordance lists. This information can be accessed in the following sections of the site:

- ↓CONCORDANCING: information – practice – resources
- ↓CONCORDANCING IN LANGUAGE LEARNING

3. Some practical aspects

Participants at the various workshops of our series worked in great detail with concordancing tools and continued to do so in between workshops. It is felt that quoting a few *Comments on the use of concordancing software & data-driven learning from participants at Workshop 8/2000* might provide further motivation to explore the potential of this aspect of using authentic materials in the context of more authentic tasks in the language classroom. Here are some of the comments:

> *I think it's a great tool!*
>
> Just a week ago when I was preparing for my English classes, I was trying to do the same thing that this software can do so much more effectively than me. I was looking up into a number of dictionaries for differences between angry, cross and furious, or security and safety, trip, journey and travel, etc. writing down all the different definitions, then pouring all this information into my students.
>
> And now, with the help of Concordancing, I can prepare lots of examples on vocabulary/grammar, etc. features, so that students themselves can make the difference. I can prepare exercises to check how they learned the material. Of course, there is some technical magic that teacher has to learn to be able to produce her worksheets, but it's not so complicated.
>
> Conclusion: dear colleagues do learn to use Concordancing. Satisfaction guaranteed both for you and your students!
>
> Audra Daubariene (Lithuania)

> *Concordance is a very powerful tool for the enhancement of language teaching and learning.*
>
> The advantages are obvious. It can help teachers make a lot of practice on words that are difficult to be understood, on grammatical meanings that are confused. And most important, it is fast and easy to use. However I can see some disadvantages. The words are out of context and the students may find difficulties in understanding the new words they face. The teacher can't just give the concordance list without careful consideration of what he has in front of him.
>
> Kostas Stylianou (Cyprus)

> *Concordancers are the tools I have been looking for since I started teaching many years ago.*
>
> They take you a lot of time to prepare your own text base, but after that they save a lot of your precious energy.
>
> Metka Kosir (Slovenia)

4.   Further Online Resources for Concordancing

Finally, in addition to the materials contained on our own webpage, we would like to draw the readers' attention to a few resources which became available only after the completion of the ICT in VOLL workshop series.

A first resource containing a large number of practical examples for concordance-based activities is a website put together by one of Tim John's post-graduate students. Passapong Sripicharn presents an impressive amount of material on his ↑'Evaluating Data-driven Learning: The use of concordance-based materials by Thai learners of English'

This site contains DDL materials and teaching units designed to draw the learners' attention to certain vocabulary and linguistics features by providing the students with concordance data and guiding them to make a generalisation. All the items presented in his DDL teaching units were taken from a sub-component of the Bank of English Corpus, known as 'CobuildDirect', using its retrieving software 'Lookup'. References into this corpus und the software are available on the GrazVOLL website at ↓CONCORDANCING: information – practice – resources

A second and equally important aspect of data-driven learning is presented on a website dedicated to ↑resource-assisted learning. This slight shift in terminology emphasises quite nicely the special focus of the approach described and elaborated in this section of the GrazVOLL website and this accompanying publication. In its own words, the site describes the approach as follows:

"Resource-assisted learning is a strategy and model for virtual learning via the WWW which involves the integration of vocabulary, concordancing, dictionary reference and multimedia to provide on-demand support for the learner. Pronunciation, dictionary explanation and concordancing examples are available as needed, providing a learning environment in which the computer acts as a sort of 'expert reading partner and linguistic consultant'" (Cobb, Greaves & Horst, 2000)

The research underlying this statement is available on the internet as an online-publication entitled ↑Can the rate of lexical acquisition from reading be increased? An experiment in reading French with a suite of on-line resources. (Cobb, Greaves & Horst, 2000).

This is a concept of integrating local as well as online resources into scenarios for language learning with the clear aim of exploiting the potential of ICT to provide a platform or tool for ensuring more flexibility in the content and organisation of learning. A further aspect is the creation of more authenticity in content and task for language learning. This is where data-driven learning and all the other aspects dealt with within the ICT in VOLL workshop series are working towards identical aims. Let us briefly summarise these in conclusion to this section.

Summary

The ultimate aim of teaching and learning in this "knowledge society" is to assist learners in their need to develop strategies of knowledge processing. Therefore, the traditional transmission model of learning must be replaced by models which emphasise information processing and knowledge construction as acts of learning most suited to the acquisition of the kind of skills needed for the knowledge society. Education and teaching in the knowledge society can no longer be reduced to "the act, process, or art of imparting knowledge and skill" as Roget's Thesaurus proposes, but learning must be recognised as an act in which a learner plays the role of an active constructor of knowledge. Criteria based on such principles need to be considered when evaluating the effectiveness and value of technology enhanced materials for language learning. The question remains, however, as to how the principle of "learning without being taught" as proposed by Piaget (cf. Papert, 1980: 7) can be put into practice and integrated into a technology enhanced learning environment of the future.

This is where data-driven learning, resource-assisted learning as well as the use of the internet as an extension of the classroom and the acquisition of web literacy come together. All this is taking place in a context, where, over the past decade, language learning theory has seen a shift from a highly guided to a more open learning environment, with constructivism as a new and very much learner-centred paradigm for learning. Learning is now perceived as a self-structured and self-motivated process of knowledge construction and the learner is regarded as a self-governed creator of knowledge.

In addition to the undeniable need to achieve instructional goals, the development of cognitive and strategic abilities suitable for the knowledge society is defined as one of the principle aims of a learning process based on knowledge construction and discovery learning. As far as new technologies and their use in language learning are concerned, the ICT in VOLL project and its section dealing with data-driven learning has shown that technology enhanced materials do have a lot of potential to assist the process of innovation which is needed in this fields as much as in any other area of education.

Perhaps one of the most important lessons learnt in the course of our work was *the vital role played by the Web Master* with his competence to implement ideas and make them instantly available. His knowledge and skills were essential not only during the workshops, but also in the crucial stages of post workshop editing and communication. Without the continuity offered by Bernard Moro, the whole undertaking would have collapsed after the first event.

The impact of the new technologies turned out to be much greater than we had anticipated at the outset. The breathtaking speed at which technical developments progressed in the three years of our co-operation demanded constant revision of ideas and rethinking in terms of possibilities. This is partly documented in the workshop reports, and can be seen as you navigate from one sphere to the next. In the course of

our work, we began to realise what an immense responsibility is being placed upon the teachers' shoulders when preparing his/her learners for the "brave new world" of the information/knowledge society.

Despite the complexity of the technology and their attendant applications, we also discovered that *it was possible for even newcomers to find their place*, if they approached the topic with an open mind and received adequate support from empathetic trainers.

We also discovered that it is not enough for teachers to focus on instrumental skills alone. They need to bring a principled and reflective approach to the subject matter at hand and need to harness the full co-operation of their learners in the learning and research process.

In addition, *back-up support is essential* from colleagues, the administration and educational authorities. "Teachers, learners and the new artifacts" form new ecologies, interacting with one another, and producing something new and meaningful in relationship to their subject matter. The roles of teachers and learners have to be redefined, where the learner is as much a researcher and teacher as those appointed to "teach" him/her.

The encounters we experienced with the *new media* opened up completely *new perspectives* and showed us that we are now able to do things which we formerly considered impossible. Our "classrooms" are no longer defined in terms of physical space, but in global categories.

It is also clear that the use of ICT in FL teaching and learning has by no means reached a satisfactory stage of penetration in the VOLL sector. Workshops which bring together colleagues with different levels of skills and experience in activities from which they can gain mutual benefit through exchange are seen as extremely useful and productive. We see samples of good practice, provided by practising teachers rather than by "experts", as motivating reasons for teachers to pursue the possibilities offered in this field.

We see the further *extension of networks* of language teachers working in the field of VOLL as a highly desirable goal, but we would stress that the use of technology alone will not stimulate teachers to co-operate for any sustained period of time without personal contacts. All ICT workshops have maintained the same pattern so far. Initially, a great deal of enthusiasm is generated during the workshop proper, and the various means of communication are used on a regular basis and intensively for a period of some six weeks to two months after the event, but then energy and interest seem to wane. Unless some provision is made for persons to be designated (and remunerated) to animate appropriate websites and contacts during interim periods, then this falling off of interest will be a recurring phenomenon. The tasks to be fulfilled by such a Web animator would be to encourage colleagues to contribute from their everyday teaching experience, to edit and comment on contributions, drawing upon the expertise of the original animating team and other experts in order to maintain the

website as a living organ, supplying the teaching body with updated materials which will hold their interest.

Linguistic challenges: The fact that communications technology is both 'shrinking' – becoming portable and seamlessly entering everyday devices as well as becoming all-encompassing and distributed throughout the world – will continue to have a considerable impact on how communities interact. An effect of this will be the emergence of new genres, new communicative modes and a need for teachers to know how to cope with linguistic challenges that transcend standards and norms.

7. Lessons learnt

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