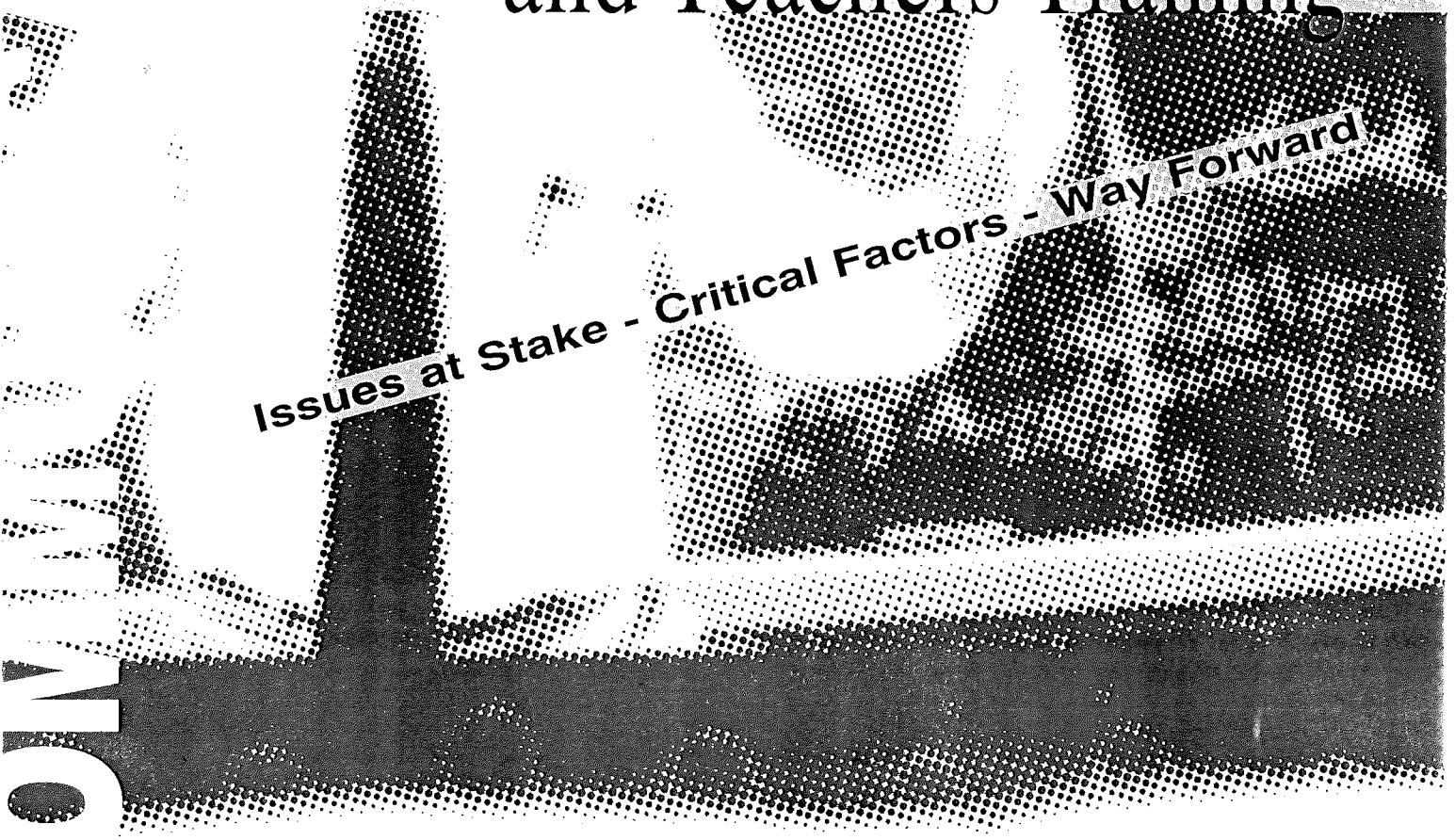
SISR-NE

School Networks and Teachers Training

Issues at Stake - Critical Factors - Way Forward



Lambrakis Research Foundation

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The present "Communication Document" reflects the issues discussed and conclusions drawn during the Workshop "School Networks and Teachers Training", which took place in Athens, Greece on the 18th September 1998, with the participation of EC-DGXIII TAP Projects TRENDS and T3 and the European Schoolnet (EUN) representatives.

The Workshop was organised and animated by Lambrakis Research Foundation, with the following objectives:

→ To identify the emerging needs and difficulties in the development of school networks and distance training services aiming at teachers' continuous professionalisation, by reflecting on and connecting related projects' experiences.

→ To explore the implications of the development of school networks, distance training services and networked learning communities for the organisation and "culture" of education systems/institutions.

→ To inform policy-makers at regional, national and European level of the needs and priorities in setting up school networks and distance training services aiming at teachers' continuous professionalisation and school development.

Evidently, the discussion had two functions:

a. an understanding-oriented (descriptive) function, which helps all the participants analyse current needs and implications

b. a decision-oriented function (prescriptive) which helps policy-makers set priorities and targets for future action.

Members of the TRENDS Project partner institutions as well as the T3 Project partner institutions participated in the discussion, bringing their experience from school networks for teachers training and professional development. Mr Ulf Lundin, Chair of the Steering Committee of EUN, made a significant contribution to the discussion, focusing on future plans and actions for "a Network of Networks" that will, hopefully, integrate the experiences and lessons learnt from the existing national and European projects. The experience from WfS was also brought in by Mr Guus Wijngaards, former Sustained Activity Manager of WfS and currently Communication Manager of EUN.

A team of experts and policy-makers from educational institutions, agencies and Ministries were called to critically contribute to the discussion, acting as facilitators, integrators, critics and rapporteurs - when and where appropriate. It should be noted that two discussion groups were formed with the aim to explore the issues at stake from the educational researcher/designer and the policy-maker perspective, respectively (all participants are listed in the Appendix).

The quality of education is strongly linked to training of teachers. For this reason, most European countries have developed policies for training and re-training school teachers. (EURYDICE, 1995) However, for a long time teacher training was considered to be mainly a pre-service procedure, taking the form of initial training. (Day, 1997). This attitude seems to have changed in the last decades. Nowadays teachers are faced with emerging social needs and challenges and are called to respond to the new pedagogical, scientific and technological developments. The rapid evolution of new technologies in combination with the continuous societal/economic changes pose the need for on-going teachers' professionalisation and updating.

Under these circumstances, in-service training seems to be an effective training policy since it could increase transfer likelihood. In other words, the closer in time and circumstance the training is to the workplace, the more effective it seems to be. Teachers are called to solve pedagogical problems on the spot by drawing on their newly acquired skills and knowledge. In this way, practice is connected with theory and learning becomes more meaningful as it is "built" in real conditions. (Collis, 1996, pp 153-4). In the beginning, in-service training used to be carried out in certain places (schools, training centres, institutes etc.), with a fixed timetable and the continuous physical presence of the trainer. This inflexible training model set limits to the range of training activities as well as teachers' participation in the courses offered.

As a result, new training models, based on distance education methodology, have been developed. (TRENDS, Training Model, 1997, p. 6). On one hand, distance education increases instructional flexibility as to the learning method, pace, sequence, media and evaluation, helping, at the same time, people to overcome health/family circumstances and difficulties related to employment, time and travel costs. On the other hand, as Jenkins (1996) put it: "Distance education interests educational planners largely because it can deliver more learning for less resource. (...) There is no doubt that its cost-effectiveness is a major asset".

Hargreaves (Leach in Mills & Tait, 1996) and Moon (1996) have pointed out that teacher education rapidly becomes de-institutionalised and dispersed across a variety of schools and clusters. Furthermore, as Leach puts it: "Open and distance teaching and learning has, over the last twenty-five years, offered an important routeway to professional development for many teachers across the world. (...) Its underlying methodology is ideally placed to facilitate a responsive and flexible model of teacher development, shifting the focus as it does from what institutions provide to how learners can be actively engaged in the process of their own learning through a wide variety of teaching and learning strategies" (Leach in Mills &Tait, 1996).

For these reasons, the notion of networking in education has already been applied mainly in groups of schools, by activities in national and/or European pilot projects. (Collis, 1996, pp 402-405). However, the extent of existing governmental initiatives and other concerted actions differ widely within the European countries. At the same time, the pilot projects in the field have addressed the problem of high telecommunication costs as well as the related organisational shift in the educational establishments that is necessary to make the on-line educational services really useful for the school communities. (Davis in Veen et al., 1995)

In any case, the technological advancement is giving the individual school the opportunity to have fast contact with other schools and institutions, thus providing strong motivation for communication and exchange of ideas and experiences. (Kaye, 1989, pp 4-6, 10, Osorio, 1997, pp 279-281). Today, there is a variety of resources available through the international data communication networks, such as directories, guides and lists. As Mc Clintock (1996) suggests: "These technologies, deployed without reserve, do not result simply in increased information access. They result in a substantial transformation in the conditions limiting full participation in cultural and intellectual work".

The establishment of school networks to support the provision of educational services (distance learning activities, access to educational material / information repositories, school-based training of teachers etc.) is recommended as a much promising field for future collaboration between the European countries, with visible and really useful results, which will have a concrete impact on and contribute to the necessary organisational shift. (Davis, 1997, Owen, 1997, Tsakarissianos & Koutra, 1997, Van Assche et al, 1997). Co-operation should be aimed at transferring knowledge and expertise in order to enhance the operation of the education systems in the region. Mature network technologies and multimedia systems will allow educational organisations, cultural institutions and research centres to provide education and training services for the educational communities.

To conclude, network technologies and resources could be exploited for supporting an educator's in-service training model, with trans-European features (Davis & Tearle, 1998) and with the potential to overcome difficulties originating from the insufficient time in the school schedule, the cost of network access and use, the lack of administrative support, etc. (TRENDS, Training Model, 1997).

In this context, existing projects and initiatives at national, regional and local level aimed at promoting school networking and co-operation between the educational communities and the technology providers, may contribute substantially to a bottom-up development of educational networks and advance the scope of their activities at the European level. (See: Johansson, 1997, Fenoulhet et al., 1996).

COLLIS, B. (1996) *TELE-LEARNING IN A DIGITAL WORLD: THE FUTURE OF DISTANCE LEARNING,* London: International Thomson Computer Press.

DAVIS, N. (1995) TELECOMMUNICATIONS FOR TEACHER EDUCATION AND PARTNERSHIP SCHOOLS: TWO COMPLEMENTARY CHANNELS. IN VEEN ET AL (EDS.) *TELEMATICS IN EDUCATION: THE EUROPEAN CASE* (pp 259-270). De Lier: Academic Book Centre.

DAVIS, N. (1997) ON-LINE TEACHER EDUCATION SERVICES LAUNCHED, *TELEMATICS TIMES FOR TEACHERS: TEACHER TRAINING PROJECTS IN DG XIII TELEMATICS APPLICATIONS PROGRAMME,* 4, 1, 6.

DAVIS, N. & TEARLE, P. (1998) A CORE CURRICULUM FOR TELEMATICS IN TEACHER TRAINING, PAPER PRESENTED AT *TELETEACHING '98 CONFERENCE,* 1-2 September 1998, Vienna. (http://www.ex.ac.uk/telematics/T3/corecurr/tteach98.htm)

DAY, C. (1997) IN-SERVICE TEACHER EDUCATION IN EUROPE: CONDITIONS AND THEMES FOR DEVELOPMENT IN THE 21ST CENTURY, *BRITISH JOURNAL OF IN-SERVICE EDUCATION,* 23, 1, 39-53.

EURYDICE - THE EDUCATION INFORMATION NETWORK IN THE EUROPEAN UNION AND THE EFTA/EEA COUNTRIES (1995) *IN-SERVICE TRAINING OF TEACHERS IN THE EUROPEAN UNION AND THE EFTA/EEA COUNTRIES.*

FENOULHET, T., DEL BRENNA, G., HUBER, M., DUMORT, A. (1996) *THE FOUNDATIONS OF A EUROPEAN NETWORK FOR SCHOOLS: A PRELIMINARY SURVEY OF EXISTING SCHOOL NETWORKS IN EUROPE,* Working Paper submitted for discussion at the conference: "Towards a European Network for Schools", European Commission, Brussels, 16-17 December 1996.

JENKINS, J. (1996) NEW PATHWAYS TO LIFELONG LEARNING - THE POTENTIAL OF DISTANCE EDUCATION. IN THE *PROCEEDINGS OF THE 5TH EUROPEAN DISTANCE EDUCATION NETWORK (EDEN) CONFERENCE,* HELD IN FUTUROSCOPE, POITIERS, France on 8-10 July 1996.

JOHANSSON, Y. *TOWARDS A EUROPEAN SCHOOLNET: INTERIM REPORT PRESENTED BY YLVA JOHANSSON, MINISTER FOR SCHOOL AND ADULT EDUCATION, SWEDEN, TO THE INFORMAL EDUCATION COUNCIL IN AMSTERDAM,* 2 March 1997.

KAYE, A. (1989) COMPUTER-MEDIATED COMMUNICATION AND DISTANCE EDUCATION. IN MASON R. & KAYE A. (EDS.) *MINDWEAVE: COMMUNICATION, COMPUTERS AND DISTANCE EDUCATION (PP 3-21).* Oxford: Pergamon.

LEACH, J. (1996) LEARNING IN PRACTICE: SUPPORT FOR PROFESSIONAL DEVELOPMENT. IN MILLS R. AND TAIT A. (EDS.) *SUPPORTING THE LEARNER IN OPEN AND DISTANCE LEARNING (PP 101-126).* London: Pitman Publishing.

MCCLINTOCK, R. (1996) *RENEWING THE PROGRESSIVE CONTRACT WITH POSTERITY: ON THE SOCIAL CONSTRUCTION OF DIGITAL LEARNING COMMUNITIES,* Institute for Learning Technologies, Teacher's College, Columbia University, New York. (http://www.tc.columbia.edu/~academic/ccte/)

MOON, B. (1996) TEACHER EDUCATION AND OPEN AND DISTANCE LEARNING: THE CHALLENGE OF NEW TECHNOLOGIES. *IN THE PROCEEDINGS OF THE 5TH EUROPEAN DISTANCE EDUCATION NETWORK (EDEN) CONFERENCE,* HELD IN FUTUROSCOPE, POITIERS, France on 8-10 July 1996.

OSORIO, A. (1997) *TELEMATICS FOR THE EDUCATION AND PROFESSIONAL DEVELOPMENT OF TEACHERS,* PhD thesis, University of Exeter.

OWEN, M. (1997) REM INSTITUTE: A MODEL VIRTUAL PROFESSIONAL DEVELOPMENT CENTRE, *TELEMATICS TIMES FOR TEACHERS: TEACHER TRAINING PROJECTS IN DG XIII TELEMATICS APPLICATIONS PROGRAMME,* 4, 5.

T3 - TELEMATICS FOR TEACHER TRAINING, *CORE CURRICULUM FRAMEWORK FOR TELEMATICS FOR TEACHER TRAINING,* July 1998. (http://www.ex.ac.uk/telematics/T3/corecurr/corehome.htm)

TRENDS - TRAINING EDUCATORS THROUGH NETWORKS AND DISTRIBUTED SYSTEMS, *TRAINING MODEL,* February 1997. (http://www.lrf.gr/english/trends/free.html)

TSAKARISSIANOS, G., KOUTRA, C. (1997) SCHOOL NETWORKS FOR IN-SERVICE, SCHOOL-BASED TEACHERS' TRAINING: THE TRENDS PROJECT, *OPEN CLASSROOM II CONFERENCE: SCHOOL EDUCATION IN THE INFORMATION SOCIETY,* 17-19 September 1997, Crete, Greece.

VAN ASSCHE, F., MEERSMAN, R., SAMPSON, D., WIJNGAARDS, G., WILLIS, R. (1997) THE "WEB FOR SCHOOLS" PROJECT: A STEP TOWARDS THE EUROPEAN SCHOOL NETWORK, *OPEN CLASSROOM II CONFERENCE: SCHOOL EDUCATION IN THE INFORMATION SOCIETY,* 17-19 September 1997, Crete, Greece.

Project experiences were discussed, evaluated and elaborated, leading to some meaningful conclusions and suggestions. These conclusions could be viewed as "lessons learnt" and are analytically presented below:

PEDAGOGICAL LESSONS

→ A new consciousness and motivation of teachers' networks beyond national levels is under development (e.g. EUN).

→ Teachers' professional development and students' learning prove to be parallel learning processes. For this reason, more emphasis should be placed on the students' learning process. In this context, an open question to be answered sooner or later has emerged: What is the impact of teacher training on the learner as well as the interaction between teachers and learners?

→ Teachers' learning is not neutral, since there is also development of teachers' motivation, which should be also studied.

→ A feeling of "independence" and "emancipation" has been created among teachers as learners and it is worth-studying in more depth.

→ The individual needs of teachers according to their own context (i.e. country, school, classroom) should be addressed.

→ There should be a possibility to put into practice what was learned in real conditions.

→ The role of tutor and the nature of tutoring prove to be cultural phenomena, which are difficult to change.

→ Openness of digital learning environments demands active learning attitudes.

→ Moderating on-line learning activities demands new teaching strategies.

→ In order to create a virtual network, we need to create a human network.

ORGANISATIONAL LESSONS

→ There is a need for expanding the scope of projects in three dimensions: quantity, complexity, geographical coverage (at European level).

→ There is a question of up-scaling, as to the number of teachers as well as the intermediate tools/functions, pointing to a European Network of Continuous Teacher Training Institutions.

→ There seem to be problems in setting up networks of teacher training institutions with reasonable geographical coverage in their environment.

→ All of the current projects are more or less "top-down", since teachers themselves would probably see things differently and this is an issue. Thus it is essential that this training should be done in a way that makes ICT simpler for the teachers.

→ Creation of multicultural learning environments demand international collaboration of moderators.

→ Model of international courses may take different approaches but generic lessons are:

- *the need for an international team of national moderators*
- *national moderators acting in a web of local learning groups*
- *national learning groups together form a human network*

→ A bottom-up project needs:

- *Matching national ICT initiatives*
- *Matching national educational reforms for schools or for teacher education*
- *Matching top-down European projects such as the EUN*

TECHNICAL LESSONS

→ A need for transparent and user-friendly communication platforms.

→ A need for involvement of all end-users made visible on the web.

SCHOOL NETWORKS

WEB FOR SCHOOLS
http://wfs.vub.ac.be/

GLOBAL SCHOOLNET FOUNDATION
http://www.gsn.org/

EUROPEAN SCHOOLS PROJECT
http://www.educ.uva.nl/ESP/

THE EUROPEAN SCHOOLNET
http://www.eun.org

T3 - TELEMATICS FOR TEACHER TRAINING
http://t3.dcu.ie/t3.html

TRENDS - TRAINING EDUCATORS THROUGH NETWORKS AND DISTRIBUTED SYSTEMS
http://www.lrf.gr/TRENDS

THE SWEDISH SCHOOLNET
http://www.skolverket.se/skolnet/

SCHOOLNET UK
http://schools.sys.uea.ac.uk/schoolnet

SCHOOLS ON-LINE
http://sol.ultralab.anglia.ac.uk/pages/schools_online/Contents.html

ODYSSEAS
http://odysseas.cti.gr/index.html

CANADA'S SCHOOLNET
http://www.schoolnet.ca

TEACHNET
http://teachnet.org

TEACHERS HELPING TEACHERS
http://www.pacificnet.net/~mandel//

NEW YORK NETWORKS FOR SCHOOL RENEWAL
http://www.nynetworks.org/

NATIONAL SCHOOL NETWORK
http://nsn.bbu.com/

NETWORKING K-12
http://falcon.jmu.edu/~ramseyil/network.htm

NEC GLOBAL NETWORK CLASS (GAKKOS)
http://www.gakkos.com/top.html

NATIONAL SCHOOLS NETWORK
http://www.school.za

SCIENCEPLUS TEACHERS NETWORK
http://www.ccn.cs.dal.ca/Education/SPTN/ascphmpg.html

A+ FOR KIDS - TEACHER NETWORK
http://www.netstage.com/apluskid/

THE LEARNING COMMUNITIES NETWORK, INC.
http://www.lcn.org/

THE LEARN NETWORK
http://www.tafe.sa.edu.du/lsrsc/learn/learn.html

PROJECTS

SCHOOLS ONLINE PROJECT
http://sol.ultralab.anglia.ac.uk/pages/schools_online/

SCHOOLS ONLINE 2 -PRIMARY BRIDGES PROJECT
http://www.becta.org.uk/projects/primary/

MULTIMEDIA PORTABLES FOR TEACHERS
http://www.becta.org.uk/mmportables/index.html

NORTHAMPTONSHIRE DISTANCE IN-SERVICE TRAINING PROJECT
http://www.becta.org.uk/info-sheets/ndip..htm

THE EIFFEL PROJECT
http://www.ilt.columbia.edu/eiffel/eiffel.html

THE LIVING SCHOOLBOOK PROJECT
http://www.ilt.columbia.edu/k12/lsb/index.html

THE HARLEM ENVIRONMENTAL ACCESS PROJECT
http://www.ilt.columbia.edu/k12/heap/index.html

GLOBE
http://www.globe.gov/

INTERNET SCUOLA
http://www.quipo.it/internetscuola/homeing.html

REM Project
http://weblife.bangor.ac.uk/rem/rem.html

T3 Project
http://www.ex.ac.uk/telematics/T3/

Netdays
http://www.netdays.org/

The Global Schoolhouse Project
http://k12.gsh.org/

RESEARCH CENTRES

BECTa (British Educational Technology and Communications agency)
http://www.becta.org.uk

Institute for Learning Technologies, Teachers College - Columbia University
http://www.ilt.columbia.edu/

IET - Open University
http://www-iet.open.ac.uk/

International Centre for Distance Learning
http://www-icdl.open.ac.uk

The Telematics Centre - University of Exeter
http://www.ex.ac.uk/telematics/

University of Twente
http://www.to.utwente.nl/ism/online95/campus/campus.html
http://www.to.utwente.nl/ism/online96/campus.htm

Media Lab - MIT
http://www.media.mit.edu/MediaLab/Research.html

TECFA Centre at the University of Geneva
http://tecfa.unige.ch/info-edu-comp.html#www_intro

Media Education Centre, Dpt of Teacher Education - University of Helsinki
http://www.helsinki.fi/kasv/media/

TRAINING INSTITUTIONS / TRAINING CENTRES

Virtual Teacher Centre (National Grid for Learning)
http://vtc.ngfl.gov.uk/

IET - Open University
http://www-iet.open.ac.uk/PDET/online.html

BECTa (British Educational Communications and Technology agency)
http://www.becta.org.uk/projects/trends/

CNDP (Centre National de Documentation Pedagogique)
http://trends.ac-rennes.fr

Pedagogical Institute
http://trends.pi-schools.gr

CFAECA (Centro de Formacao da Associacao de Escolas de Aveiro)
http://trends.dts.cet.pt

CIDEAD (Centro para la Innovacion y Desarrolo de la Educacion a Distancia)
http://abedul.pntic.mec.es/~trends

BDP (Biblioteca di Documentazione Pedagogica)
http://wwwa.bdp.fi.it/trends

University of Oulou
http://edtech.oulou.fi/t3/

University of Utrecht
http://www.ruu.nl/ivlos/t3/

University of Exeter
http://www.ex.ac.uk/telematics/t3

Media Education Centre, Dpt of Teacher Education - University of Helsinki
http://www.helsinki.fi/kasv/media/

In the light of these ideas, participants contributed their views focusing on the following crucial issues, that are constituting major areas of interest and action priorities:

1) Networking people and school communities, collaborative work.

2) The organisational shift, pressure for changes "imposed on" education systems, through ICT-related innovations.

3) Communications infrastructure, networking activities.

4) Teachers' in-service training.

5) Regional and national decision-making levels (authorities and European co-ordination).

The identification of the emerging needs, difficulties and synergies in the development of school networks and distance training services aiming at teachers' continuous professionalisation, is a long-standing, open issue, considered to be a priority also in the on-going "Learning in the Information Society" Initiative of the European Commission.

The Group suggests that policy frameworks, initiatives, programmes, actions and pilot projects should be set up by approaching the aforementioned issues from two perspectives:

(a) The perspective of educational researchers and designers, who are mainly concerned with development of content/materials and didactics.

(b) The perspective of policy-makers, who are mainly concerned with issues of organisation and scalability.

In the light of the experiences derived from a number of national and European pilot projects, the contributions of projects like TRENDS and T3 and the framework established by the EUN Initiative, the Group reached a certain set of recommendations to all the interested parties, namely the public education authorities, school authorities, education policy-makers, research centres, Schools of Education, and the private sector, to the extent that it will be involved in the process.

The main remarks and recommendations emerging could be summarised in the following points:

A. TRAINING MATERIALS, CONTENT AND DIDACTICS

Training content and materials

→ The emphasis should not be placed on specific curricular content or prescription of materials, since a very content-specific (top-down) approach to training materials and didactics could put the European dimension of teacher training networks at risk.

→ It was pointed out that there is a lot of training materials in common among European countries. Similarly, common learning objectives could be integrated into the curricula in order to develop European citizenship.

→ Teacher training should be approached in parallel with students' learning since what and how students learn is strongly linked with what and how teachers teach.

Learning processes and didactics

→ Emphasis should be placed on training processes rather than products/materials.

→ A major priority should be the change of teachers' attitudes, since the teacher is the actual agent of innovation and change in schools.

→ Teacher training should be supported with the dissemination and analysis of models of "good practice", which can be used as stimuli of discussion, reflection and change.

→ Teachers could be involved in evaluation of existing learning materials and this reflective/evaluative activity could form part of their training and professional development.

To summarise, there is obviously a trend towards "process-oriented" pedagogy rather than "product-oriented" or "knowledge-centred" pedagogy. The activities and practices forming teachers' training and professional development are emphasised more than the nature, content and structure of training materials. It is

understandable that common learning objectives and similar learning processes can be served by various training materials in many different forms.

What is more than clear is the shift from "development of content" to "development of practices", from "text" to "context" and from the "author" to the "reader". In other words, the teacher herself is called to reflect on, evaluate and participate in the development of training content and materials. She is viewed more as a "contributor" and "builder" of her own knowledge rather than a mere consumer of ready-made training content and materials. She is also viewed as a member of a "networked community of practice", discussing and collaborating, reflecting and evaluating models, practices and materials.

B. SCALABILITY - ECONOMICS & ORGANISATIONAL FRAMEWORK

Cost-effectiveness

→ It was stressed that cost-effectiveness is needed in order to address the tremendous demand for teachers' training.
Scalability seems to be an answer to this issue. Furthermore, scalability may have a regularity effect as well as a market competition effect.

→ There is an issue of reducing the cost of teacher training among different countries but also ensuring quality, that means avoiding "easy" solutions.

→ The subject-driven demand has an effect on subsidising cost of training material development.

→ The following ideas for reducing/subsidising the cost of teacher training were presented:

- *Selecting teachers who will actively respond to training (probably not the oldest teachers).*
- *Standardisation of processes, materials, hw and sw tools.*
- *Promoting school leaders' role.*
- *Increasing modularity of training courses (individualisation of learning).*
- *Involving end-users in the production/development of services.*
- *Adopting ODL (open and distance learning) as a way to reduce costs.*

Sustainability

The issue of sustainability of continuous professional development systems was brought into focus. Sustainability actually means to involve teachers and re-engineer education - that is very expensive.
In this context, Training Centres may act as service providers and at the same time subsidise costs by revenues from schools/teachers/LEAs.

Provision of services and tools

→ On one hand, there seems to be a need for policy development to support opening tenders for providing services.

→ On the other hand, there is a need for development of communication practices and, therefore, tools.

→ Intranets inside schools may help to develop positive attitudes to communication, since teachers are willing to but afraid of communication.

→ Teacher training could be a gradual process, consisting of several stages (e.g. (1) Awareness, (2) Familiarisation with IT, (3) Short training sessions in a long period - see the Bristol experience).

→ Experience from commercial training points to the following principles in providing training services: (a) Short sessions, (b) Need-oriented training, (c) Modularity.

Structural change

→ Another crucial issue is the number of potential trainees, since it is not realistic not to set "priorities" in the beginning. Prioritising target groups is essential in this stage.

→ Prioritising means selecting teachers according to a set of criteria.
The question is which teachers should be targeted at before others. The most influential

or the youngest? Should all of the teachers be well-informed, anyway?

→ Learning managers are an essential "part" of the prioritising structure.

→ Teachers participate in professional development/training programmes mainly for career reasons. Their motivation is basically "extrinsic". For this reason, teachers approaching the end of their career are not particularly interested in professional development.

→ It seems that teachers' expression of interest (self-selection) is a realistic "point" to start with.

→ Of course, we should not forget that there is also a "political" goal: Teachers should be provided with equal opportunities for training and professional development since equal qualifications of teachers also mean equal qualifications of students.

C. TRAINING DESIGN PRINCIPLES

→ ***Acknowledgement of existing individual competencies.***

Teachers and trainers are adults who have already developed a set of competencies, some of which may be certified by official titles and qualifications, some others may not. In a continuing training perspective, recognition of competencies acquired on the job is fundamental both to motivate learners and to achieve a complete picture of competencies available in a given group.

→ ***Intersector user groups.***

The opportunity of creating inter-sector user groups (including teachers from school, university, vocational training and industrial training) is motivated by the need of breaking consolidated habits of teaching and stereotypes about what happens in "other" education/training contexts.

→ ***Integration of classroom, ODL, context -based learning.***

Teachers' training should try to integrate ODL segments with some

conventional classroom-based group activities and some project work based on the work-context of the teacher.

→ ***Integration of ODL scenarios.***

ODL is no longer a single-paradigm approach: in addition to tutored self-managed learning, teachers should have the opportunity to try virtual classrooms and networked collaborative learning, in order to experiment with the advantages and the limitations of each approach on their own learning, before proposing them to their trainees/learners.

→ ***Core-content on standard competencies.***

The content basis of a teacher training system should be focused on agreed standard competencies directly related to the design, management, support and evaluation of the teaching /learning process.

→ ***Open to new, non pre-codified content.***

As a balance to the previous principle, content should, however, not be a close set, but openness should be built in the system, in order to incorporate new content (modules) corresponding to changing needs and specialised competencies.

→ ***Support to contextualisation.***

Every effort should be made to show the relevance of competencies offered by the system to help solving the concrete problems that a teacher can face in her/his context. Activities should encourage immediate test of newly acquired knowledge and skills in the school environment; collection and processing of information from the teacher's environment in project work should be required.

→ ***Mixed funding.***

Every stakeholder of teachers' training should invest something to guarantee

her/his/its committment. This does not necessary mean cash: working time, engagement, other forms of material and immaterial support are, anyhow, expression of investment.

→ ***Trend to demand-led.***

Although in an initial phase a public authority may define objectives and content of training to be provided, in the medium and long term the teachers' demand should be detected and the training system should progressively evolve towards full responsiveness to user needs/requirements.

→ ***Concerted strategy / autonomous management.***

Whilst it is absolutely legitimate and advisable that all interested parties are consulted and possibly involved in making the main choices about the training system to be developed, the day-to-day management of the system should be autonomous to guarantee reactivity, effective trouble-shooting and accessibility of responsibility centre.

→ ***Plurality of content and service providers.***

Only one content and service provider would hardly offer the excellent coverage of all content and service areas and would not offer sufficient choice of approaches and resources. A training system for teacher and trainers must maximise the access to relevant resources and services and should be open to competitive offers.

→ ***European design and implementation.***

If a training system for teachers and trainers is designed in 1998/99, it must reflect the process of European integration and provide its users with the opportunity to communicate with teachers and trainers in other European countries, to collaborate with them in several teaching areas, to exchange study visits and to share evaluation approaches.

D. TRAINING DESIGN "MATRIX"

This "Matrix" is an attempt to identify interrelations and interdependencies between possible fields of action and approaches, adopted in designing teacher training programmes through school networks, and areas of results that are to be affected.

AREAS AFFECTED	PRIORITISING TARGET GROUPS	STANDARDS	LEARNING MANAGERS	MODULARITY	END-USERS INVOLVEMENT
MATERIALS PROCESSES		++		++	
USE OF ICTs AND TELECOMS		+			
CHANGE OF WORK ATTITUDES	++	++	++	++	
ECONOMIC & ORGANIZATION OUTCOME	++	++	++	++	++

As it can be seen in the table above, certain decisions and strategies may have an impact on certain aspects of the training process as well as outcomes. The "crosses" (++) imply a possible significant impact. The absence of "crosses" does not necessarily mean "no impact at all". It rather shows that the impact on those areas cannot be easily predicted or defined.

The Group reviewed the main accomplishments of the Projects TRENDS and T3 as well as their exploitation perspectives. The latter are presented in the following tables:

PROJECTS' EXPLOITATION PERSPECTIVES

T3 (Telematics for Teacher Training)

→Sustainability of on-line strategy of collaborative delivery thrives best if partners invest same workload.

→Commercialising services from partner institution across Europe not likely to take place: lack of human network.

→Thinking of best practices for mixing bottom-up and top-down approaches

TRENDS (TRaining Educators through Networks and Distributed Systems)

→Building on established contacts between Public Educational Authorities (Network of Centres) as well as between schools, teachers and training bodies.

→Use of TRENDS School-based, Distance Training Model.

→Use of TRENDS Training Course in the Use of ICT in Teaching and Learning.

→Sustaining a Network of Teacher Training Centres (service providers) in Europe and supporting ICT-related innovations in the various national environments.

→Disseminating results and experience, particularly to projects of EC Joint Programme on Education Multimedia.

→Further validating educational services model and cost-efficiency with ISDN Network in Europe.

A COMMON BASIS FOR DEVELOPMENT: THE EUROPEAN SCHOOLNET

Objectives and Future Actions

→ To move from small projects to large groups.

→ To encourage end-users' involvement - at the level of teachers.

→ To promote the role of learning managers (tutoring process).

→ To collaborate on the basis of common or complementary project results.

→ To integrate the pedagogical suggestions (on training content, materials and didactics) with the framework of the "Training Design Matrix" (see above).

→ To inform and benefit the European SchoolNet (EUN) in the development of the following areas: (a) The Virtual Workspace, (b) The Virtual Teacher College, promoting research and development in didactics and collaboration of schools, teachers and students at European level.

→ To use this "Communication Document" as a basis for the developments in the EUN Framework.

→ The TRENDS Training Centres together with other Training Institutions all over Europe should proceed with the building of a Network to provide on-the-job training and relevant support for school teachers, thus materialising the concept of the "Virtual Teacher College" in Europe and establish a "Network of Excellence" of teachers' continuous professionalisation, to face the challenges imposed by the Information Society's impact on Education.

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Supported by the EC

WORKSHOP

School Networks and Teachers Training

18 September 1998, Athens, Greece

With the participation of **EC-DGXIII TAP Projects TRENDS** and **T3,** and **EUN representatives**

LAMBRAKIS
RESEARCH FOUNDATION

To:
Members of the User Group of
the TRENDS Project

Athens, 20 January 1999

Dear Member of the User Group,

For anyone being involved in the field of ICT driven innovations in education, it is more than evident that making teachers familiar with the new learning media and practices and, further to that, making them understand and command their new role in the learning process, is considered the major task for the sustainability of the school systems.

At the same time, the existing teachers training systems, in most of the European countries, consist mainly in pre-service and some in-service training, provided by the authorized, mostly public training institutions, namely Schools of Education (Universities), Teachers Colleges and Education Research Centres. More particularly, in-service training, being a costly exercise, is provided in a rather accidental way, in varying forms and schemes in the different countries or even regions, being dependent a lot upon political factors and the availability of public funds in certain time periods.

These observations and ideas governed the initiative of a group of twenty European organizations (see attached brochure), from Britain, France, Spain, Portugal, Italy, Greece and Denmark, to launch the project "TRENDS – TRaining Educators through Networks and Distributed Systems", addressing the issues of in-service training and continuous professional development of school teachers, by developing and validating school-based, on-the-job training schemes, based upon distance learning and ICT enabled (telematics) methodologies. The participating organizations validated their teachers training methodology by providing training to some 120 European secondary schools, connected with a minimum 64kbps bandwidth, and 2,400 teachers, who are still participating in pilot activities, with the National Training Centres, after the official termination of TRENDS as a Telematics Application project

The TRENDS project, together with the projects T3 and REM, were supported by the Telematics Applications Programme of the European Commission (DG XIII). TRENDS focused more on the organizational aspects of the enterprise, validating distance, school-based practices for the delivery of on-the-job training to teachers as professionals. An important aspect of the project was the effectiveness and sustainability of the public educational authorities to act as training services providers.

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We are now investigating the possibilities of building on the experience gained through TRENDS and trying to further elaborate the models developed, in a more user-driven environment, meaning actually the involvement of other Teachers Training Institutions in Europe. To this end TRENDS, together with the EUN Initiative and T3 organized a Workshop on "School Networks and Teachers Training", in Athens, in September, the results of which are presented in the attached *Communication Document*.

We do hope that you will find it interesting and purposeful and we are looking forward your reflections.

Best regards,

Nikitas Kastis
Research and Development Director