

NETIS Methodological Guide

By Chris Sadler and Robert Pinter
London-Budapest, December 2008

Publication of this report is supported by:



Leonardo da Vinci

This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use that may be made of the information contained therein



Table of contents

Teaching and learning resources.....	4
1. Course Book	4
2. Textbook.....	5
3. The Learning Activities	6
Instructional Design Goals.....	8
Teaching and Learning Styles	9
1. Traditional Lecture Course.....	9
2. Blended Learning Course	9
3. e-Learning Course.....	10
4. Independent Study.....	11
Accessing NETIS Resources.....	12
Members of the NET-IS consortium	13

Teaching and learning resources

The primary output of the NETIS project has been a range of teaching and learning resources. The purpose of this short summary is to itemise the available resources; to reveal the pedagogical context within which they were conceived; and finally, to offer suggestions as to how these materials may be deployed to promote the teaching and learning of Information Society as a subject of study.

The major resource components include:

I. Course Book

[The Course Book - Information Society](#) consists thirteen chapters, a bibliography and key terms in [English](#), [Greek](#) and [Hungarian](#):

- Preface by Róbert Pintér ([pdf](#))
- Róbert Pintér: Towards getting to know information society ([pdf](#))
- László Z. Karvalics: Information society – what is it exactly? (The meaning, history and conceptual framework of an expression) ([pdf](#))
- Attila Kincsei: Technology and society in the information age ([pdf](#))
- Szilárd Molnár – Bence Kollányi – Levente Székely: Social networks and the network society ([pdf](#))
- Bence Kollányi: Use of space in the information society age ([pdf](#))
- Márton Holczer: Innovation and competitiveness in the information society ([pdf](#))
- Éva Simon: Introduction to the legal regulation of information society ([pdf](#))
- Lilla Juhász: The information strategy of the European Union ([pdf](#))
- Szilárd Molnár: eGovernment in the European Union ([pdf](#))
- Elisa Mancinelli: e-Inclusion in the Information Society ([pdf](#))
- Árpád Rab: Digital culture – Digitalised culture and culture created on a digital platform ([pdf](#))
- István Bessenyei: Learning and Teaching in the Information Society. eLearning 2.0 and Connectivism ([pdf](#))
- Róbert Pintér: Popular buzzwords, supernarratives and metanarratives for development: What does the term “information society” mean? ([pdf](#))
- Bibliography ([pdf](#))
- Key terms ([pdf](#))

2. Textbook

[The Textbook](#) aims to deepen knowledge on information society by providing country reports, case studies and conference articles, student papers and annex.

Country reports

Six country reports which analyze the state of development of the information societies in the participant countries of the NETIS project (all papers are in the same structure to allow comparison):

- Tarmo Kalvet Estonian information society: Achievements so far and towards an explanatory framework [pdf](#), [pdf in Hungarian](#), [pdf in Estonian](#)
- Kerstin Siakas - Themis Kotsialos The Greek Information Society Experience [pdf](#), [pdf in Hungarian](#), [pdf in Greek](#)
- Róbert Pintér et al. Development of the Hungarian information society in the last decade - Hungarian Country Report 1998-2008 [pdf](#), [pdf in Hungarian](#)
- Michela Moretti The information society in Italy [pdf](#), [pdf in Italian](#)
- Veronika Stoffa Information Society in Slovakia (The Actual Situation) [pdf](#)
- Malcolm Read - Chris Sadler Information Society in the United Kingdom [pdf](#)

Case studies and conference articles

18 case studies and conference articles focusing on different research topics of interest to the partners:

- Tarmo Kalvet: Digital Stratification in Estonia: Internet users and non-users [pdf](#)
- Kerstin Siakas - Elli Georgiadou: Considering Divergent Cultural values in technology enabled learning [pdf](#)
- Szilárd Molnár - Róbert Pintér: Rejuvenating Small Communities with the Help of IS Mentors and Wi-Fi Networks – Findings of Research Conducted in 2004 on Hungarian Small Settlements [pdf](#), [pdf in Hungarian](#)
- Mihály Csótó - Levente Székely: The indicators of internet usage: Does the net conceal or reduce inequalities according to regions and settlement size in Hungary? [pdf](#), [pdf in Hungarian](#)
- László Z. Karvalics: Ómega – The Emerging „Cosmic Orientation” [pdf](#)
- Árpád Rab: Virtual worlds: past, present, future [pdf](#)
- Mihály Csótó - Attila Kincsei - Róbert Pintér - Árpád Rab: Identity related crime in the world of films [pdf](#)
- Zsolt Tóth – István Bessenyei: Moodle and social constructivism [pdf](#), [pdf in Hungarian](#)
- István Bessenyei - Zsolt Tóth: E-learning experiences in the NETIS project [pdf](#), [pdf in Hungarian](#)
- Fabio Naschimbene: Development cooperation in the network society [pdf](#)
- Veronika Stoffa: Using modelling, simulation, animation in e-learning courses [pdf](#), [pdf in Hungarian](#)
- Chris Sadler: Network Knowledge: Gleaning new knowledge from the Internet [pdf](#)
- Malcolm Read: Mobile telephony, new interaction rituals? [pdf](#)
- Maha Mohamed Saleh - Elli Georgiadou: FIAIFM: A Model towards Bridging the Digital Divide [pdf](#)

- Róbert Pintér: Information Society Studies in Practice - a Networked Learning Case Study [pdf](#)
- Chris Sadler – Tarmo Kalvet: Information Society Studies in Practice – a Networked Learning Case Study: student needs and feedback in the NETIS project [pdf](#)
- István Bessenyei – Veronika Stoffa: Information Society Studies in Practice – a Networked Learning Case Study: Experiences of Teachers in NETIS project [pdf](#)
- Kerstin Siakas: A Distributed Multicultural Network for Teaching Information Society – Cultural Diversity Aspects [pdf](#)

Papers from students and early stage researchers

Seven papers from students and early stage researchers in Greece and Hungary – the results of a NETIS Call for Papers:

- Papadopoulos Charalampos: E-crime [pdf](#)
- Chatzinikolaou Anastasia - Chatzinikolaou Nikolaos - Giovanopoulou Theodora: The use of smart cards and their implications on the society [pdf](#)
- Nikolaos Noulas: E-Culture – The Digitalization of the Cultural Heritage - 3D Modeling of a Greek Ancient Monument [pdf](#)
- Dimitris Siaperas - Maria Lazanaki: eHealth – Study about the Degree of Application in Greece [pdf](#)
- Norbert Merkovity: Digital Diversity – an Attempt to Describe the the Individual's Information Networks [pdf](#), [pdf in Hungarian](#)
- Balázs Szemes: On The Problems of Regulating Online Services in Hungary – Law and Reality of On-line Gambling [pdf](#)
- Péter Tóth: Patterns of ICT diffusion in Nyugat-Dunántúl region [pdf](#)

Annex

An annex (with [statistics](#), [bibliographic sources](#) and a list of [key terms](#)) relevant to research and development in this area.

All papers appear in English and many appear also in one or more of the other partner languages. Precise up-to-date details are available on the [project website](#).

3. The Learning Activities

These are contained in a [Moodle virtual learning environment](#) (vle) with thirteen ‘courses’, one for each course book chapter, in each of English, Greek and Hungarian. Each such course has the following sections:

- Competences to be achieved – here the learning goals for the chapter are listed together with a before-and-after self-assessment questionnaire.
- Main text – the text of the relevant chapter drawn from the course book.
- Resources – recommended reading drawn from the bibliography accompanying the course book.
- Course Glossary – a tool for students to contribute or review definitions and explanations.

- Creative Tasks – a series of discussion forums related to course-wide and chapter-specific topics.
- Review Questions – some assignments seeking student input relating to specific questions arising out of the chapter.
- Quiz – a multiple-choice quiz designed to test the student’s reading and understanding of the chapter.
- ePortfolio – a tool allowing the student to create personal wiki pages mapping the knowledge and ideas accumulated during the course. Individual wiki pages can be interlinked.
- Surveys – a number of questionnaires designed to gather student data during the Netis teaching trials.
- Complementary Exercises – a place to add additional materials and assignments.

All the above materials are made available to teachers and learners in a variety of formats and locations.

Formats and locations of NETIS teaching materials

Location	CourseBook	CourseBook Chapters	TextBook Articles	Learning Activities
NETIS Project Website	✓ pdf	✓ pdf	✓ pdf	✓ zip
NETIS Moodle	-	✓ pdf	✓ pdf	✓
Printed Course Book	✓	-	-	-
NETIS CD	✓ pdf	✓ pdf	✓ pdf	✓ zip

Instructional Design Goals

Although the learning materials listed above were assembled and presented in the formats described to serve a variety of pedagogical styles, the underlying philosophical approach to their development was rooted in networked learning. In addition to the traditional, hierarchical model of teacher/producer and learner/consumer, we wanted to accommodate a decentralised, constructivist strategy where the learners create personal knowledge through interactions with their peers. In this context, the assembled materials, especially the Moodle learning activities, have been designed to mediate these interactions. For further elaboration of these ideas, please see [Chapter 12: Learning and Teaching in the Information Society. eLearning 2.0 and Connectivism](#) (Course Book) or [Information Society Studies in Practice – Experiences of Teachers in NETIS project](#) (Textbook) in the first instance.

Teaching and Learning Styles

In the course of the NETIS project, the partners tested the teaching and learning materials in different countries and contexts; with different types of students and using different teaching and learning styles.¹ The following are the main exemplars:

I. Traditional Lecture Course

Format: The course is taught over a semester. Each week the lecturer delivers a lecture covering a sub-topic of the subject.

Focus: The students take notes during the lecture, read up on the sub-topic and prepare seminar presentations.

Primary resources: The published course book Information Society, with one chapter for each week.

Assessment: Traditional essays and examination questions.

NETIS Reflections: A traditional teaching format was followed (amongst others) at the [Alexander Technological Educational Institute of Thessaloniki](#). Students were provided with a copy of the textbook in advance, and weekly lectures were given, followed by an examination. The outcome for the majority of participants was not successful for a number of reasons:

- The traditional format was conducted alongside a more active-learning format. The teacher reported that the students were initially suspicious of the non-traditional offering but that those who eventually chose it were the most conscientious and successful. Therefore those students opting for the traditional mode must have been more passive or at least more cautious.
- The teacher reported that attendance had been poor for one lecture to the next. This can happen with some students when they possess the course book (and so think they already 'have' the material).

A variant of the traditional format was also followed at [Eotvos Lorand University of Sciences in Budapest](#). In this case there was a weekly topic but the sessions were student-led. One student would present an introduction to the topic, based on the appropriate course book chapter, whilst a second would offer a critique. This was followed by a general class discussion. In general, the students did not regard the introductory presentation as a more accessible pathway to the material than the written chapter itself. However, they did appreciate the critiques and these seem to have sustained better attendance and higher levels of participation than parallel courses.

2. Blended Learning Course

Format: Students utilise online resources, primarily those embodied in a vle (NETIS Moodle). The teacher is present on a regular basis.

¹ For detailed teaching reports from each country with teaching experience see: http://www.itk.hu/netis/teachm.htm#Curriculum_and_Teaching

Focus: The teacher talks less and listens more. The students focus on learning activities set in Moodle. Some of these (sometimes all) are collaborative tasks which require the students to work together and to contribute to one another's learning.

Primary resources: The virtual learning environment.

Assessment: Typically a portfolio of work.

NETIS Reflections: This format was most closely followed in the test teaching at the [University of West Hungary](#) (see the Textbook: [E-learning experiences in the NETIS project](#)). The teachers were pleased with the level of work and commitment shown by the students but reported that they were not very accustomed to the less structured learning forms (for example, developing knowledge maps) and it proved difficult to get them to comment on each other's work. The teachers also expressed disappointment that their assessment of the rich products resulting from student work had been institutionally required to be reduced to mere percentages.

Students at the [Alexander Technological Educational Institute of Thessaloniki](#) were offered an 'active-learning' variant. Working singly or in pairs, they were required to prepare written reports and presentations on seven out of 35 given topics over the course of the semester. Students were expected to participate in discussions after the presentations and assessed (overall) on the quality of their reports, their presentations and their participation in discussions. Students who chose this format scored well in their assessments compared with the students attending traditional lectures.

3. e-Learning Course

Format: Students utilise online resources. These may be provided via a vle or may only involve a looser collection of facilities like search engines and particularly Web 2.0 learning tools like wikis etc. The teacher is not present, at least on a timetabled basis.

Focus: The teacher typically sets the learning tasks and moderates student interactions in discussion forums.

Primary resources: Online.

Assessment: By portfolio or other learning task outcomes. Sometimes these may be negotiated between students and teacher.

NETIS Reflections: After a single laboratory session with the students, the [Middlesex University, London](#) course followed an e-learning approach. Students were issued with the course book and directed to read selected passages. Following this they downloaded their assignments from the NETIS Moodle site. These required them to accomplish a learning task in pairs. Beforehand however, they had to negotiate their partnerships online (via the discussion form and email) and then finally collaborate face-to-face or electronically to produce a deliverable product. Some students avoided the online negotiation stage by partnering with their friends but apart from this the trial made good use of the Moodle facilities and students who opted for this assignment outperformed those who avoided it.

4. Independent Study

Format: The student uses one or two particular topics covered in the Information Society course as an entry point to developing some expertise in the subject.

Focus: The student determines the learning tasks, having initially set the goals for what he or she wanted to achieve, possibly in consultation with the teacher/supervisor.

Primary resources: Either the published texts or the Moodle resources, depending on the task.

Assessment: Most likely a dissertation or portion of a dissertation.

NETIS Reflections: Independent study was another format chosen by some students at the [Alexander Technological Educational Institute of Thessaloniki](#). The teacher adopted a conference-like format where students were required to submit extended abstracts and then met regularly with the teacher to develop 'the paper'. Participating students found this format the most rewarding and scored correspondingly high marks in the assessments. However, the teacher had a busy time training them in conference paper production techniques and, as Greek-speaking students, they had the additional barrier of having to prepare their work in English.

Accessing NETIS Resources

The primary source for the NETIS teaching materials is the [NETIS website](#). From here interested parties can download all the articles listed in this document including the Course Book as a single document or as individual chapters in English, Greek and Hungarian; all the Textbook articles; and the Moodle course images. In addition the results of the partner country segmentation interviews and the partner country teaching trials are published in full there. Enquiries can be made to the project coordinator, Robert Pinter (pinter.robert@ittk.hu). It is planned to maintain the website for resource access until at least 2013.

Teachers may utilise all the NETIS materials in their courses and on their own virtual learning environments at no cost. The Moodle course images should be directly uploadable on other Moodle hosts. However, teachers may be able to run courses hosted on the NETIS Moodle site itself. Please contact Istvan Bessenyei (i.bessenyei@externet.hu) to enquire about likely conditions and costs.

Members of the NET-IS consortium

1. *Information Society Research Institute, Budapest University of Technology and Economics, Budapest* Hungary
2. *Praxis Center for Policy Studies, Tallinn* Estonia
3. *Department of Informatics, Alexander Technological Educational Institute, Thessaloniki* Greece
4. *Information Society Education and Research Group, University of West Hungary, Sopron* Hungary
5. *SCIENTER, Bologna* Italy
6. *János Selye University, Komarno* Slovakia
7. *School of Computing Science, Middlesex University, London* United Kingdom