

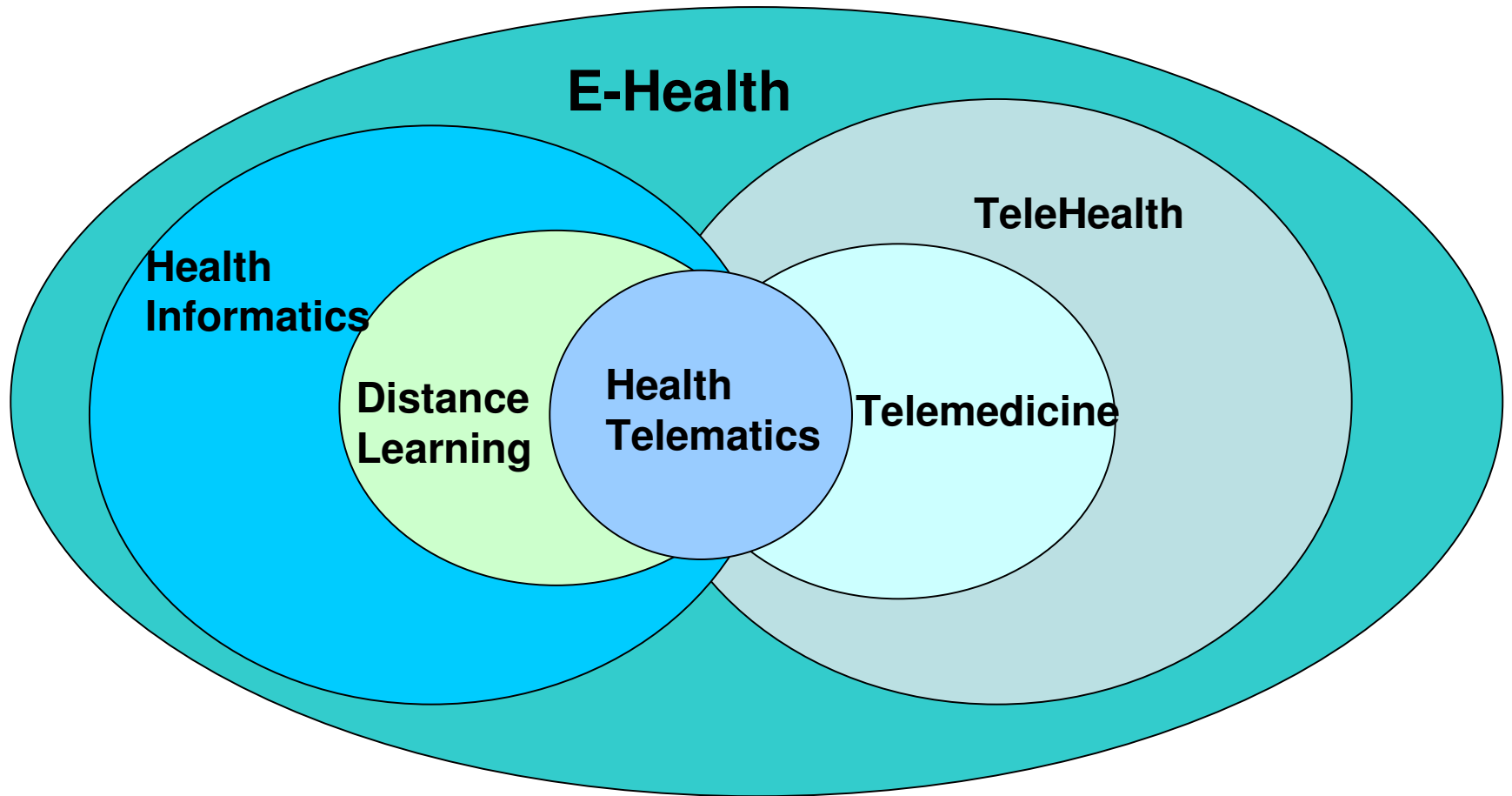


# Real-time and web-based classes for distance learning

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COST IS0605 WG4 Meeting

# E-Health segments



# Teleeducation: Needs

- Workforce transformation rate (“change of professions”)
- Rapidly evolving/transforming knowledge
- Medical Informatics – keeping being informed
- Multimedia-enriched learning
- Globalization in education
- Limitations of traditional education
- High education standards worldwide
- Professionals’ mobility
- Life-long learning
- Learning along with carrier
- Learning from home
- Learning from/to anywhere & at anytime
- Worldwide Networking

# Networked Collaborative Learning

- Traditional – Teacher-centered design of education - ***teacher teaches students*** - seems outdated as passive, non-critical, less-innovative and less-creative.
- Future trend - ***Networked collaborative learning***, where learners work together, share resources, ask questions and support each other in their learning - highly appropriate in the field of adult and continuing education
- Such model induces development a “**learning community**”, sharing resources, knowledge, experience and responsibility through reciprocal collaborative learning.

# Modes of Teleeducation/Distance Learning

1. Electronic Resources of Medical Informatics: Evidence–Based Medicine databases, Clinical Practice Guidelines, Electronic Journals
2. Web-based courses – lectures, presentations, self-assessment tools
3. Online real-time videoconferences/tele-lectures

# Web-based courses – Virtual Classrooms

Virtual Course (Web-Based Course) is based on:

- 1) client-server architecture;
- 2) hypertext + multimedia content;
- 3) asynchronous student access  
and
- 4) person-machine interactivity

# Web-based courses - requirements

- **Interoperability:** possibility to integrate with complementary software;
- **Authentication** of both instructor and student;
- **Functionality** of group-work environments;
- **Data mobility and reusability;**
- **Reuse of course contents** from existing resources (XML or SCORM);
- **Transfer** of course contents and student records between platforms
- **Programming** interfaces (API);
- **Extensibility**

# Web-based courses - advantages

- **Accessibility** – learning from anywhere if having Internet access (‘mobile student’ as well as “mobile teacher/instructor”)
- **Authorship** – applicability for multiple/collaborative authorship: working teams definition
- **Resource-manager** function active for sophisticated editing (upload/download, import/export/backup of content on server) and creation of index/glossary.
- **Teacher-student** communications - available in forms of a) e-mail, b) discussion lists; c) special homework agenda follow-up; d) calendar test passing; e) bulletin board; f) suggestion of topics for future lectures by students.
- **Quizzes/Assessment** function – self-assessment functionality for students, also used for instructor-guided courses;
- **Administration** – easy form of users management (for students – registration and access rights; for teachers – privilege setting, tasks assignment);
- **Easy access** to multiple web-based references;
- **No time – constraint**
- **Less bandwidth dependency**
- **Easier solutions for language barriers**
- **Statistics** - generating access statistics and reports. Easy assessments both for students and authors/lecturers performance tracking



# Web-based courses - limitations

- Limited/none tutor's guidance
- Limited interaction/feedback
- Limited customizing – one size should fit all
- Limited creativity
- Self-motivation – not enough for long time
- Problems of authenticity

# Real-time interactive tele-lecturing

## – Strength/pros

- High Interaction
- Excellent feedback and more creativity
- Bringing several sites together
- Learners' society/networking
- International education at your/home workplace
- Better promotion of ITC in education

# Real-time interactive telelecturing – Weaknesses/cons

- High cost (hardware/software/connection)
- Problem of getting everybody at certain time (especially in case of overseas projects)
- High bandwidth need
- Language barriers more obvious
- Certain participation is needed to justify ROI

# Our experience and points for collaboration

- Real-time online VTC courses – 4 modules, 12 days, 3h/d – US-Georgian interactive DL program 2000-2001. Very high cost due to T1 line leasing, still unreliable connection, high satisfaction (84%).
- Web-based courses – low cost, easier to prepare, LMS platform – ILIAS (will be presented by D. Jorjoliani on next meetings)
- User satisfaction methodology, Econometrics and uncertainty modeling would be useful for Econ@Tel partners to be elaborated during the project

# Steps to Go.

## Main Question: when to step up?

- a. Starting from providing access to Informatics databases and reference sources
- b. Introducing web-based courses for reading, homework, exams and networking
- c. Adding real-time interactive classes wherever and whenever appropriate, required, feasible, sustainable but only based on user needs rather than becoming a fashion.

Statistics and user satisfaction are essential as usual.

# Distance Learning must be convenient, learner-targeted, sustainable and beneficial



**Education makes you feel good.  
We mean Real Good!**



**"Henry, I'm beginning to think  
we're on different career paths."**