



ΕΛΛΗΝΙΚΟ
ΑΝΟΙΚΤΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ

Educational Content,
Methodology &
Technology
(e-CoMeT) Lab

*

R&D activities

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Assistant Professor
Director

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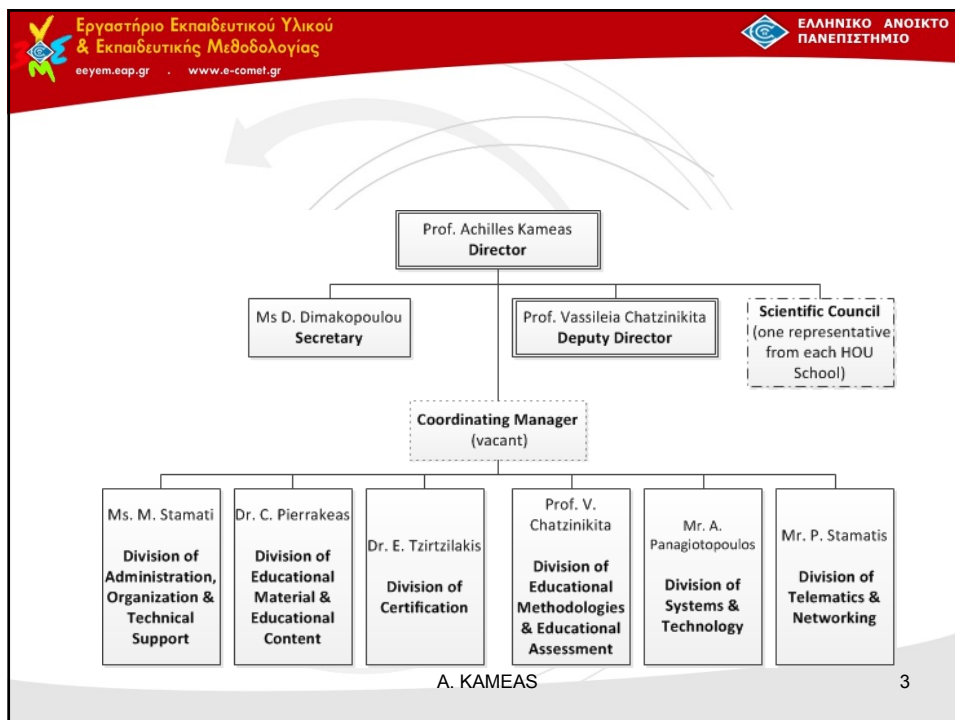
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e-CoMeT Lab

- The e-CoMeT Lab activities include:
 - Creation (development, production, editing), access (recovery and distribution), usage and maintenance (adjustment, storage and archiving) of **educational content and material** (digital and printable);
 - Development and evolution of **distance and adult education methods** through the usage of modern educational theories and technological developments that ensure efficient implementation;
 - Production and application of **Information and Communication Technologies** (ICT) in education and production of television and radio programme;
 - Education, methodology and technical support** of the HOU community in adopting the results of the above activities;
 - Providing advice and know how** to organizations, besides HOU, regarding the above fields of activities;
 - Promotion** of research and innovation in the domestic and international educational and research community

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Research

- Development of semantically rich domain representations for
 - Teaching domains
 - Learning outcomes
 - Learning object meta-data
- Development of Learning Objects
 - Methodology for developing learning objects
 - Specifications
 - Technical support
- Quality certification of Educational Content
- Assessment of non-formal competences
 - Competence portfolio
- Mapping programmes of study to NQF
 - ECTS
 - Mapping learning outcomes to qualifications

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- User surveys
 - User needs analysis
 - User satisfaction
- Student profiling
 - Ethnographic studies
 - Learning stereotypes
- Personalized education
 - Learning Activities
 - Smart Assistants
 - Special needs
- Educational uses of
 - Tele-conferencing
 - Social computing / Web 2.0
 - Artificial intelligence
 - 3D / Immersive environments
 - Mobile computing
 - Pervasive computing

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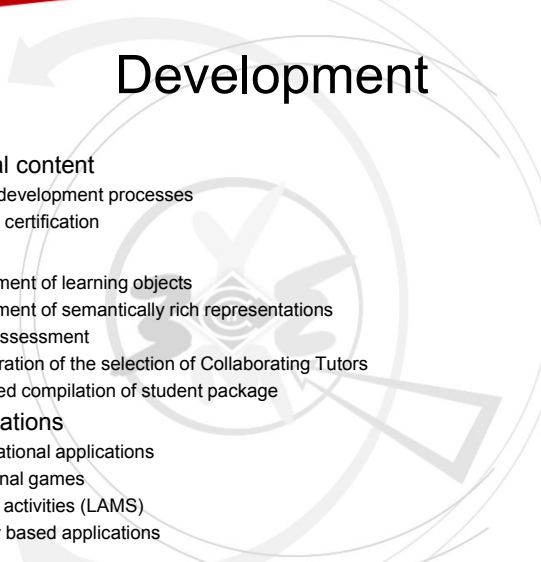


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ΠΑΝΕΠΙΣΤΗΜΙΟ

Development



- Educational content
 - Content development processes
 - ISO9001 certification
- Tools for
 - Development of learning objects
 - Development of semantically rich representations
 - Quality assessment
 - Administration of the selection of Collaborating Tutors
 - Automated compilation of student package
- Pilot applications
 - 3D educational applications
 - Educational games
 - Learning activities (LAMS)
 - Ontology based applications

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Services, Consulting, Support

- Services
 - Student Information System
 - Learning Management System
 - Institutional Repository
 - Moodle
- User support
 - User training
 - Training content
 - Helpdesk
- Consulting
 - Specifications
 - Guidelines
 - IPR and contract management

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UDES: Unified Digital Educational Space

- Robust and fast infrastructure
- Student information
- Semantically rich educational services
- Smart consulting / orientation
- Personalization
- Tele-education and tele-conferencing
- Access to educational content
- Social networking and communication
- Lifelong learning, formal and informal
- Anytime, anywhere access to educational services for everyone



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Student centred education

- Determine the Learning Outcomes for each teaching unit of every programme of study
- Reform, or redevelop Educational Content
 - To use Learning Objects
 - Stored in a university-wide repository
- Codify Instructional Strategies
- Develop Learning Activities
- Create semantically rich representations
- Continuously assess and improve

The diagram shows a pyramid of Bloom's Taxonomy with levels from bottom to top: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. To the right is a hierarchical ontology tree starting with 'Thing' at the top, branching into 'Entity', 'Competency_domain_entity', 'GenericSkill', 'AffectiveDomain_genericSkill', 'CognitiveDomain_GenericSkill', 'PsychomotorDomain_GenericSkill', 'KnowledgeEntity', 'Performance', 'Autonomy', 'Complexity', 'Context', 'Frequency', 'Scope', and 'Intp'. Further sub-entities include 'hasSubgroup', 'isSkillPartOf', 'relatedGenericSkill', 'aboutTopic', 'hasCondition', 'hasPerformanceCondition', 'frequencyCondition', 'autonomyCondition', 'complexityCondition', 'contextCondition', 'scopeCondition', 'isAnalyzedin', 'isTheKnowledgepartOf', 'prerequisiteCompetencies', 'argument1', 'argument2', 'difficultyLevel', 'quantity_condition', 'difficultyLevel', and 'textualDescription'.

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Personalized educational services

- Student profiling
 - Personality traits
 - Learning style
 - Log data
 - Overlay model of learning outcomes
- Personalized education
 - Individual learning path modeling
 - Protection of privacy and personal data
- Constant adaptation and improvement
 - Customer satisfaction assessment
 - Design and development of new services and content
- Smart personal assistants

The diagram illustrates a system for personalized educational services. It features a central 'User' node connected to three main components: 'Personalized Learning Path', 'Personalized Assessment', and 'Personalized Recommendation'. Each component is represented by a circular flowchart showing a sequence of steps. The 'Personalized Learning Path' flowchart includes 'Initial Assessment', 'Learning Object Selection', 'Learning Activity Selection', 'Learning Activity Execution', 'Learning Outcome Assessment', and 'Learning Path Adjustment'. The 'Personalized Assessment' flowchart includes 'Assessment Design', 'Assessment Execution', 'Assessment Scoring', 'Assessment Feedback', and 'Assessment Improvement'. The 'Personalized Recommendation' flowchart includes 'Recommendation Design', 'Recommendation Execution', 'Recommendation Scoring', 'Recommendation Feedback', and 'Recommendation Improvement'. Arrows indicate the flow of data and information between these components and the central 'User' node.

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Non-formal lifelong learning

- Support for flexible programmes of study
 - Provision of independent teaching units
 - Adoption of ECTS
- Organization of VET seminars
 - Organizational and technological support
 - ECVET certification



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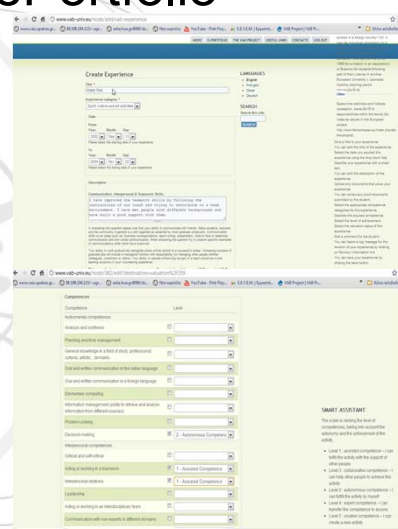
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Competence ePortfolio

- Records knowledge, skills and competences
- Qualifications assessment
- CV maintenance (Europass compatible)



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Employability improvement

- Association of Learning Outcomes to Qualifications
 - Link the descriptions of programmes of study to job descriptions
- Map of Learning Outcomes to the National Qualification Framework

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Social networking

- Amplify the sense of belonging to the HOU community
 - Fight feelings of isolation and exclusion
 - Free exchange of opinions and ideas
 - Participation in voluntary activities

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Certification

- Application of ISO 9001 certified procedures for the development of educational material
- Certification of the suitability of all educational content for distance adult education
- Support and guidance of educational content developers
- Digitization and archiving of content
- Novel educational content quality standard

ΔΙΕ Σ19: Δραστηριότητα Εκπαιδευτικού Υλικού (EY)

```
graph TD
    A[ΓΑΚ] --> B[Έκταση ΕΥ S19.1]
    C[Οδηγός Διαδικασίας ΕΥ] --> B
    D[Αξιολόγηση Περιεχομένου ΔΕ S1] --> B
    B --> E[Επιλογή περιεχομένου για εκτύπωση ή ψηφιοποίηση]
    F[Παραπομπή εργαλείων σχετικών με ΕΥ S1] --> E
    E --> G[Αναγωγή ΕΥ]
    E --> H[Εκπαίδευση ΕΥ]
    E --> I[Ενημέρωση ΕΥ]
    E --> J[Παύση ΕΥ]
    K[ΔΕ S11 Ανάπτυξη / επικαιροποίηση ΕΥ] --- G
    L[ΔΕ S12 Ενθάρρυνση ΕΥ] --- H
    M[ΔΕ S13 Παύση ΕΥ] --- I
    N[ΔΕ S14 Παύση ΕΥ] --- J
    O[(Βάση δεδομένων)] --- G
    P[ΔΕ S15 Άσκηση διαγραφής νέου/ παλαιού ΕΥ] --- Q[Ψηφισμός]
    Q --> R[Εξέλιξη]
```

2. ΕΓΚΥΡΟ & ΕΠΙΣΤΗΜΟΝΙΚΑ ΑΡΙΘΙΑ ΠΕΡΙΕΧΟΜΕΝΟ

2.1	Περιεχόμενο σύμφωνο με τις αρχές της επιστήμης, αποδεκτό από την επιστημονική κοινότητα (γεγονότα, έννοιες, αρχές, νόμοι, κλπ).	☐
2.2	Επιστημονική - αντικειμενική παρουσίαση υποθέσεων, θεωριών, πράξεων, και επιστημονικών μεθόδων επίλυσης προβλημάτων.	☐
2.3	Εγκυρό περιεχόμενο από αξιόπιστα πηγές (που αναφέρονται).	☐
2.4	Ορθή χρήση επιστημονικών όρων, σύμβολων, τύπων, χαρτών, τεχνικών σχέδιων, κλπ, σύμφωνα με την επιστήμη.	☐
2.5	Η βιβλιογραφία είναι σύγχρονη και ανταπεκρίνεται επαρκώς στο επιστημονικό περιεχόμενο.	☐

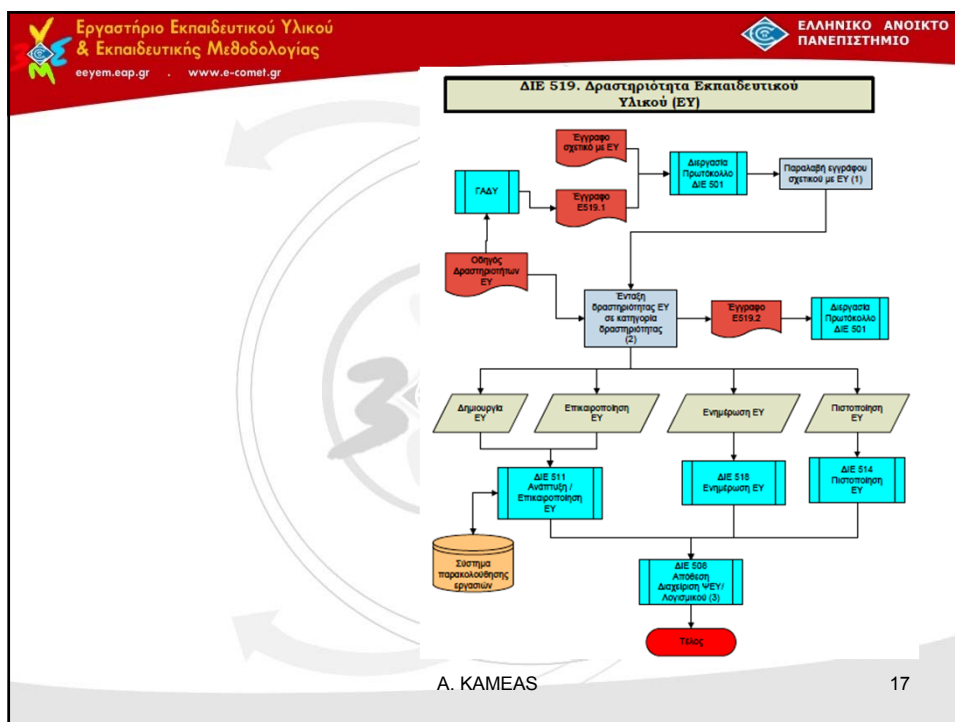
Σχόλια ενότητας- Παρατηρήσεις:

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The diagram illustrates the E-learning Development Process as a circular flow. It begins with 'Requirements' at the top, leading to 'Analysis', then 'Design', 'Development', 'Implementation', and 'Evaluation'. A large arrow points from 'Evaluation' back to 'Requirements', completing the cycle. A central diamond-shaped logo contains a stylized 'e' and a computer monitor icon. The background is light blue with a subtle grid pattern.

- Creator / Author
- Subject expert
- Expert in distance / adult education
- Unit coordinator
- Language editor
- Technician
- Producer
- ISO9001 certified procedures
- Content management tool
- Standards
- Specifications
- Guidelines
- User support
- IPR management



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Anytime, anywhere access for everybody

- Tele-conferencing
- Presence
- Access using mobile devices
- 3D / immersive interfaces
- Smart classrooms
- Educational activity spheres

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Research projects

- **TIPS:** T-Learning to Improve Professional Skills for intercultural dialogue
 - Ended in 2010
- **VAB:** Valuing Experience Beyond University
 - Ended in 2011
- **PIN:** ProInterNet
 - 2010-2012
- **CompAAL:** Developing qualification profiles for jobs in Ambient Assisted Living
 - 2012-2013
- **SONETOR:** Training of cultural mediators utilizing new Social Networking Software
 - 2012-2014
 - e-CoMeT Lab is coordinator

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Why e-CoMeT Lab...

- e-CoMeT Lab currently employs more than 45 people, among them
 - 18 PhD holders
 - 23 MSc holders or Engineers
- We are a team of high skilled researchers!
- We are dedicated to improving the quality of education offered by HOU
- We turn our ideas into reality...
- ... and we love the journey
 - But above all...
- We have a great time working in the Lab
 - (thinking is the best way to travel)



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Ευχαριστώ Thank you



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