QUIS – Quality, Interoperability and Standards in e-learning

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QUIS

tisip - it og forskning

eLearning Designing Tomorrow's Education

Outline

- Program call and type of project
- Partners
- TISIP’s role and motivation
- Project activities
- Results obtained so far
- Co-operation

QUIS

Quality, Interoperability and Standards in e-learning

A project under the eLEARNING PROGRAMME, DG EAC/26/04

a Transversal project

Proposals will focus on observation, comparative analysis, experience exchange and forcasing for e-learning, its use and its likely evolution, providing information for policy makers and for European education and training stakeholders….

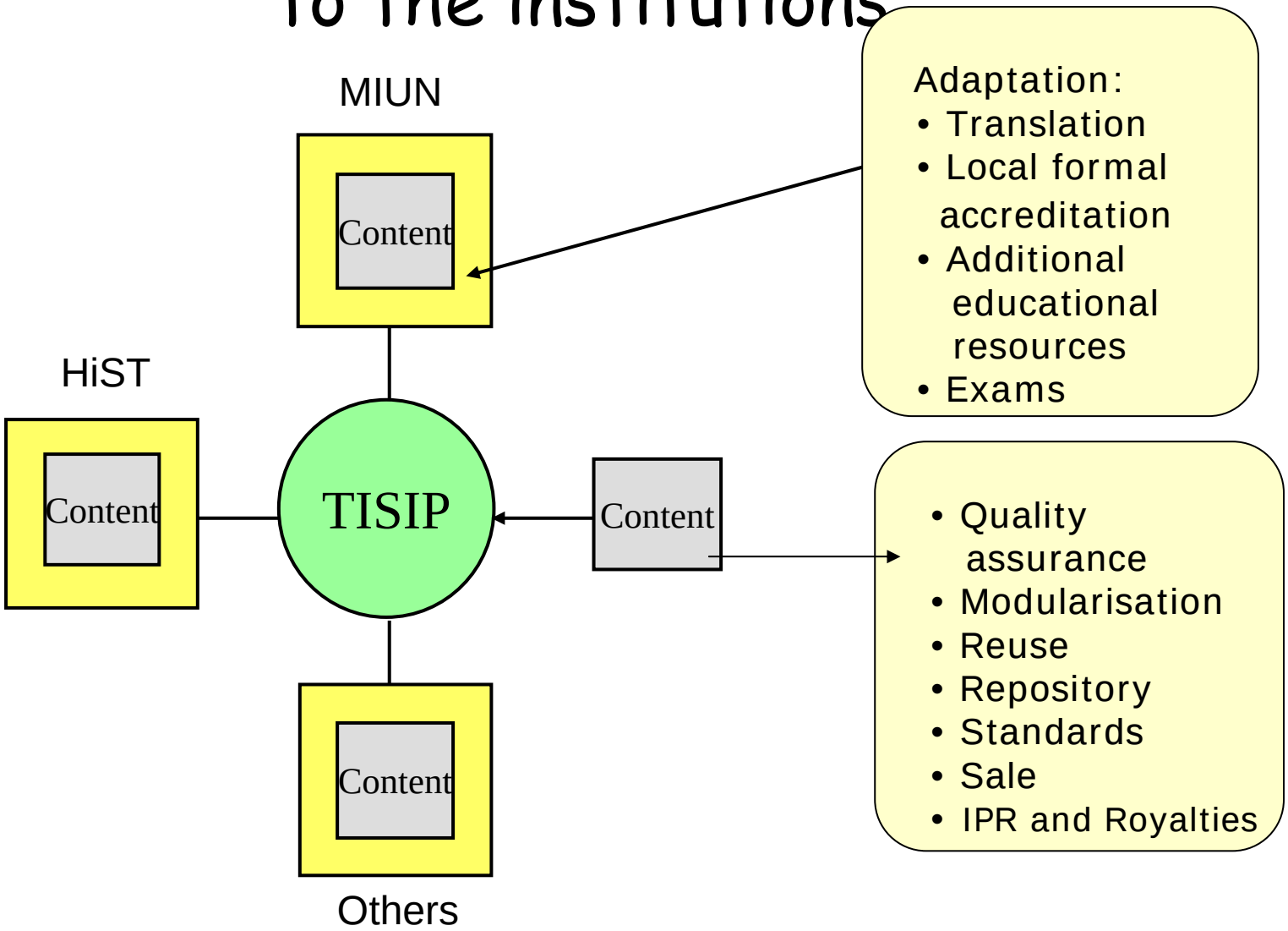
Priorities:

- *Quality in e-learning, interoperablitity and the use of technical standards*
- *Peer reviews and case studies of good pratice*
- *Comparative analyses, both qualitative and quantitative*
- *Foresight, scenario planning and forcasting for e-learning in Europe*

Partners

SZÁMALK Education and Information Technology Ltd., Budapest

TISIP delivers digital learning resources to the institutions



TISIP's role is to act as an editor and broker of Digital Content

QUIS - activities

WP-2 Analyse projects on Quality in e-learning

WP-3 Develop a QAS to promote a European dimension of e-learning

WP-4 Analyse commercial and experimental LMS systems

WP-5 Standards for e-learning

WP-6 Quality and Personalisation: Design patterns, Agent technology, etc

WP-7 Analyse projects on Cost effectiveness

WP-8 New models for cost effectiveness

2005 2005 & 2006 2006

WP-2: CLASSIFICATION

- Lifecycle Model

  beginning with planning to the termination of a product's use

  (e.g. ISO 9000)

- Functional Model

  cover different functional areas of educational activities, ranging from administrative issues to the design of learning units

QA approaches:

- product oriented
- process oriented

WP-2: Analyse Projects on Quality in e-Learning

Projects analysed:

mENU: **Model for a European Networked University**

MECA-ODL: **Methodology for the Analysis of Quality of ODL delivered via the Internet**

NEWORKERS: **New Models for Enhancement of ODL use in Life-long Learning of Workers**

GreTel: **eLearning in Europe: needs, experiences and instruments**

E-LEN: **A network of e-learning centres**

EQO: **European Quality Observatory**

SEEQUEL: **Sustainable Environment for the Evaluation of Quality in eLearning**

QUAL-E-LEARNING: **La qualité de l'eLearning**

UNFOLD: **Understanding New Frameworks of Learning Design**

EUA: **Developing an Internal Quality Culture in European Universitie**

Open and Distance Education Quality Council ODL QC Standards, UK

ELUE **Improving quality of e-learning in universities**

SEEL: **Supporting excellence in E-Learning**

WP-2: CONCLUSION

- The approaches cover a variety of aspects and perspectives for the quality of learning
- Most of the QAS of the projects focus on development and design, ensuring quality from teachers/developers /managers perspective
- No harmonisation effort towards a common European Quality Assurance System
- It is recognised that there are philosophical and practical differences between education and training.
- We plan to propose a process oriented system for quality assurance
- ISO 9000 principles will be applied where they are considered useful
- The instructional design process (Analysis, Design, Development, Implementation, Evaluation) is the major process of the system

WP-4: Analyse commercial and experimental LMS systems

- Features
- Users roles (details on use and functionalities)
- Relationships with standards
- Usability
- Pedagogical methodologies
- Installation
- Maintainability
- Required hw & sw
- Licensing (open source/proprietary)
- Total cost of ownership
- Usage (how many institutions etc)
- Support quality

WP-4: Systems evaluated

- A-Tutor 1.5
- Blackboard Academic Suite 6.2
- Claroline 1.6.1
- Class Server 4.0
- Desire2Learn 7.3
- DoceboLMS 2.0.4
- It's:learning 3.0
- LAMS 1.1
- LON-CAPA 1.3
- Moodle 1.5
- PaKMaS
- Reload 2.1.2
- Sakai project 2.0.0
- WebCT Campus edition 4.1
- Web Teach/TWiki
- WeBWorK 2.1
- ……. More ?

WP-4: **Conclusions**

Most of the LMS examined leave the teacher free to design his courses using his preferred pedagogical methods.

They propose a wide set of technological tools focused mainly on four areas:

- content delivery, reuse and management,
- class and student management,
- group communication and cooperation,
- self assessment – quizzes.

WP-4: **Conclusions**

The tools allow for the (hand-crafted) construction of courses that follow different pedagogical styles, yet there are no specific tools available to help the teacher implementing more complex pedagogical settings (e.g. best practices).

The presence of group communication / cooperation tools allows for the application of the Socio-constructivist pedagogy.

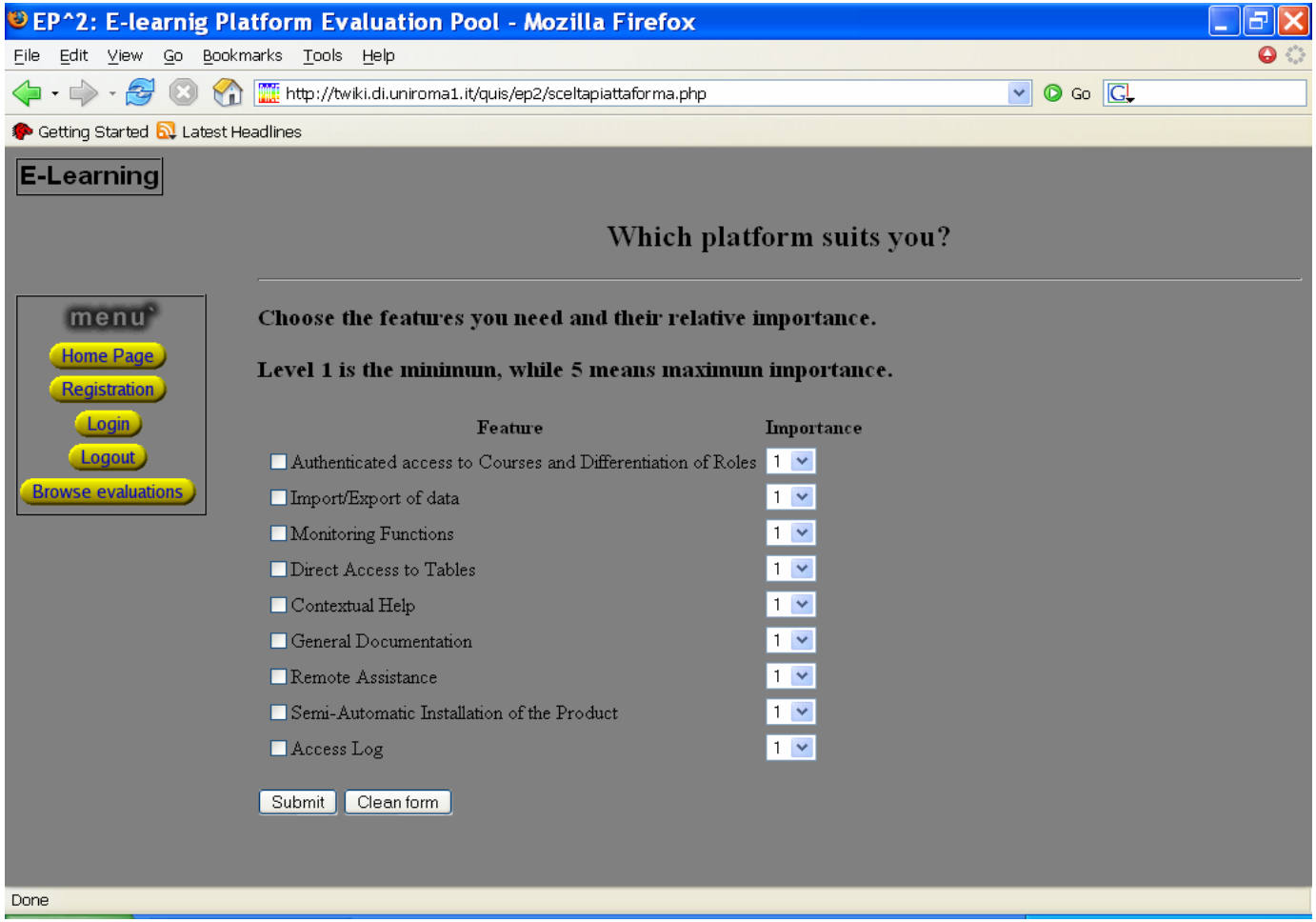
WP-4: Conclusions

Some effort towards the personalization of the learning experience is beginning to appear, either by defining different groups of users to which different learning paths/activities are presented, or by “releasing” learning components for student consumption only when a set of rules are satisfied.

- PaKMaS is a notable exception, being able to automatically build learning paths in the material; moreover, in PaKMaS the student himself can annotate the learning material and construct his personal learning paths.

LAMS and Reload start addressing the issues of multi-learner personalization by following the “Learning Design” methodology.

EP*2: Elearning Platform Evaluation Pool



http://twiki.di.uniroma1.it/quis/ep2

WP-5: Definition of a standard

"documented agreement containing technical_specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for t purpose" (ISO, 2002)

WP-5: Why standards in e-learning

diffusion of personal computers 

 diffusion of digital technologies in education

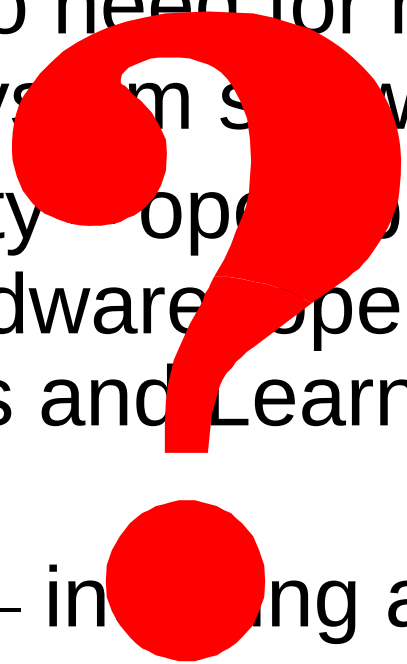
a lot of educational material and tools 

however

contents and tools are often not interchangeable and/or interoperable 

WP-5: Advantages in using standards

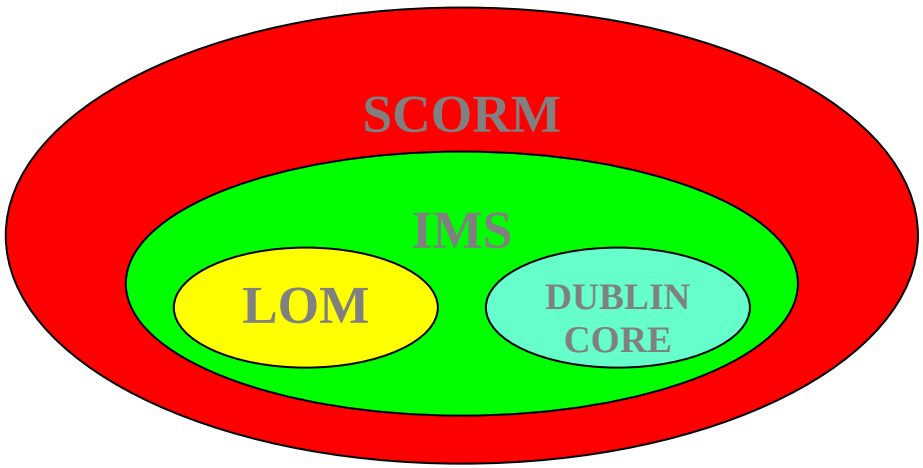
- Durability – no need for modification as versions of system software change.
- Interoperability – operability across a wide variety of hardware, operating systems, web browsers and Learning Management Systems.
- Accessibility – in[illegible]ng and tracking on demand.
- Reusability – possible modification and use by many different development tools.



WP-5: A first comparison: metadata

Metadata comparison:

- **SCORM metadata include IMS and LOM**
- **IMS metadata include LOM and DUBLIN CORE**



WP-5: A first comparison: other parameters

Standard	# Tools	# LMS	#Repositories
SCORM	5 free+ 8	14	3
IMS	5 free+4	5	3
LOM	2 free		
Dublin Core	9 free +2		
ARIADNE	1 free		1

Wp-5: Outcomes

- From an initial analysis, it seems that a lot of metadata is devoted to administering and reusing resources, but educational information should be extended, in order to provide more expressiveness in describing educational contexts and targets to which such resources could be addressed.
- Evidence: interested teachers complain about this deficiency

WP-5: LMML- Learning Material Markup Language Framework

Different from other e-learning standards:

metadata are not applied externally to the educational resources, like an header or an envelope, but rather are integrated into the content.

WP-7: Analyse projects on Cost effectiveness

Look at **Cost Effectiveness** and **Cost Efficiency** in **e-learning** in the perspective of the **User**, the **Provider** and the **Society**

Background

Many institutions and e-learning networks have experienced how difficult it is control the cost of developing and running net based education.

Our aim is to develop models for cost efficient and cost effective implementation and running of net based education

WP-7: From the society's perspective

Reasons for subsidizing development of distance education and e-learning

- effective way to educate people, provides a more educated society
- time saving for teacher and student
- remove geographical barriers
- avoid costly duplication of courses
- compete in an international market

WP-7: From the institution perspective

- **Pedagogic** - E-learning can make the teaching more learning centred, personal adjusted
- **Administrative** - The teacher, the teacher supervisor and the administrative staff will also get greater flexibility, easier to administrate
- **Economic** – Economy of scale, Re-use and modularization, Less student/teacher time

BUT: Costs for developing, administrating and running distance education

Often underestimated or the possibility to save money are overestimated
To much savings can lead to - low quality, low throughput and worn-out teachers

WP-7: From the students/company perspective

- Costs and savings with distance education
  - Combine work and studies
  - Don’t have to move
  - Study in their own pace
  - Study pace can vary depending on work load

Co-operation

EP*2: Elearning Platform Evaluation Pool

See: http://twiki.di.uniroma1.it/quis/ep2

- You can:
  - Evaluate an LMS (4 different user roles)
  - Judge other evaluations
  - Ask for the LMS that suits you better

Interested persons for the Quis project:

At: www2.tisip.no/quis/
we plan a forum for information exchange related to the project, please registrer.