Imaginative acquisition of knowledge

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Imaginative acquisition of knowledge

- *"Universities and their Function"*
  - Essay, A.N. Whitehead, 1929
  - Proper aims for student learning of an institution of HE
- "The university (...) unites students and professors in the imaginative consideration of learning. The university imparts information, but it imparts it imaginatively. ...A university which fails in this respect has no reason for existence. This atmosphere of excitement, arising from imaginative consideration, transforms knowledge....Thus the proper function of a university is the imaginative acquisition of knowledge."

Jezgra za međunarodne projekte

1. TEMPUS JEP – Curriculum Development
2. TEMPUS SCM – TEALS
3. TEMPUS-Socrates – Cro4Bologna
4. Eurolearn – Eureka umbrella
5. Eureka projekt
6. Referalni centar za E-projekte – CARNet
7. ALIS – bilateralni HR-Velika Britanija
8. iProjekt – Lokalizacija LaTEX-a za HR
9. RC za osiguranje kvalite u visokom školstvu – Nacionalana zaklada za znanost
10. ...

Higher education (HE) today

- ...has become part of a global shift to a new way of creating and using knowledge,
- focused on solving problems and sensitive to customers needs
- strives for quantity as well as quality
- interdisciplinary
- infinite quantities of instantly accessible information
- accountability, QA, league tables, performance indicators
- in knowledge-based economies, universities - engines for social change and the expansion of prosperity

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University teacher

- "Gone are the days when being a university or a teacher in a university was enough to command respect."
- Required to be more businesslike and more accountable
- Asked *to do more with less* – teach more students, supervise more research students, which must gain their degrees more quickly
- Excellent teacher, high productive in research, perfect administrator, businessman...

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Students

- Grown up with the expectations of staying connected 24-hours 7 days a week
- They are harder to teach and less indulgent towards indifferent teaching
- Have to survive in global competition after studying period
- Widening access to HE – different students' background

E-learning

- Fit in new system and changed the way we
  - Learn
  - Teach
  - Research
  - Make Busuness

- Not addressing fundamental HE/business objectives

- Approached as a technical solution

- Not being rigorously evaluated

E-learning system

- Contributes to the solution on the different stages (HEI, professor, students) – HOW?
- Powerful tool for achieving strategic objectives of the university
- System must be measured in terms of its impact on the performance of the university in financial and non-financial aspects (pedagogical, image...)
- ...But it must be pedagogically sound and cost effective

Overall objectives of a university

- To have outstanding academic personnel
- To perform high-level scientific research work
- To establish efficient, innovative and appealing studying process
- To have talented students and community support
- To use university resources in most effective and efficient way
- To contribute to socio-economic development of the community

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Three folded mission of a university

- **Teaching**
- **Research**
- **Serve to society**

Why?

Why and how to embed e-learning in the overall mission of a (complete) university?

Contributions to strategy...

Why it's helpful?

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Three folded mission of a university

- **Teaching**
- **Research**
- **Serve to society**

- Bologna process
  - Exciting process
- Quality assurance
  - Quality of teaching and learning
- Competition vs cooperation with other universities
- Part-time students
- Campuses in different cities

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Three folded mission of a university

- **Teaching**
- **Research**
- **Serve to society**

- PhD studies
  - Small groups, not necessary at one place
- Joint postgraduate studies with other universities
- Embedded research in teaching and teaching that impacts research

Three folded mission of a university

- **Teaching**
- **Research**
- **Serve to society**

- Delivering courses for broader public
  - Competitiveness
  - Employability
  - Science communication
- Entrepreneurial university
  - Non-public funding
- Reach underrepresented
  - Digital devide
- Lifelong learning

Overall objectives of an university

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Usage of e-learning
- Staff development
- Postgraduete studies
- Blended learning
- Training for non-university users

Comprehensive approach to e-learning

What?
Where?

- Aligns e-learning system to
  - State (Strategy for HE etc.)
  - University (UniZg – ISKORAK, strategy for e-learning?)
  - Faculty (misson)
  - Personal (academic freedom, responsability)

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Problems- challenges at different levels

State
University
Faculty
Individual

- Overarching "soft strategy", but effective - with planned **resources**
- Education development fund – interlinked with university/faculty funds
- Infrastructure – high speed fibre network for students
- Motivation for HEI, professors and students
- Intellectual property rights protection
- Standardization ?

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Problems – challenges at different levels

State

University

Faculty

Individual

- Strategy for e-learning as part of strategy of teaching and learning or separate
  - EUA www.checkpoint-elearning.com
  - Coimbra report – HECTIC project
- Strategy in implementation
- Integrated IS ? (ERP + e-learning platform)
- Repository of e-learning material, connection to library system
- Standardization & valorisation of e-learning material
  - CARNet project

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Problems- challenges at different levels

State

University

Faculty

Individual

- Support for e-learning
  - centre or grouping e-learning units together
- Common platform for e-learning?
- Respect diversity
  - Of faculties and disciplines
- Competition for teams of teachers
  - internal grant
- Dissemination of project results - portal
- Cost planning and control
  - European funds

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Problems- challenges at different levels

State
University
Faculty
Individual

- Related to the mission
  - Need analysis – methods & tools
- Professional learning plans
- Staff development for teaching and specially e-learning
  - Use e-learning
  - Mentoring novice teachers and oriented new employee
- Content and technical expert
- PC classes and other e-learning infrastructure reqirements
- More professional attention to education

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Problems - challenges at different levels

State

University

Faculty

Teachers/professors

Students

- Motivation for all target groups
  - also new faculty members, teaching assistants
- Network of experts
- E-competences
- Balance of all three roles
  - research, teaching, society service

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Problems - challenges at different levels

State

University

Faculty

Teachers/professors

Students

- Access to e-learning
- Learner readiness
  - Orientation sessions
- Technical support
- Responsibilities and changing the roles of teachers and students
- "Corrective mechanism"
- Virtual mobility
  - Education and Training 2010

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DSS for the Decision making and Implementation Process

DECISION MAKING	TOOLS

1. Intelligence phase
(Identify the central decision problem)
    ▪Perform a situation analysis
    ▪Conduct search & scanning procedures
    ▪Problem identification
    ▪Determine problem ownership
    ▪Present a problem statement
	Data Acquisition, Storage and Retrieval
	Data base management systems, Interactive query, Data bases
	Data analysis
	Spreadsheets, Graphics, Statistical analysis
	MS/management science/operations research models

2. Design phase
Develop alternatives & establish criteria
Search for alternatives
    ▪Initial list
    ▪Revised list
Set criteria for choice
    ▪Must criteria
    ▪Want criteria
Predict and measure outcomes
	Data analysis
	Data Acquisition, Storage and Retrieval

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DSS for the Decision making and Implementation Process

DECISION MAKING	TOOLS
3. Choice phase (Evaluate alternatives) ▪Develop multicriteria decision model ▪Solution to the model ▪Sensitivity analysis ▪Selection of alternatives	**Decision analysis:** expert systems (designed to replace decision maker), expert support systems (AHP, ANP..) **Data analysis** **Data Acquisition, Storage and Retrieval**
4. IMPLEMENTATION (Action plan and control system)	**Data Acquisition, Storage and Retrieval** **Data analysis, Decision analysis**

Source: Dyer R.F., Forman E. H.: *An analytic approach to marketing decisions*, Prentice Hall, 1991

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Conclusions

- State of the art of e-learning in Croatia
  - Broad variety of levels and experiences
  - Respect for diversity
- E-learning is just one way of teaching and learning
- Must have a role in the three-folded mission of a university
- Evolution towards blended learning
- Quality assurance in e-learning
- Entrepreneurial university
- All target groups and stakeholders should participate
- Use of different sources for implementation and finance
  - International, national and university projects
  - Cooperation with industry, SMEs
- Do not forget "...imaginative acquisition of knowledge..."

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Anketa – ispitivanje mišljenja

Ciljevi ankete:

- **Prikupljanje i sistematizacija znanja od poznavatelja visokoškolske nastave i primjene e-učenja**

- **Pomoć u izradi strateških dokumenata uvođenja e-učenja** – anketa je strukturirana na način da izvrši prikupljanje i prioritizaciju podataka potrebnih za izradu strateških dokumenata:
  - ➢ *ciljevi uvođenja e-učenja*
  - ➢ *prednosti uvođenja e-učenja*
  - ➢ *kriteriji/podkriteriji odlučivanja važni za strateško planiranje uvođenja e-učenja*
- ✓ *Pri formiranju ankete (kriterija/podkriterija, prednosti i ciljeva) korišteni su primjeri strategija e-učenja vodećih europskih sveučilišta*

- **Određivanje važnosti i selekcija kriterija odlučivanja ključnih za izradu modela za višekriterijsko odlučivanje**

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Anketa – ispitivanje mišljenja

- Rezultati ankete (ocjene važnosti kriterija) služit će kao input za razvoj **matematičkih modela za višekriterijsko odlučivanje:**
  - ➢ **Analitički hijerarhijski proces (AHP)**
    - – individualno i grupno odlučivanje
  - ➢ **Analitički mrežni proces (ANP)**

- Razvijeni modeli za višekriterijsko odlučivanje omogućit će donošenje odluke o odabiru jedne od varijanata e-učenja na razini sveučilišta/fakulteta:
  - ➢ *ICT supported face-to-face learning*
  - ➢ *Blended learning*
  - ➢ *Learning that is entirely online*

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Primjena modela za višekriterijsko odlučivanje

- Modeli za višekriterijsko odlučivanje moći će se primijeniti kao potpora odlučivanju u strateškom planiranju uvođenja e-učenja na pojedinim sveučilištima i fakultetima.

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