6 – 8 June 2007
Culture as Innovation
The Search for Creative Power in Economies and Societies
Turku, Finland

Culture as Innovation in Vocational Higher Education

Slides are available at:
http://www.oamk.fi/~laurik/CultureAsInnovation

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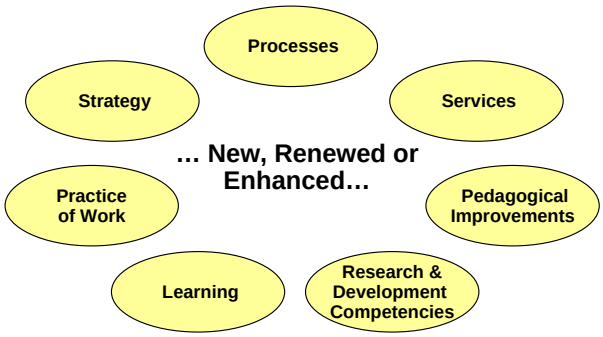
Introduction

- The purpose of my presentation is to create **Shared Understanding of Cultural Innovation Processes in Vocational Higher Education**
- Soft System Methodology (SSM) has been used to analyze:
  - The **Guiding and Interacting Layers** related to the problem area and
  - **Cultural Innovations and Work Life Cooperation**

Innovation

- **Innovation** means both the **creation** of novel and useful ideas as well as their **implementation**
- **Innovation process** consists of
  - **Discovering** of Ideas
  - **Developing** of Ideas
  - **Implementation** of Ideas

Innovations can be…



Culture as Innovation

- Culture as Innovation = Paradigm Shifts + Restructuring of Cooperative Entities + Development of Resources
  - **Formal Features:** processes, roles, tools etc..
  - **Informal Features:** customs, values, beliefs, taboos, stereotypes, traditions, language behaviours etc

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- Key Concepts
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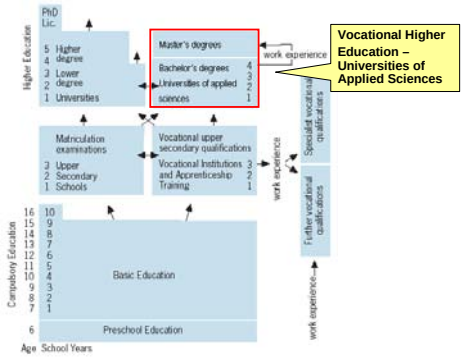
- Summary

Vocational Higher Education in Finland

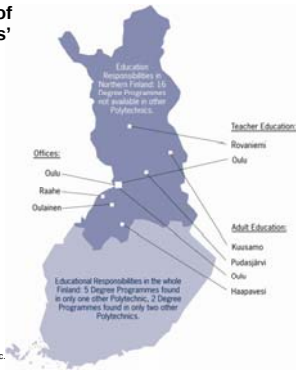
Is a cultural innovation process also.
Culturally different vocational institutions are smelting together and growing into a new culture and level of competence in local, national and European contexts.

Finnish Education System

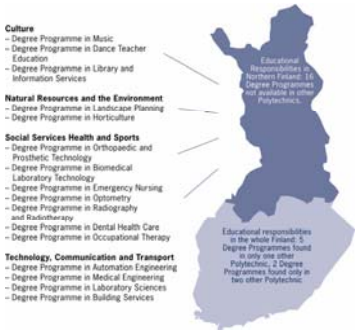


Local Responsibilities

Oulu University of Applied Sciences' Locations and Educational Responsibilities in 2005

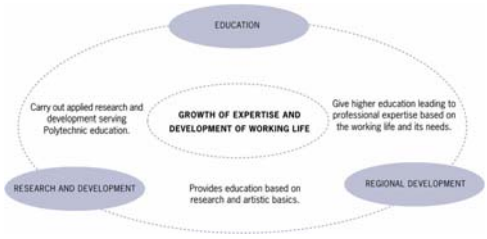


Responsibilities in Northern Finland

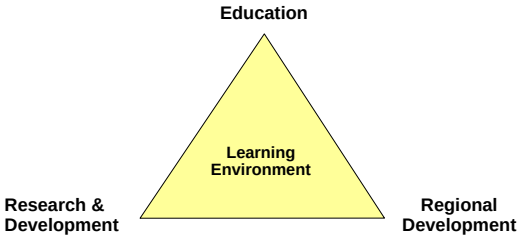


Responsibilities in Whole Finland

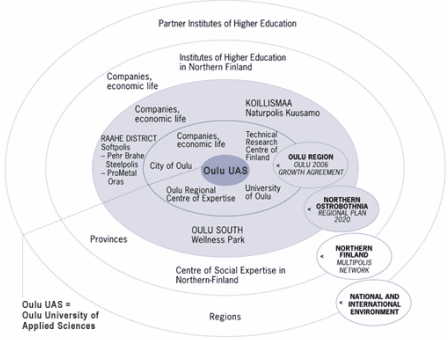
University of Applied Sciences´ Functions and Their Relations



Learning at Universities of Applied Sciences



Oulu University of Applied Sciences' Innovation Environment



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Key Concepts

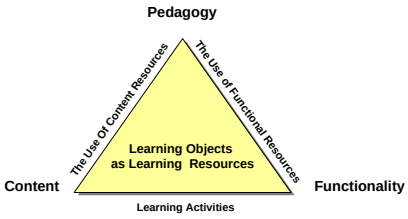
- eLearning and Blended Learning
- Learning Resources
- Learning Objects
- Paradigm and Paradigm Shift
- Synergy Enablers and Disablers
- Interoperable Competence

eLearning and Blended Learning

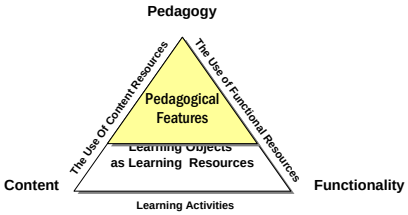
- eLearning and Blended Learning are seen here broadly as synonyms
- These concepts are involved in the flexible use of information and communication technology in learning, teaching, cooperation and working related situations.

Learning Resources (1)

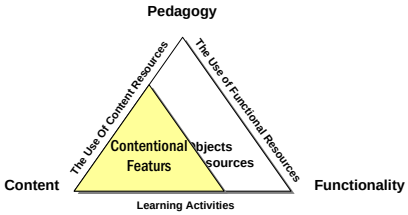
- Learning Resources can have pedagogical, functional and content-related features



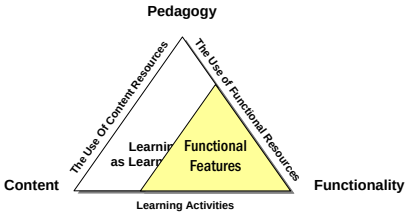
Learning Resources (2)



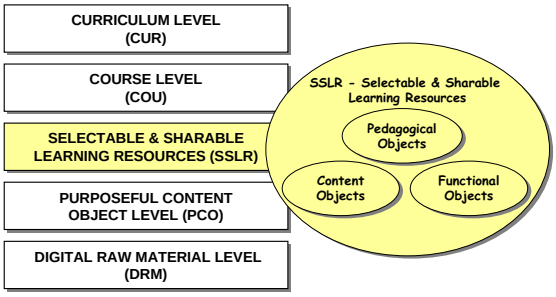
Learning Resources (3)



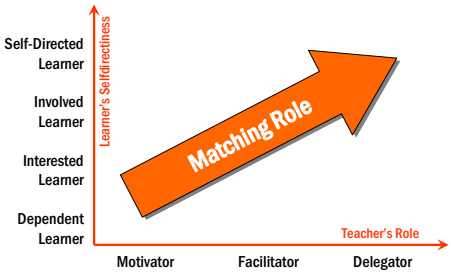
Learning Resources (4)



Learning Resources and Granularity Levels



Learner's and Teacher's Role (Grow's SSDL-model)



Teacher's and Learner's Matching Roles

- **The Demand of Matching Roles** affects on the selection and usage of Learning Resources
- **Selectable and Sharable Learning Resources** could became important Synergy Enablers for Cultural Innovations
- Vocational Education benefits especially from **Working Life oriented Learning Resources**

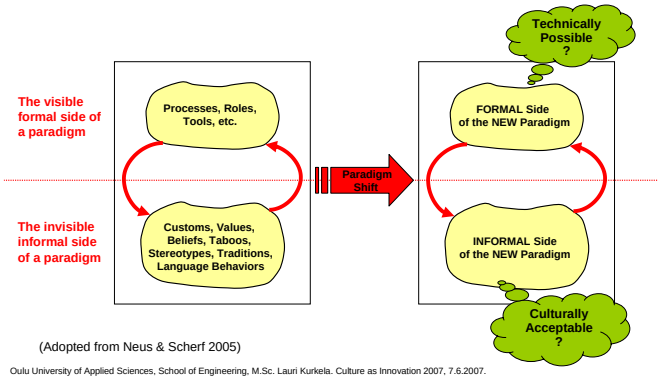
Learning Objects

- **Learning Objects** are defined as any entity, digital or non-digital, which can be used, re-used or referenced during technology supported learning (LOM 2000)
- **Learning Resources** are seen here as Learning Objects in a broad sense

Paradigm and Paradigm Shift

- **Paradigm** refers to the functional model(s) which guides a system or its subsystems
- **A paradigm shift** must be *Technically Possible* and *Culturally Acceptable* (Checkland & Holwell 1998, Checkland & Scholes 1999, Checkland 1999)
- Usually **the desired cultural change** is more demanding than the technological one (Neus & Scherf 2005)

Paradigm Shifts include both the Formal and Informal Features



(Adopted from Neus & Scherf 2005)

A Successful Paradigm Shift

Pressure for Change ✘ Clear Shared Vision ✘ Capacity for Change ✘ Actionable First Steps =

- If any of these elements is missing, the paradigm shift will fail (de Woot 1996)
- Paradigms affect to what kind of learning resources are needed – And learning resources affect to what kind of paradigms can be used or developed
- Paradigm shifts, reorganizing of purposeful entities and development of resources are organizational development tools.

Synergy Enablers and Disablers

- **Synergy** is related to the **benefits** and **added value** gained in fulfilling the needs of different actors, systems or subsystems in the design of paradigms, resources and value chains
- **Synergy Enablers** and **Synergy Disablers** are features which facilitate or prevent the growth of synergy

Growing Synergy

- Synergy is growing if the (sub)system produces **added value** for its environment (effectiveness), if the added value is produced using **purposeful means** (efficacy), if the added value is produced using **minimal resources** (efficiency) (Checkland & Holwell 1998, Checkland & Scholes 1999, Checkland 1999).
- Synergy is growing if an organization shares its **well balanced goals at all levels**

Cultural Compatibility as Interoperable Competence (IC)

- Interoperability **between actors** (persons, organizational levels, networks, levels of the society)
- **Ability to serve other actors** (on the same or different layer)
- **Ability to utilize services produced** by other actors (on the same or different layer)
- Interoperability can be Symmetric or Asymmetric by nature, depending on the fact whether the cooperation is between **actors of the same class or different classes** (Pekonen 2002)

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Soft System Methodology (SSM)

- Developed by Peter Checkland et.al (1974…). The process of inquiry into real world complexity is itself a system for learning
- SSM creates Shared Understanding of complex real-world situations and guides organizations in their learning and development process
- SSM was applied here as a multilayered analysis

Why SSM?

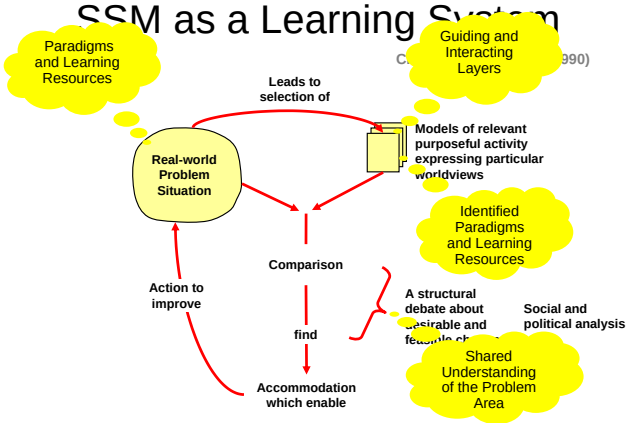
- Soft System Methodology is a tool that is especially useful in diagnosing and addressing organisational problems and designing new systems in cultures by pluralistic views and values. (Molineux & Haslett 2003)

How SSM could be applied?

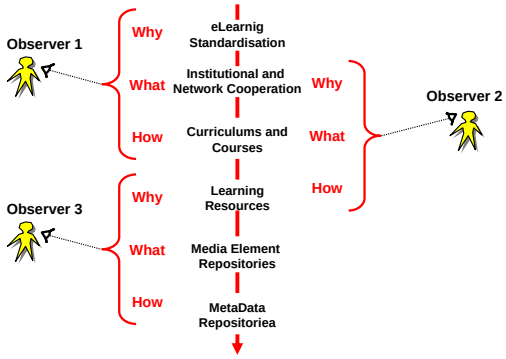
1. Analyses of the Current State of the System
2. Description of the Major Problem Areas.
3. Identification of Cultural Synergy Enablers and Disablers
4. Description of the Desired Future State of the System.
5. Development Steps towards the Desired Future State of the System

In this presentation only steps 1 to 3 are discussed on general level. Those steps should be revised in a contexts of an specific organisation.

SSM as a Learning System



Shared Understanding



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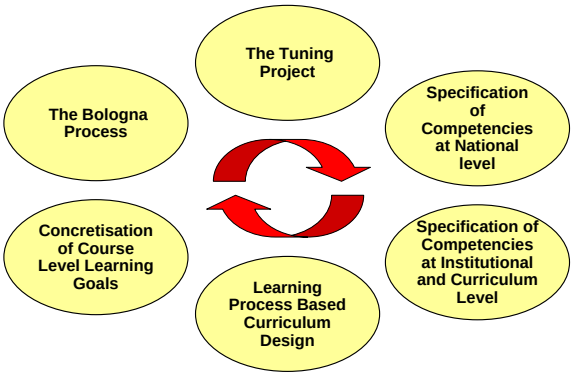
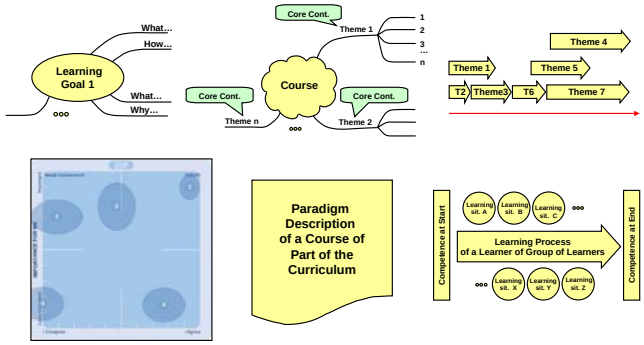
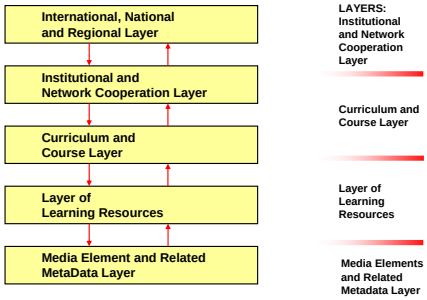
Ongoing Innovation Processes



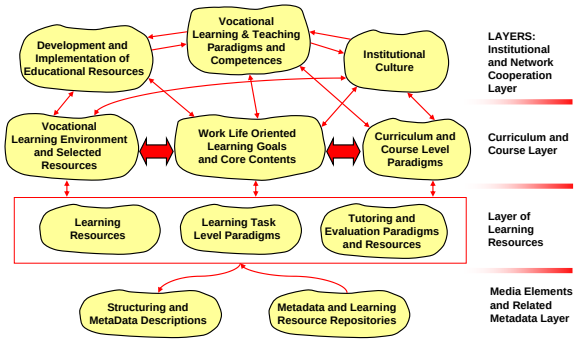
Concretisation of Learning Goals



Hierarchy of Guiding and Interacting Layers



SSM: Culture as Innovation and Interacting Layers



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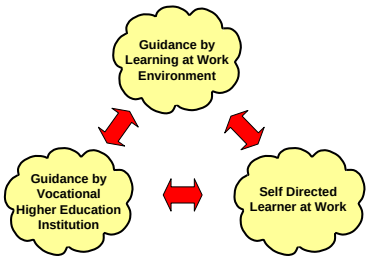
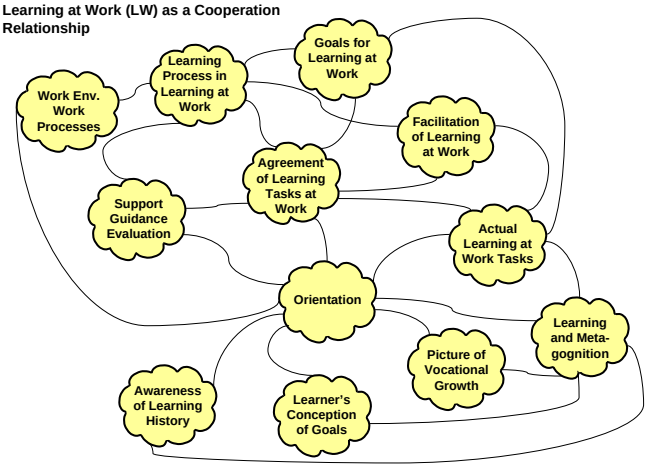
SSM: Learning-at-Work as a Cooperation Relationship



Learning at Work (LW) as a Cooperation Relationship



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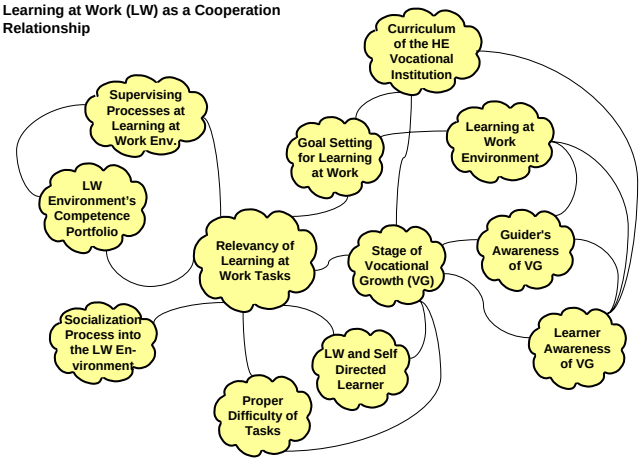
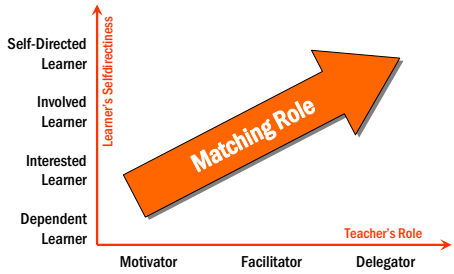


Learner's and Teacher's Role (Grow's SSDL-model)



Teacher's and Learner's Matching Roles

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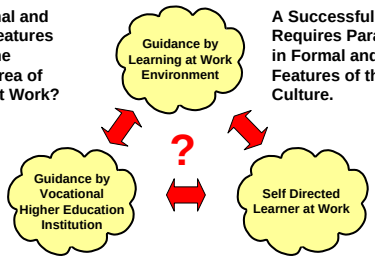
- Selectable and Sharable Learning Resources could became important Synergy Enablers for Learners, Teachers and Educational Institutions
- Vocational Education benefits especially from Working Life oriented Learning Resources

SSM: Learning at Work, Responsibilities and Cooperation Culture

What Formal and Informal Features exists in the Problem Area of Learning at Work?



A Successful paradigm Shift Requires Parallel Chances in Formal and Informal Features of the Cooperation Culture.

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Summary (1)

- The focus of this presentation was on the use Soft System Methodology in order to create shared understanding of Innovation Processes and Cultural Development Processes in Higher Vocational Education
- The problem area was analysed as a multilayer purposeful system and as a cooperation relationship in learning at work

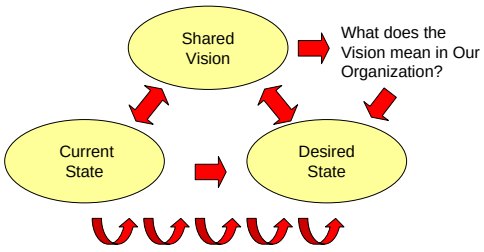
Summary (2)

- The SSM analysis was made on general – not on organisation specific – level
- This could be a starting point for organisation specific cultural innovation processes
- An educational institution has to find out what kind of synergy enablers or synergy disablers exists in its case.
- Paradigm shifts should be made with small steps which are culturally acceptable and technically possible.

Summary (3)

- A new SSM-iteration should be made to find out what is the new state of the system after a couple of paradigm shifts and development activities
- The new SSM-iteration means also re-evaluating of the needed development tasks

How to apply this Model in an Organization



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Questions? Comments? Discussion?

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