

# Mode 2

## New Knowledge Production New Training and Education

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# Constructivism in the Teaching and Training

- The most important distinction between Industrial and Information Society concern the
- New knowledge production mode (Mode 2 of Scientific Production, instead of Mode 1 of the Industrial Society), by Gibbons, Nowotny, et al.

# RELATION BETWEEN SCIENCE AND SOCIETY?

## Mode 1

- Academic context
- Disciplinar
- Perceptually homogeneous
- Internal definition of quality and relevance by peers
- Hierarchic and static structure organization
- Internal responsibility
- Academic freedom and demand of knowledge

# RELATION BETWEEN SCIENCE AND SOCIETY?

## Mode 2

- Application Context
- Multidisciplinary
- Perceptually heterogeneous
- External definition of quality and relevance
- Non-hierarchical, horizontal structures, ad-hoc organizations
- External responsibility
- Interests and stake-holders defining the agenda

# Constructivism in the Teaching and Training

- Knowledge is in the individuals and not outside...
- Words are not packages of concepts and their meaning needs to be negotiated...
- The learning strategy is usually problem-solving...
- Others are very importantes, causing perturbations that being solved leed to cooperative learning

# Constructivism in the Teaching and Training

- Experience is very important aiming at the partial fit with reality, as the senses are not channels through which truth is transmitted from outside...
- Science under a constructivist perspective is not so much the search for truth but the attempt to make sense of the world...
- Previous knowledge of the learners is very important...

# Constructivism in the Teaching and Training

## Constructive PRACTICES...

- It is opposed to having people attentive and passive...
- Learners need time to reflect in their experiences and to relate them with what they already know
- An important part of learning should be the negotiation of meaning, comparing with what they already know, with what the others say and solving the discrepancies...

# Constructivism in the Teaching and Training

## Constructive PRACTICES...

- The learning process cannot stop at class level; it is important that students compare the knowledge built in the classroom with the knowledge built by the scientific community...
- Encouraged to speak, not only with the teacher but among them...
- The main task of the teacher is to establish and maintain a learning environment with certain characteristics we will mention later..
- CLEs (Constructive Learning Environments) are the main multimedia contribution to this perspective.



## IMPLICATIONS TO EDUCATION and TRAINING (cf Graham Hills)

### OLD

- Static
- Impassive
- Single medium
- Synchronous
- Passive
- Unidirectional
- Local
- Audience
- Real

### NEW

- Dynamic
- Supportive
- Multimedia
- Asynchronous
- Active
- Interactive
- Network
- Person
- Virtual

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