



UC Leuven
Limburg

MOVING MINDS

**A powerful learning
environment**



Task as a teacher



Discussion

“As a teacher I’m not responsible for the learning of my students.”



A powerful learning environment



Individual task:

Dreaming.... now we are 2025.

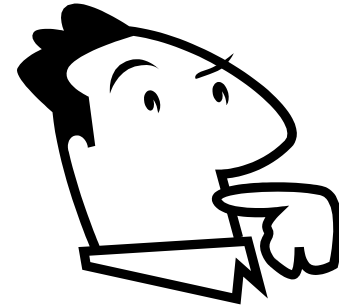
You still give courses and you have a lot of energy. Your students like your courses very much. They like the way the courses are structured and they can't stop telling how much they are learning in your lessons.

How do your courses that you give now (2025) look like?

How are you acting? How are the students acting? How are your colleagues acting?



In groups per 4 (5):



Can you indicate what made the cooking lesson of yesterday evening giving you so much energy?

What did the teacher do?

What did the students do?

What in the environment/ the context made this success possible?

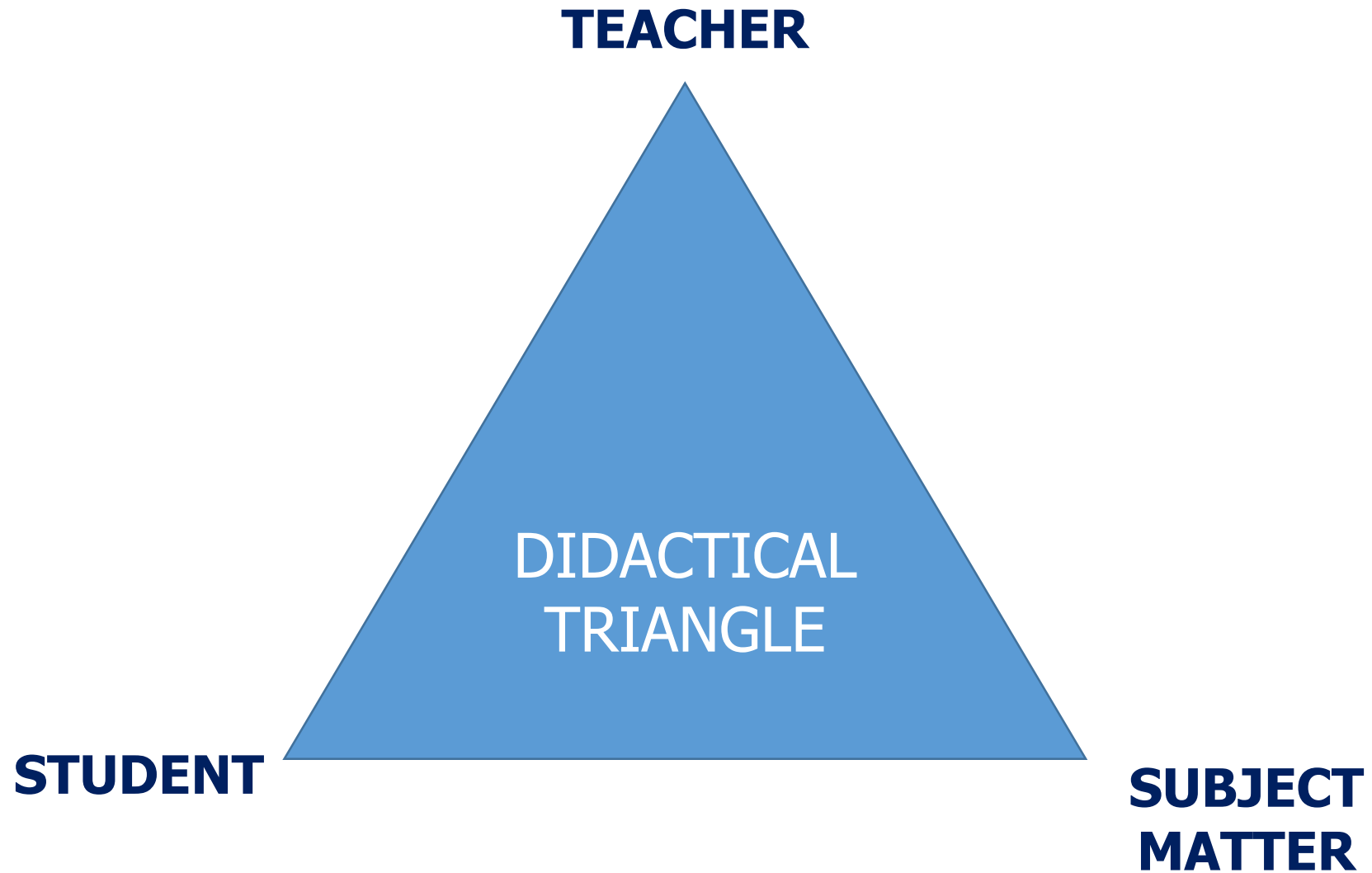


In groups per 4:

Can you name a few elements that contribute to a powerful learning moment?



History of looking at learning processes





Late 20th century :

Education based on cognitivism

“Powerful learning environments are situations and contexts those which learners can provoke and keep going the required learning processes and motivation to effectively achieve the intended learning outcomes.”

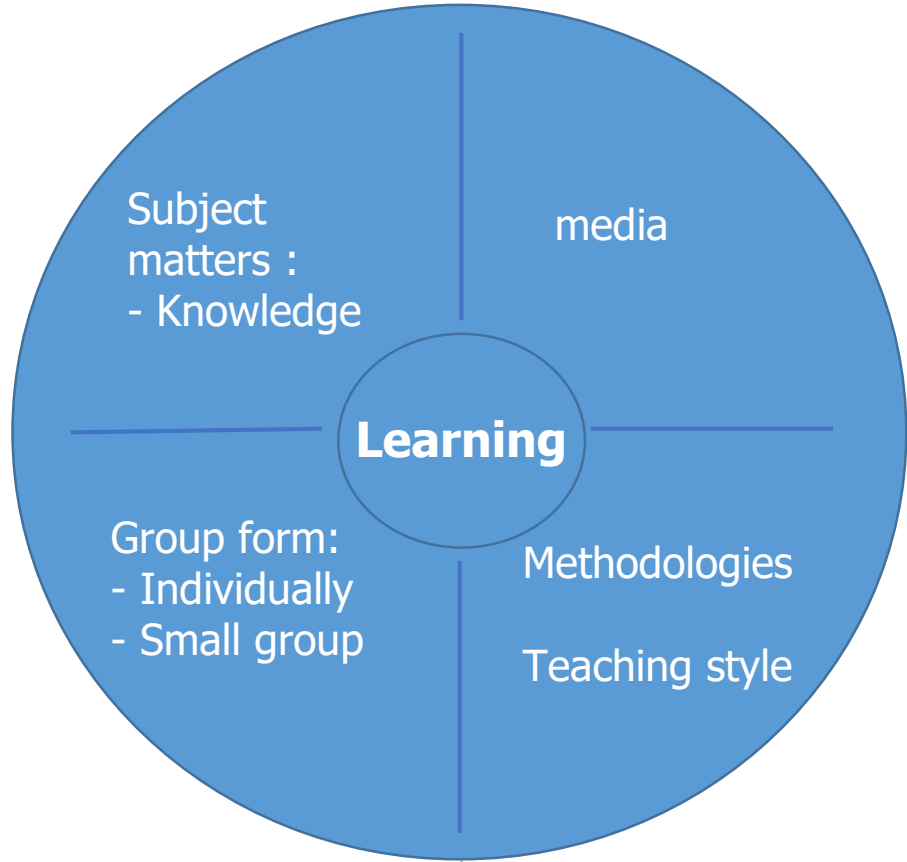
(Decorte 1996)



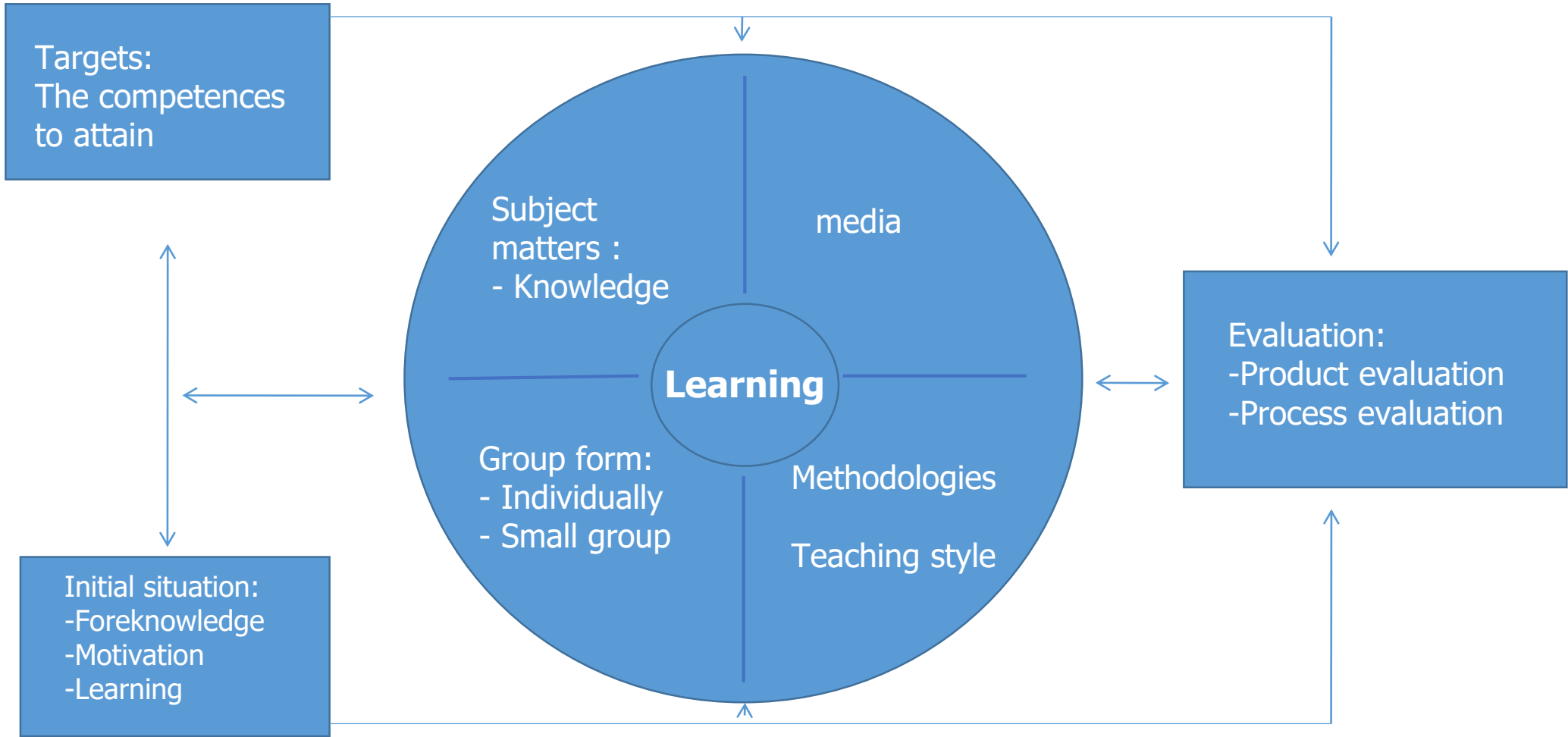
Vision on humanity and society

Targets:
The competences
to attain

Initial situation:
-Foreknowledge
-Motivation
-Learning



Evaluation:
-Product evaluation
-Process evaluation





- teacher (and subject matter) central
- Learner is passive receiver



21st century

Competence based education

Donché en Van Petegem **(2002)**

"A powerful learning environment offers sufficient opportunities to reflect, to actively acquire knowledge and skills, to build independence and to learn cooperative (with and from each other). "



Dochy **(2015)**

High Impact Learning that Lasts (HILL)

“A learning environment is a powerful learning environment if it has an impact on the learner and stimulates learning.”



A powerful learning environment is, in addition to learning information about the intended subject, also stimulating learning of:

Working and learning in team

Trust in partners

Communication

Solving a problem

Looking for information

Select relevant information accurately

Being critical

....



Focused on lifelong learning

- Sustainable employability of knowledge or skills
- Functional flexibility: knowledge or skills can be used in varying situations
- Self crafting: self-responsibility and commitment to actively shape your own life
- Reflection: thinking about your own learning
- Teamwork and interpersonal skills
- Formal and informal learning

= new learning goals



Implications for didactics

Learners work actively with their own learning in the powerful learning environment.

Learners with educational needs and support centrally.

= Mindshift

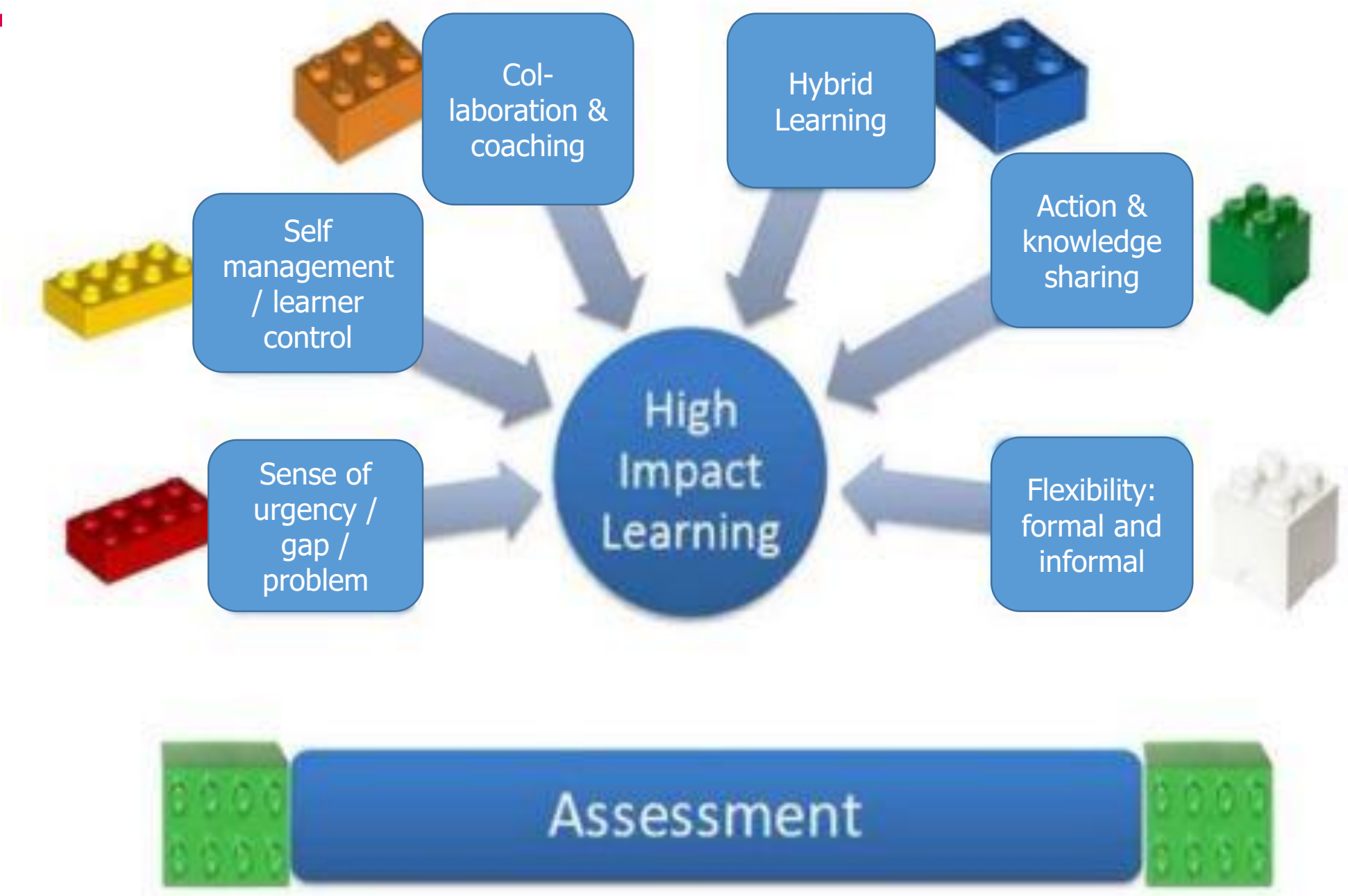
(renewal resistance)



What should that learning environment look like?

A number of factors contribute to the active learning of the learner.

Dochy 2015: HILL





Brainstorming

Per group you will find sheets with different components that contribute to active learning.

Exchange what you understand by this component.

How could you make this component specific in lessons or courses?



1. urgency, gap, problem

Create 'sense of urgency' :

- Start from an issue
- Give strong argumentation
- Problem owner uses persuasion power
- Strong interest



Involvement (intrinsic motivation)

State of flow (Csikszentmihalyi 1979)

Optimal balance between what the task demands and the already acquired competencies.



1. urgency, gap, problem

Motivation and interest

- are drivers for learning, necessary conditions
(but not enough to have impact with certainty)
- are needed for the start-up
 - just-in-time learning
 - see direct benefit
 - to be able to use the learned immediately
- bring learners to extra energy investment in own development or learning process.



1. How in your class?

- Start with a problem, as real as possible
- Be open to a real problem and involve the problem owner
- Start with a case or an authentic situation, if possible formulated by a third party
- Work with authentic material
- Go outside, view and visit reality
- Provide strong argumentation that exposes gap: show the problem to the learner
- Invest time to have the learner explain how he sees the gap
- Formulate team goals and individual goals
- Let the learner formulate learning goals
- Make a brief learning report
- Discuss this
- Start discussion with problem owner
- Let learners figure out how the problem could be solved and facilitate the search (without chewing the solution)



2. Selfmanagement & learner agency

Selfmanagement:

Something you can not learn, you can not reach.

- It is an attitude, always a choice, you have to work constantly on it
- Gives possibilities to achieve what you want

➡ Requests reflective attitude
= think about acting + willingness to adjust your own action

reflection – on- action

reflection – in – action

➡ Requests flexibility



2. Selfmanagement & learner agency

Students learn more if there is room for learner agency:

The student affects what he does and learns and how he is learning.

The student takes initiative, acts and decides on learning process.

The student estimates consequences of his choices and accepts the consequences.



2. How in your class?

- Trust the learner, give learners responsibility
- Make sure you know the learner (remember names)

- Have individual goals (or team) formulated
- Give the possibility to determine the learning process

- Allow flexibility in solutions and solution strategies
- Stimulate own solution strategies
- Allow choice and respect the consequences of choices

- Give space to reflection

- Build a culture where mistakes are allowed (start with yourself)
- Lead by example - share 'failure stories' - manage reactions to mistakes by others



2. How in your class?

- See feedback as a learning process component, plan your feedback
- Use mid-period reviews as a coaching tool
- Give selective, group-oriented feedback
- Provide adequate feedback on task and process
- In addition to critical feedback, give a lot of positive feedback
- Turn learners into peer-assessors

- Make a more strict selection in the relevant content that is offered
- Plan your contact hours with focus on depth

- Use real case material from reality
- Bet on teamwork



3. Cooperation, interaction & coaching

Learning always takes place in a network of social interactions
impact on personal performance
impact on the situation in which is learned

High Impact Learning that Lasts =

Individual learning
 interactive
 feedback from peers and coaches

+

Team learning



3. Cooperation, interaction & coaching

Learning together asks for:

Confidence



co-construction



constructive conflict

Coaching



transfer



3 . Cooperation, interaction & coaching

Effect on

Cognitive competences

increased performance
more efficient problem solving

Metacognitive competences

reflection
critical thinking

Social competences

improved relationships
communication
connectedness

Emotional competences

self-image
motivation

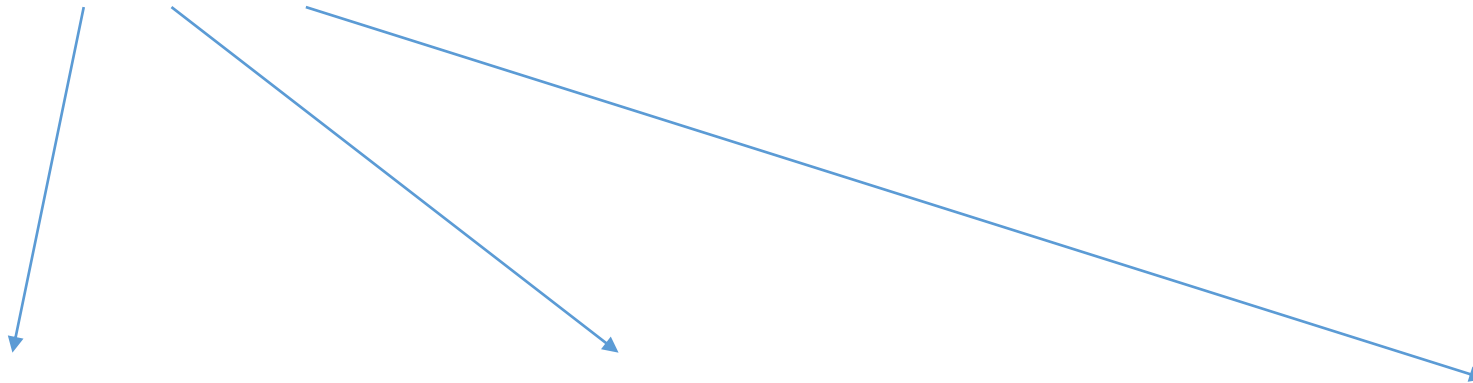


3. Cooperation, interaction & coaching

Learning in social contexts



individual learning



Peer learning



cooperative learning



collaborative learning

Coaching

teamlearning



3. How in your class?

Coaching / peerlearning

- at the right time, provide enough time
- Open, clear, honest communication style
- Show understanding, do not take a stand
- Respect emotions, talk about it
- Let learner take his own responsibility
- Encourage, push boundaries
- Constructive feedback on task and process

Cooperative learning

- Collaboration
- Each individual has his own input
- Individual responsibilities and tasks



3. How in your class?

Collaborative learning and teamlearning

- Let the learners work in groups (3 to 7 people)
- Stimulate and facilitate collaboration
- Stimulate sharing; there are no bad ideas
- Allow information sharing between groups
- Team works autonomously with coach (quality of output increases)
- Interdependence of teams and subteams needed
- Work from talents of group members
- Coach is not an expert but a partner and learns too
- As a coach also collaborate and learn together
- Do not compare learning
- Give freedom to learners



4. Hybrid learning

Different terms

Hybride learning

Blended learning

Mixed mode learning

Technology enhanced learning



4. Hybrid learning

High Impact Learning that lasts (HILL)
is embedded in a hybrid environment in which
through interaction and
via different methods and carriers
is learned.

= Synchronous and asynchronous learning



Makes it fascinating and varied, effective and interactive



4. Hybrid learning

To mix different work forms in function of goals, motivation and powerful learning.

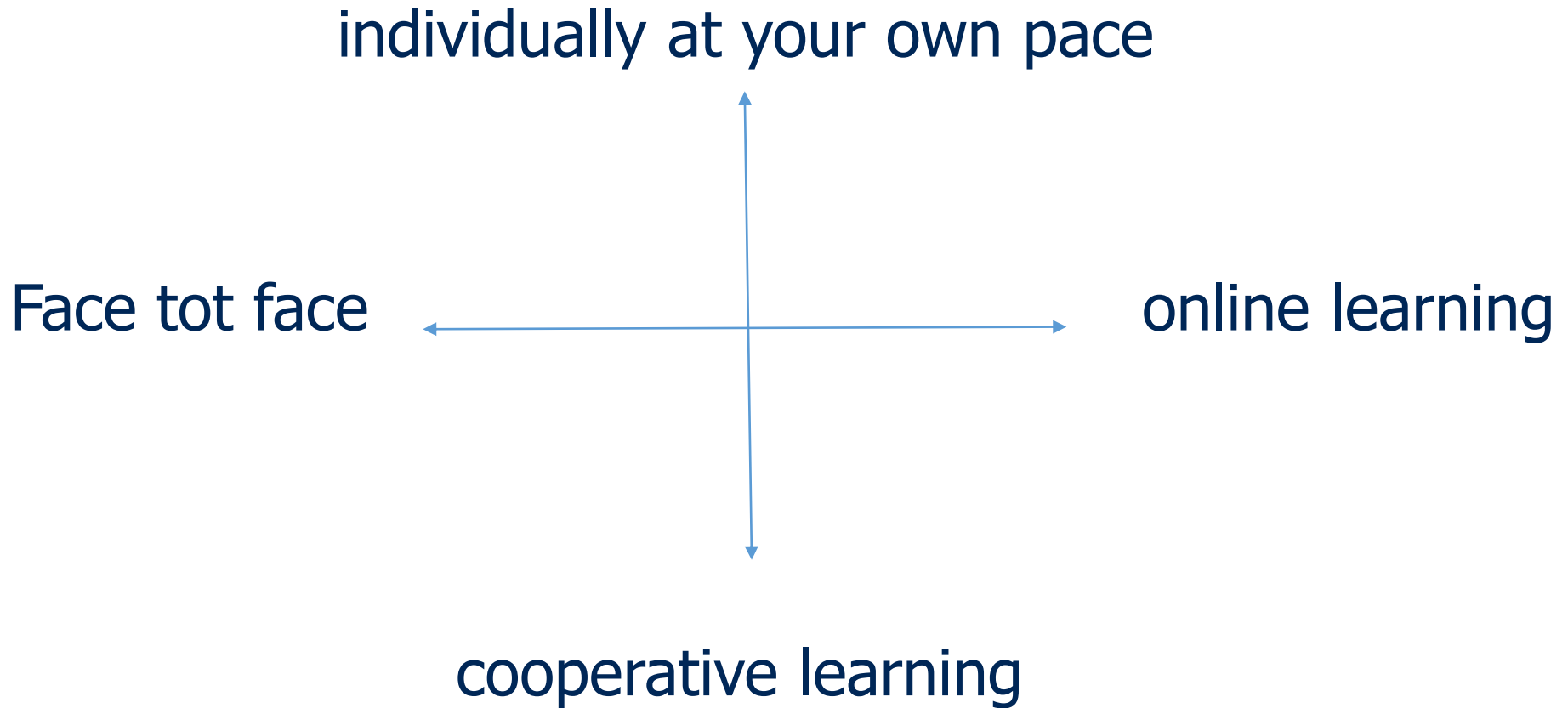
How do I keep the attention of the learner?

How do I ensure that he / she reaches the end of the course without loss of commitment?

The right relationship between face-to-face and online learning differs per situation and from person to person.



4. Hybrid learning





4. How in your class?

- Think about alternative forms of presentation
- No pure knowledge transfer
- Helping to actively construct knowledge, tasks focused on the construction of knowledge
- Much attention to prior knowledge and preconceptions
- Vary enough in each learning trajectory
- Request feedback on the hybrid learning environment from the learner
- 'Variation is the key of learning' (F. Marton)



5. Action and knowledge sharing

Concept development requires commitment and engagement:
actively building know-how.

Importance of being continuously engaged by the learner.

Actively acting and learning in realistic situations

- = just in time learning (the moment you need to solve a problem)
- More transfer
- Appeals generic skills to keep knowledge up to date



5. Action and knowledge sharing

Actively acting and learning in social situations

Active learning often implies interaction between individual and group.

Active learning often implies information or knowledge exchange that is reciprocal

Making mistakes and receiving stimulating feedback

feedup, feedback and feedforward



5. How in your class?

- Provide authenticity in learning: case, project, problem, material, simulation, etc.
- Provide active realistic exercises
- Integrate lesson contents of different courses
- Problem-based education
- 'Learning by doing'
- Stimulate peer discussion, interaction
- Stimulate individual reflections, then to 'small group discussion' and consensus and ten finally on 'whole group agreement' (P. Rosseel)
- A lot of feedback (feedup, feedback, feedforward)
- Do not work frontally, in a classroom setting, but use as many round tables as possible.



6. Flexible learning space

Most important but most difficult innovation.

Connects with current learning on the internet.

Impact on all other building blocks.

Allow spontaneous and informal learning:

- casual activity

- accidental interaction with peers

- experiences during work

- all kind of extra actions that do not belong to planned learning



6. Flexible learning space

Within the framework of learning lines and learning objectives,
be open to occasional moments of enrichment

+

encourage spontaneous learning; build incentives to encourage this.

Control of learning in the hands of the learner:
self-directed
tailored to the learning individual

Reflection needed
to bring this learning to a conscious level
transfer possible



6. How in your class?

No methodology; =mindset of the teacher (openness to the chances in the environment)

1. Spontaneous learning moments

- See every moment as a moment to learn something
- Leave the planning when something presents itself
- Encourage flexible and spontaneous learning
- Link spontaneous learning to formal joint learning
- Provide discussion moments; networks; social interaction
- Give time to experiment, opportunities to search and to make mistakes
- Provide a safe learning environment
- Encourage informal chats and meetings; exchange work between peers
- Stimulate sharing information sources
- Stimulate own learning goals



6. How in your class?

2. Reflection, together and individual

- Plan and take time for brainstorming
- Make space for thinking along and planning (learners agency)
- Stimulate awareness of what one is learning
- Consider what has been learned, see what is learned next to product or set goals
- Let informal learning always in the hands of the learner (self-directed)
- Provide learning output from spontaneous learning, ask reflective questions

3. Support and / or inspiration

- As a teacher: inspire others
- Do not strictly follow a manual
- Invite learners to inspire each other
- Invite external people to come and speak
- Attention to networks



7. assessment for learning

Assessment = collect and interpret information about the performance of a learner.

The learner adjusts learning behavior according to assessment method or to what is tested.

Assessment must be congruent with instruction

1. Evaluation provides information about the extent to which goals have been achieved
2. Evaluation provides information to improve learning

Assessment of learning ↔ Assessment for learning ↔ Assessment as learning



7. assessment for learning

Assessment for learning:

1. Immediate and extensive feedback
2. Learning progress map: what I already can of all of what I want to acquire
3. Relate subject to complex world with questions and tasks

Assessment for learning is flexible, authentic and context dependent.

Assessment for learning is specific for the needs of an individual.



7. For the future?



Assessment as learning:

learning and assessment are congruent and the same
both give information to become better

The coach follows the growth of the learner:

- gives constructive feedback
- activates peers to coöperate
- activates the learner as owner of his own learning process

In schools assessment of learning is still common. So also in the precepts of our students, assessment will have that meaning.



7. How in your class?

- Integrate learning and assessment
- Also use group assessments in addition to individual assessment
- Assess about different modules, courses, trajectories
- Pay more attention to the process in the assessment
- Focus on strengths and talents
- Use interim discussions
- Qualitative assessments instead of points
- Assessment is part of the learning process
- Self-, peer-, or co-assessment as method or part of the learning process
- Never assessment with stress: is never a learning moment



https://www.youtube.com/watch?v=Xljhu6_FYYM&t=314s



Assignment in groups per 4:



What had we thought of ourselves with our group?
What is additional?

What do I recognize in my activities?
What appeals to me to try out?
What do I have questions about?



Tips for lessons and courses

1. Dedust the content / throw content in the container
2. Make the urgency, gap, problem explicit: let the learners formulate own learning questions
3. Clearly articulate intended competence: by coach or by learner
4. Express method of control of acquisition
5. Add / activate preconcepts / foreknowledge
6. Create a hybrid learning environment with active working methods and attention to cooperation and cooperative learning
7. Openness for spontaneous learning and input
8. Active coaching and feedback moments
9. Connect new insights to own learning questions
10. Reflection on one's own learning process / learning attitude with attention to self-testing against the intended competence





Implications for the organization

- 1. All teachers grow in professionalism:**
 1. they become continuous designers of learning and learning environment
 2. They become coaches instead of transferring knowledge
 3. They function in self-managing teams
- 2. The organization has to function as a learning organization**
 1. Same vision
 2. Same learning concepts
 3. Personal expertise
 4. Learning in teams
 5. System thinking
- 3. Less control of governmental inspectors or responsables**

Less control leads to bigger autonomy, more responsibility, more motivation and satisfaction



‘Those who continue to teach in the present as they did in the past, take the future from people.’