When I was young, it seemed that life was so wonderful, a miracle, it was beautiful, magical.

And all the birds in the trees, well they'd be singing so happily, joyfully, playfully, watching me.

But then they sent me away to teach me how to be sensible, logical, responsible, practical.

And they showed me a world where I could be so dependable, clinical, intellectual, cynical.

Supertramp, The Logical Song
UNASSEMBLED SNOWMEN FOR SALE CHEAP!

CALL [REDACTED] FOR DETAILS.
Learning and innovation in Denmark
or
Learning outside the classroom in real projects

About myself: Michael Bjørn

- Chief Consultant at University College Lillebaelt, Department of Research and Innovation
- Head of Project Center, Department of Research and Innovation at University College Lillebaelt
- Master in Educational Leadership
- Leader of Laboratory for Body and Movement in an EU financed three year research project, LoL, Kids n’ Tweens
- Project Leader on project Knowledge and Innovation Partnerships

Research fields:
- Physical activity and the good life
- Language acquisition
- Children and learning
- Knowledge and knowledge production, individual and organizational
- Change and innovation leadership
What are we talking about in Europe?: Europe is facing new challenges

- Economic crisis combined with expensive welfare-systems
- Strong economic growth in countries, we compete with.
- New solutions need to be found in order to secure the EUs status as world-leading economic power.
- European states need to improve significantly in ability to foster entrepreneurs and a continuous stream of new innovative enterprises.
- Private and public companies need to work together in networks and partnerships.
Wayne Gretzky’s father Walt always told him: “Skate where the puck’s going… not where it’s been.”

Wayne Gretzky has been called “the greatest hockey player of all time.”
Meeting the new challenges requires entrepreneurship and an innovative mindset

- Entrepreneurship refers to the individual's ability to turn ideas into action.
- It is related to creativity, innovation and risk taking as well as to the ability to plan and manage projects to achieve specific objectives.
- Entrepreneurship is one of the eight key competences.
- The European Commission is committed to promote entrepreneurship through education at all levels.
- In March 2000, The European Council set a strategic goal for Europe for the next decade: "to become the most competitive and dynamic knowledge-based economy in the world".
- The decade has passed and Europe is nowhere near reaching this goal.
- The education system does not manage to develop innovative and entrepreneurial competencies.

Qvortrup, Levels of knowledge
based on Niklas Luhman’s system theories

First order knowledge
- Factual knowledge
- Qualifications
- Direct stimulation, acquisition

Second order knowledge
- Reflexive knowledge
- Competencies
- Assimilation, Appropriation

Third order knowledge
- Systemic knowledge
- Creativity, Production

Fourth order knowledge
- World knowledge
- Evolution
- Validation

Michael Bjørn, Senior Advisor and lecturer, University College Lillebaelt, Lab leader, LoL, Kid n’ Tweens Lifestyle with Lars Elbæk
Project Knowledge and Innovation Partnerships
C. Otto Scharmer, The U-model
Dimensions of Knowledge and Innovation

- First order knowledge
  - Factual knowledge
  - Qualifications
  - What you know that you know

- Second order knowledge
  - Reflection
  - Competencies
  - What you know that you do not know

- Third order knowledge
  - Process knowledge
  - Creativity
  - What you do not know that you know

- Fourth order knowledge
  - World knowledge
  - Validation
  - Evolution
  - What you do not know that you do not know

- Deep dive
  - Sensing
  - Letting go

- Presencing
  - Letting come
  - Crystalizing

- Enacting
  - Prototyping
  - Embodying
  - Performing

- Downloading
  - Suspending
  - Seeing

- kids n’ tweens
Digimovez is a new learning platform developed for physical education and based on video recordings from pupils’ own personal devices. The video clips are used as learning resources for inspiration, imitation, visual feedback and the production of improvised exercises. The clips can be combined with verbal or written reflective communication between the users. The ‘Video Calendar’ can be used by the teacher as a planning tool.

Pupils and teachers worked with designers and experts in the development of the concept. The pupils were the experts in the teams – their experience in using video and youth sites provided knowledge that none of the other participants could.
Learning by Developing
Model developed by Laurea University of Applied Science
Levels of knowledge and innovation in a learning by developing setup

- **First order knowledge**
  - Factual knowledge
  - Qualifications
  - What you know that you know

- **Second order knowledge**
  - Reflection
  - Competencies
  - What you know that you do not know

- **Third order knowledge**
  - Process knowledge
  - Creativity
  - What you do not know that you know

- **Fourth order knowledge**
  - World knowledge
  - Validation
  - Evolution
  - What you do not know that you do not know

**Finding**
- Downloading
- Suspending
- Seeing

**Improving**
- Enacting
- Prototyping
- Embodying
- Performing

**Duplicating**
- Presencing
- Letting come
- Crystalizing

**Deep dive**
- Sensing
- Letting go

**Sharing**
- Downloading
- Suspending
- Seeing

**Kids n’ tweens**
Six recommendations that can be used to develop new complementary holistic and pragmatic approaches to learning, allowing new knowledge and products to emerge:

■ Innovative projects must take their starting point in attempts to find new solutions to genuine and untamed problems in order to represent authentic and meaningful learning situations;
■ Projects should consist of people representing different professions, ages and disciplines, since new knowledge emerges when people from different backgrounds meet in the development process, and they all contribute with their specific knowledge;
■ Innovation and design methods should be used, and ideally all participants should take active part in all phases of the design process;
■ All development processes rely on explicit as well as embodied knowledge as the basis for the development of new knowledge, products and services. Therefore, a variety of approaches to learning should be used, including physical activity;
■ Teachers and other professionals who work with children need to be trained in the design of creative processes;
■ Since these learning processes deal with context dependent knowledge that has not yet been developed, new assessment methods must be created that are dependent on the specific context.
References

- Scharmer, C. Otto, Theory U: Leading from the Future as It Emerges
- Qvortrup, Lars, The Hypercomplex Society
- Shailendra Vyakarnam, Katalin Illes, Anette Kolmos & Thomas Madritsch, Making a Difference, Innovation in Higher Education at Laurea University
- Luhman, Niklas, Introduction to systems Theory
- Project Knowledge and Innovation Partnerships: http://www.projetvip.dk/
- Project Kids n Tweens, www.kidsntweens.dk
- University College Lillebaelt, www.ucl.dk