

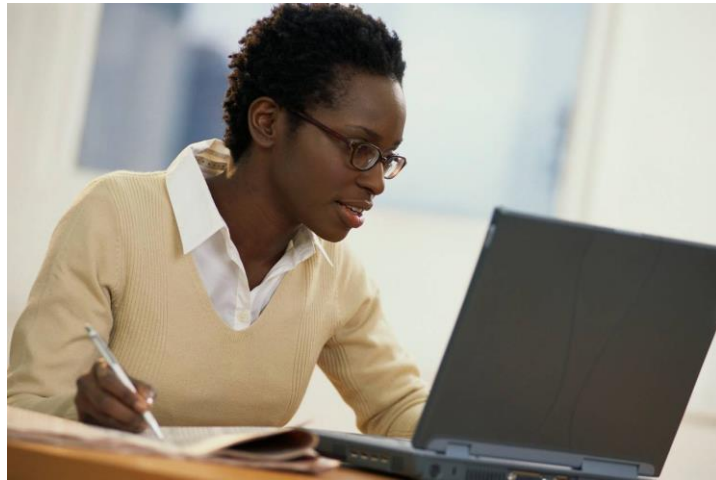
Academic teaching in a globalising world: possibilities, challenges and problems

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The interconnectedness of mobile devices has changed the way we...



Learn



Work



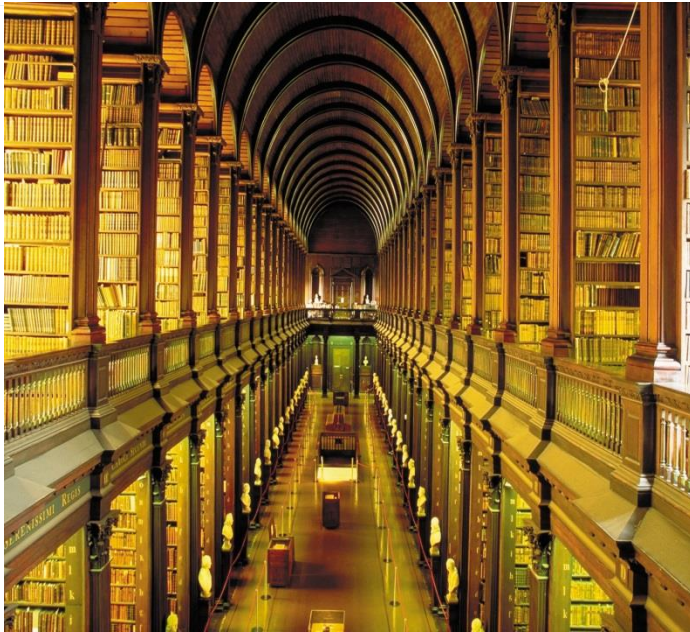
Live



Students



Universities change



- Huge amount of information available
- Subject Matter Experts
- Socially acknowledged certification



Need for change

- Growth of number of students worldwide
- Challenges in European labour market: disappearing jobs, new jobs, changing jobs
- Re-training, freshen up courses, career switch
- Degree seeking and/or certification seeking
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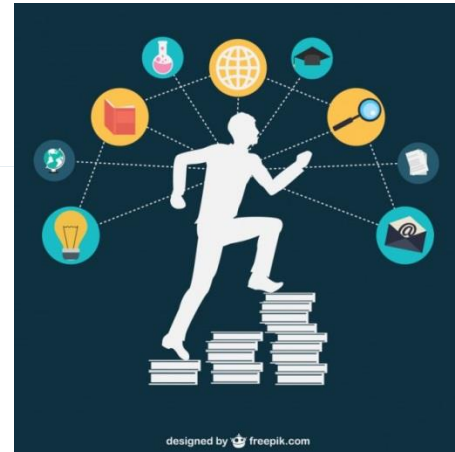


Developments in the globalising world

- Funding (less euros per student)
- Growing number of students worldwide, learning becomes less dependent on time and space
- Increasing diversity of students
- Future jobs, 21st century skills
- Impact of new technologies on society



Need for academic teaching



■ Traditional, but still valid goals:

- Educating people to become independent and critical thinkers
- Transfer of knowledge

■ New goals:

- How to deal with abundance of information
- How to tackle problems interdisciplinary
- Conceptual understanding of complex problems
- How to make use of knowledge in a meaningful way

Do we need to rethink the focus of our teaching?

2 central questions:

- 1. WHAT** do we need to teach to prepare our students for their future?
- 2. HOW** do we need to teach them?



What to teach? Content and Skills

■ Content

- Disciplinary knowledge
- How to cross disciplines
- How to handle knowledge

■ Skills

- Communicating clearly
- Collaboration
- Creative thinking
- Implementing innovations
- Making sound judgements and decisions
- Solving problems
- Developing leadership

How to teach?

Four basic (guiding) principles at WUR

1. Student as an active participant / active learning / engagement
2. Feedback is an essential part of learning
3. Fostering differentiation
4. Learning in communities



Approach: blended learning

- Rethink / redesign programmes, courses, modules and teaching material
- Technology as our partner: Technology Enhanced Active Learning
- On-campus learning should focus on higher cognitive learning outcomes / deep conceptual understanding
- Embed 21st century skills
- More efficient and effective



**WHAT
TO
TEACH**

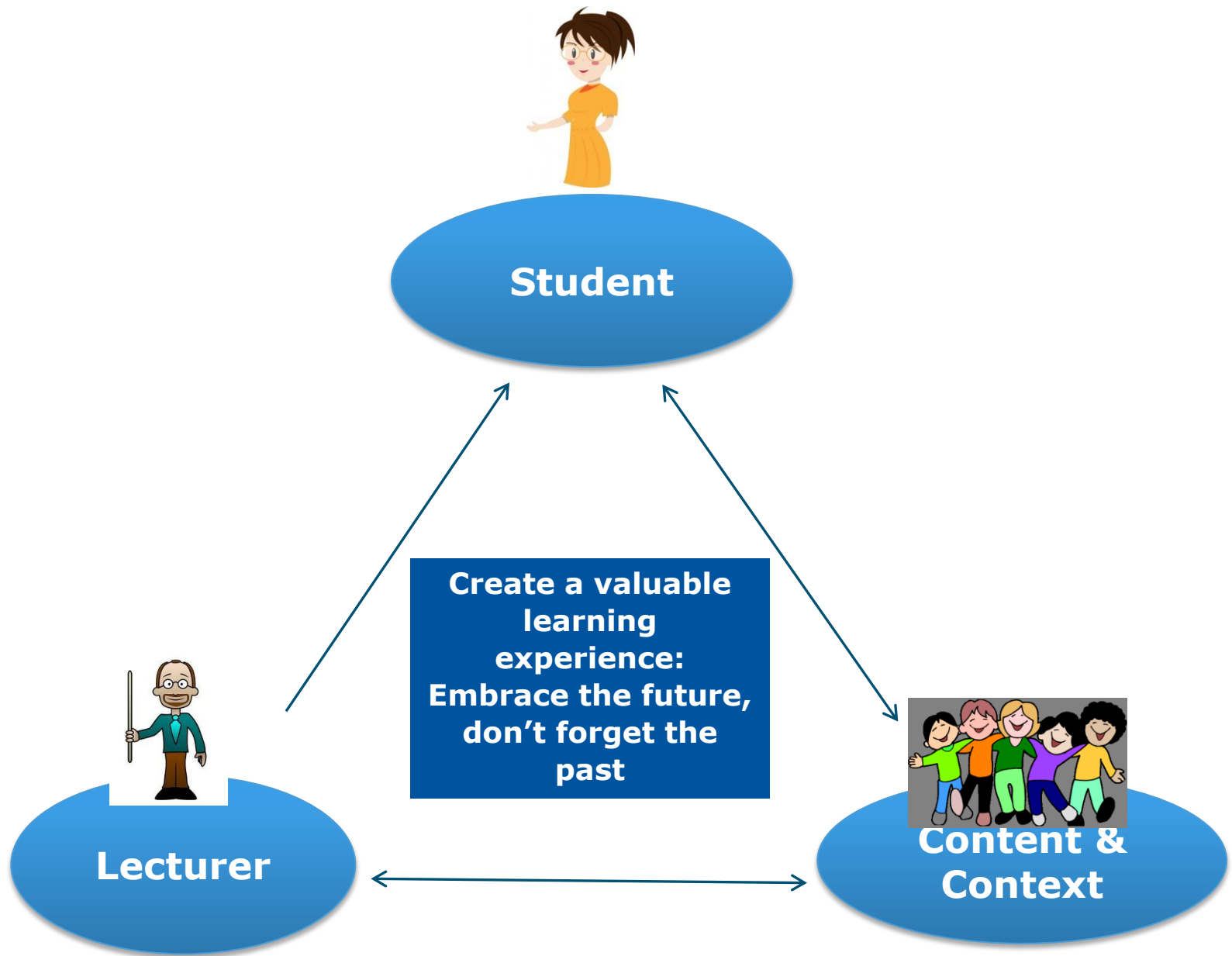
**HOW
TO
TEACH**



Learning communities

HOW
TO
TEACH

- Flipped class-room
- Peer learning and peer teaching
- Use of e-learning materials
- Connecting to real life problems from society:
working with stakeholders



Possibilities

- IT tools open up possibilities for more effective learning
- Connects to modern way of living with IT tools, appeals to students
- Teaching and learning become less dependent on time and location: more flexibility
- Education comes within reach of many more people



Problems and questions

- Diversity
 - Differences in culture
 - Differences in levels of knowledge
- Examination, accreditation, certification
- How to deal with property rights and Open Educational Resources?
- How to deal with material developed by others?
- Face-to-face contact indispensable for academic teaching?
- What about practicals and group work?

Challenges for teachers and students alike

- Students need to get used to changing from passive consumers to active learners
- Teachers need to be prepared to change their role
 - From teacher-centred to student-centred
 - Supporting students in the process of acquiring knowledge rather than transmission of knowledge
- Organisational conditions need to be in place to support innovation
 - Technical support
 - HRM should acknowledge innovation activities
 - Managers should support innovation

Attempts to tackle the challenges at WUR

- Development of distance learning MSc programmes
 - One in nutrition, one in plant breeding, each some 25 students/year
- Development of MOOCs
 - 10 MOOCs available, > 200000 students worldwide
 - MOOCs as electives for on campus students
- Introducing blended learning
 - Online material used in on-campus education (knowledge clips, practicals)
 - Flipped classroom
 - Thesis rings



Connecting to society

- We are actively promoting that real life problems are addressed by students in courses
- Attractive and motivating for students, but also for stakeholders
- ACT (academic consultancy training) is compulsory in every MSc programme: students have to work 6 weeks on a real life problem interdisciplinary
- Entrepreneurship minor in BSc, entrepreneurship track possible in MSc programmes
- Students take part in research projects in their BSc and MSc thesis, often a topic that is societal relevant

Experiences online masters

- 62 students in 2 programs/2 cohorts, (mean age 32)
- Same level of learning possible
- Positive course evaluations
- Engaged learners - and drop-outs
- ➔ Tough programs for students who combine study and work
- Impulse for innovations
- Teaching materials used in blended campus courses
- Spin-off: courses for professional learners



MOOCs experiences

- www.edx.org/school/wageningenX
- Basic for free, certificate for low cost
- Teams and cohorts optional
- Bundling in programs:
 - X series
 - Micromaster biobased economy
- > 200 000 participants



Blended learning experiences

- MOOCs as a part of a course
- Our nutrition MOOCs are used at another university
- MOOCs as electives for on campus students
- MOOCs as brushing up courses/pre-masters
- Group work appears also possible online via discussion boards, peer-to-peer education works very well
- But: on campus learning remains important, including mobility both for teachers and learners alike

Goals: flexibility, effectiveness, activating students...

Experiences with teachers

- Big investment in time and effort
- A few pioneers are running ahead and are awarded for this
- WUR spends more than 1 million euro per year specifically on innovation in IT education
- Technical and didactical support is given, stable learning environment needed
- Management stimulates innovation strongly
- Teachers lounge formed to learn from each other



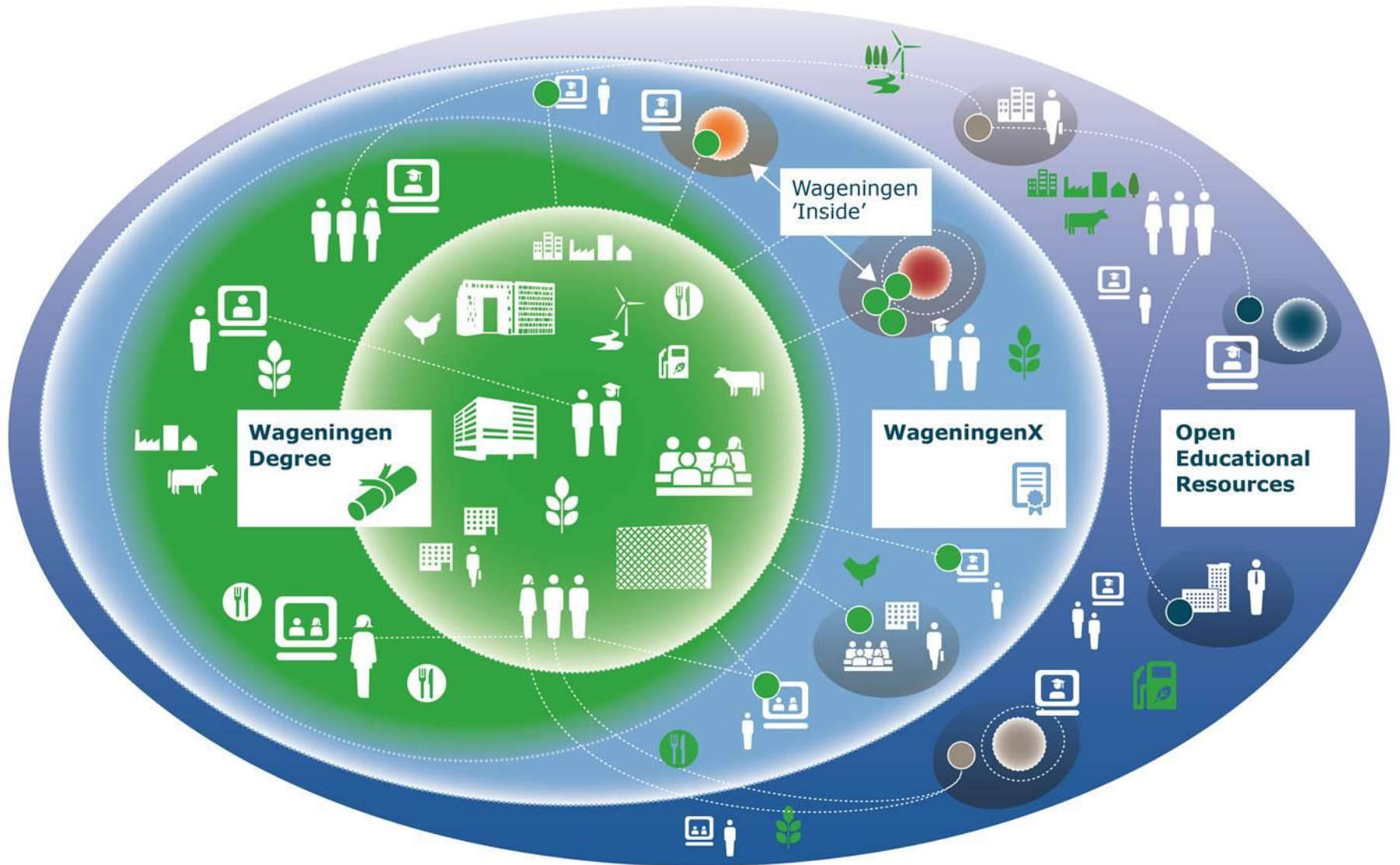
Development of education ecosystem

- Degree education
 - Accredited BSc and MSc programmes

- Non-degree education
 - Professional education
 - Micromaster (biobased economy)
 - Short courses via OER
 - MOOCs

- Ecosystem: connecting all activities

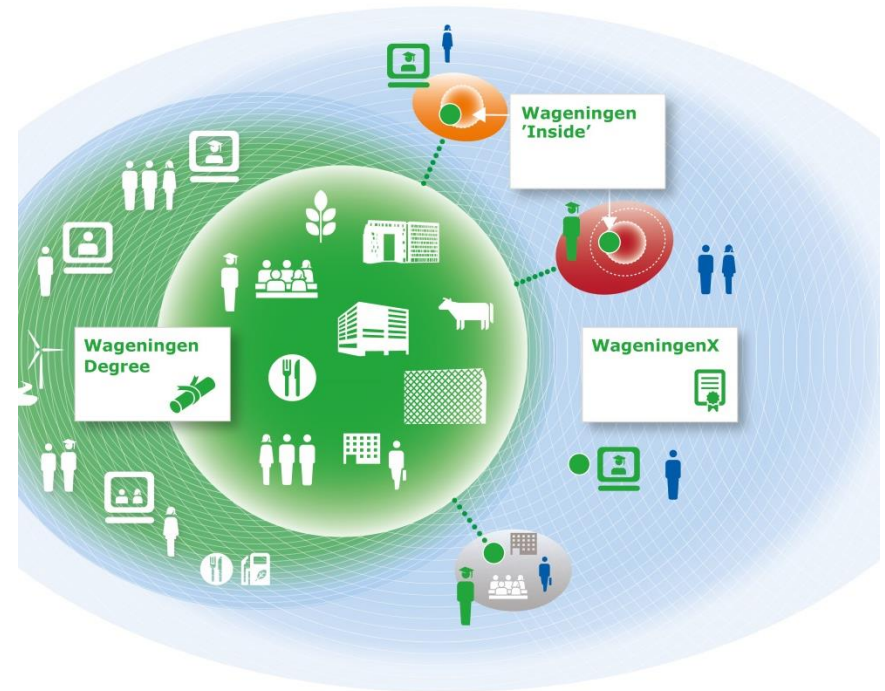
Wageningen ambition: education ecosystem



Wageningen Education Ecosystem

Impact digitalization

- Different ways of teaching/learning possible
- Scalable materials
- New target groups
- Blurred boundaries
- Flexible study-paths



Spin-offs

- Boost innovation on campus (pedagogy, support-organization)
- Renewal of campus courses, blended approaches
- MOOCs for credits: electives, SPOCs (small private online courses)
- “MOOCs as books”: re-used at other universities (License -model or OER)
- Applications on campus



Conclusion

- IT developments open up the possibilities for new ways of teaching and learning
- It is an exciting and stimulating way to deal with education in a globalizing world, both for teachers and students
- Experience is gained by trial and error
- Learning analytics are badly needed
- Whether or not we are hereby preparing the student for the global world cannot be fully answered yet
- It is clear that the academic world needs to adapt to changes whilst keeping academic values

Thank you for
your attention!

