

## Lecture Dirk van Damme

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### Higher education in transition or transformation?

Ladies and Gentlemen,

It's a real honour and a great pleasure, for which I thank the Rector and the Executive Board, to speak at this wonderful Dies Natalis celebration of Wageningen University and Research. How do we see the future of universities? Can we speak about relative stability, continuous change or do we see signs of more fundamental transformation?

Let me start with a reassuring, quite optimistic note: universities are one of the most resilient institutions human civilization has invented and there is very little indication that their existence is under existential threat. In 2030, 2040, 2050 and beyond, we will see universities flourishing all over the globe. But the word 'resilient' doesn't mean stubborn conservatism; it signifies an integration of continuity and change. Being resilient also means being flexible enough to adjust to changing circumstances. So, the question becomes whether universities have the resilience to avoid stagnation and to open up to new challenges.

Universities have a special relationship with time, unlike most other institutions of the modern world. The origins of accumulated scientific knowledge which universities have to transmit to new generations, go back to the earliest stages of civilization. At the same time, universities produce new knowledge, with which they help to construct a better future for humanity and with which new generations are educated for a lifetime in a rapidly changing world. Universities deal with a very long time horizon.

The illustrious Clark Kerr, President of the University of California and one of the greatest experts on universities, said in 1982 in his seminal *The Uses of the University*:

“About eighty-five institutions in the Western world established by 1520 still exist in recognisable forms,..., including the Catholic church, the Parliaments of the Isle of Man, of Iceland and of Great Britain, several Swiss cantons, and seventy universities”.

Sudden changes at the surface of history look rather trivial in a long-term perspective. But universities do have to deal with more fundamental changes, often below the surface, which require them to transition to a new stage or even to transform more radically. The beautiful word ‘metamorphosis’ expresses this notion of change very well.

It is fair to say that the origins of those changes often lie outside universities and the incentives to adapt are also often external. Universities seldomly change because of internal dynamics, but because the environment in which they operate is changing. There is nothing wrong with that. The real power of universities is that they are able, like no other institution, to engage in reflective change, to analyse the changing environment with the tools of scientific research and to balance the choices reflectively. So, we are not speaking about ‘disruption’, the fashionable, overused and often misused word coming from industrial innovation.

However, I do believe that we are in the midst of a time of transformational change. In the history of universities, there are long periods of relative stability and periods of accelerated transformation. When situated amid change, it is difficult to predict the outcomes and to forecast the future. Yet, we can see some glimpses of changes with a high probability.

Our current model of university education has been shaped in a previous period of transformation, stretching from the end of the Second World War well into the 1970s. Universities exchanged the old paradigm of elite education for a model oriented to

- human capital development for economic growth, prosperity, and social progress,

- massification by opening access,
- credentialism for a qualifications-based labour market,
- social mobility through meritocracy,
- a front-loaded educational life-course (concentrating all education investments in the first quarter of a lifetime),
- discipline-focused education for a rather stable occupational structure.

The merits of this model are huge and our present-day prosperity and well-being would not have been possible without it.

Adapting to this model required a lot of effort from universities. Especially massification has been and still is a difficult nut to crack. Governments relied on a funding model which implicitly rewarded the marginal cost of every additional student, while universities had to cope with the real cost. This tension could only be solved by stretching institutional capacity and by maximising the workload of staff.

Not all promises of the model have been fulfilled. It was founded on a beautiful but overly ambitious concept of equality of opportunity. University education should be available and accessible for everyone with the necessary capabilities, whatever his or her social background, social status, gender, the colour of skin, religious affiliation, etc. Despite all our good intentions and many efforts, we did not succeed. Social background still matters for success in higher education, directly or via its impact on prior educational trajectories. Successful university education is not only a matter of universal access but also of deep-rooted structural social inequalities and sometimes real discrimination. Massification has lifted the distribution of educational success but did not reduce the width of the distribution.

It is not only in international politics and diplomacy, or in welfare state policies, but also in higher education that the post-war consensus is falling apart. There are cracks in the current model, through which the light of a new and more promising model starts to shine, to quote Leonard Cohen. It would take me too long to

analyse all 'cracks' or deficiencies of the current model, so let me focus on a couple of them.

- Credentialism is definitely on the decline. Diplomas and degrees remain important, and in emerging economies they are still regarded as extremely valuable. But in open knowledge economies, credentials are less and less valued by employers. A good indicator is that there is a sharp decline in degree requirements in job ads. More and more global employers no longer ask for a university degree for highly-qualified jobs.
- Massification is under pressure. More and more governments question whether we should infinitely increase the share of tertiary-educated graduates in the population. At the individual level, a university education still yields benefits in earnings, social status, and many other outcomes. Yet, at a societal level, there are strong signs of over-schooling and degree inflation, with diminishing economic returns and substitution effects against mid-educated workers. Our societies do not need ever more university graduates to prosper and innovate. Like countries such as Germany realise, we also need well-trained mid-educated technicians and professionals.
- There are strong concerns about the impact of university education on social inequality and about meritocracy itself. The production of high numbers of university graduates has contributed to polarization on labour markets, squeezing out the middle class, and to rising social inequality, threatening social cohesion, social stability and our political democracy. Universities should critically reflect on their role in growing social inequality and polarization.
- The front-loaded model of the educational life-course, which concentrates educational investments in the first 25 years of an individual, creates the illusion that qualifications last a lifetime and prevents a real breakthrough of lifelong learning. Our educational system contrasts with the real world of increasingly diversified and de-standardised biographies. The idea that the

knowledge and skills which a degree represents, remain valid for a lifetime of work is simply illusory.

- Discipline-centric education is under a lot of pressure. Outside the realm of regulated professions such as medical doctors or lawyers, there is less and less congruence between scientific disciplines and the occupational structure. New occupations and professions, often emerging at the frontiers of disciplines (where also new scientific research findings are situated), no longer relate clearly to the disciplines.

In short, there are strong doubts that university education is still preparing people for jobs. Of course, this schematic and probably exaggerated picture would require a lot of nuances. The production of university graduates is probably still very much needed for technical universities, which are facing an enduring problem of under-supply of the qualified STEM workforce for a knowledge-intensive and innovative economy and society. But you will forgive me for painting the big picture with very large brush strokes.

What are then the characteristics of the emerging model and what are the consequences for university education in the future?

First, the new model is about skills, not qualifications or credentials. Skills are labelled as “the new currency”. The turn to skills is real and very strong, and I am afraid universities still fail to acknowledge it. Universities are hesitant to embrace skills, because they see skills as intrinsically vocational in nature. The real challenge for universities is to increase their impact on the skills debate by promoting an academic definition of skills, such as higher-order critical thinking skills and advanced research skills.

OECD data, such as collected in the Survey of Adult Skills, point to an important discrepancy between qualifications and skills. Too many graduates enter the labour market with poor skills. And even in the Bologna space, the same qualification does not have not a similar skills equivalence. As a consequence, qualifications are rapidly losing their significance as a reliable measure of the skills which employers value. This is a risky development for universities. There are

strong signs, especially in economies with more open labour markets such as the US or Australia, that employers no longer trust the signalling value of qualifications and start to move to skill assessment themselves instead of trusting the assessment by universities. Also, the rapid expansion of alternative qualifications, often driven by corporate interests and explicitly skill-oriented, such as micro-credentials, digital badges or nano-degrees, is part of this trend. Employers seem to value a skill-focused certificate more than a university degree.

Second, the new model is about new skill demand. I know, there is a lot of rhetoric about the so-called 21<sup>st</sup>-century skills. But there is also a real change happening in the demand for skills, as a consequence of digitalization, automation and artificial intelligence. Routine tasks are disappearing very rapidly in the task input of jobs, but higher education is still predominantly focused on training young people for predictable, procedural tasks. There is growing frustration among global employers that universities are not adjusting their curricula and teaching and learning environments to address the need for creativity, problem-solving, communication and critical thinking skills. We don't have a PISA for higher education which is assessing learning outcomes of graduates, but a recent assessment of critical thinking skills of university graduates in Finland demonstrated that only half of them had the advanced critical thinking proficiency required for the job reality. And the value-added between the first and third year of a bachelor's degree was rather minimal.

Third, the new model asks for an innovative redesign of curricula and learning trajectories. There is a lot of confusion about interdisciplinarity, which often leads to the superficial mingling of different disciplinary content. There are also interesting experiences, for example in the university colleges in this country, to develop new blends of disciplines. In the international discussion, there is an emerging consensus that there is nothing wrong with disciplinary knowledge. A university graduate has to have a deep knowledge of one particular domain. But on top of that, a horizontal capacity geared towards the development of transferable, generic skills has to be built. This T-shaped model is gaining a lot of

traction. It requires the development of meta-cognitive skills and the capacity for transfer and synthesis. Especially in the context of AI, those advanced horizontal skills, such as high-level synthesis and decision-making in uncertain circumstances, become extremely important. A massive endeavour of curriculum redesign is needed to build those skills into university education.

Fourth, the new model will be a model of lifelong learning. The Netherlands, as well as my own country, concentrate their university education investments on the traditional age cohort, entering university at the age of 18. In this country, only 5% of first-time university entrants are over the age of 25. Regulation is working against part-time study and new combinations of work and study. Whereas society is moving in the direction of diversification of biographies and the economy is asking for more flexible lifelong learning, with opportunities for reskilling and upskilling along the life-course, university education enforces an outdated model of front-loaded education, of which the qualification is supposed to last a lifetime full of change.

This is unsustainable: skill depreciation is real, the half-life time of skills is shortening. After half a century of empty rhetoric about lifelong learning, digitalization is radically changing the learning biographies of people. We need shorter initial education with more flexible combinations of part-time study and work at later stages in the life-course. In the highly diversified and flexible environment of lifelong learning, universities no longer will have the monopoly and there is a huge need for innovative approaches for universities to play a significant role in this market. But apart from the rather narrow and very specifically tailored programmes offered by other providers, universities will retain an important role in the domain of research-based education, be it that it will be more and more in a 'network education arrangement': educational programmes offered in a cooperation model, for instance: joint degrees, executive master programmes with industry etc, European University alliances' joint courses, etc. An active role of universities in post-initial, lifelong learning will be critically important. The idea that a research-based education is something for

the initial phase, and that lifelong learning is about more targeted, vocational learning, is simply very, very wrong.

Finally, the new model will be about a diversified teaching and learning landscape. The pandemic has accelerated the development of distance education, online learning and hybrid approaches. This required a very steep learning curve for university teachers, support staff and technical support units. The question now is how to benefit from this experience to design the teaching and learning environment of the future. There is a growing consensus that MOOCs can play a role for underserved populations and lifelong learners, but not as an alternative for a university education. Moreover, the experience with online learning has not been overwhelmingly positive; research has indicated quite a lot of negative outcomes. Students seem to value traditional formats such as in-person lectures and seminars. In some countries, they have openly questioned whether they should continue to pay huge fees for poor online education.

The debate on what happened during the pandemic should inform the redesign of teaching and learning practices and environments. It is time to move away from fashionable, but largely empty concepts which have dominated the debate so far. Recent research seems to indicate that self-directed and activating learning approaches fail to produce equivalent learning outcomes than cognitively demanding lectures and seminars. The future will show a very diversified landscape of teaching and learning delivery modes with combinations of synchronous and asynchronous, online and on-campus, digital and in-person teaching and learning. It will require a lot of ingenuity of university teachers to design the smartest and most effective approaches, but there are a lot of lessons to be learnt from the experiences during the past pandemic.

The Netherlands has been very successful in developing a high-quality university education system under the old paradigm: an accessible, high-quality system with high output at a relatively low cost. Will this country suffer from Jan Romein's famous law of the handicap of a head start, meaning that high performance in the old model would limit its capacity to switch to the new model? I think the risk is



real, but that would be an underestimation of the reflective capacity and innovation of the Dutch system. It is essential that the system fosters its capacity for analysis, reflection and change management. Moving from the old to the new never is straightforward; it is often messy and difficult. And much is still unclear. But, as this dies meeting demonstrates, the willingness to change is there. And I have to congratulate Wageningen University and Research that it takes this reflection on the future of higher education very seriously and that it engages in evidence-based innovation in teaching and learning.

Let me conclude with some thoughts on what is happening today on our European continent and what keeps us busy and awake at night: the war in Ukraine. Whatever the outcome in the short term, the medium- and long-term consequences will be huge, also for education and research. The world is moving, once more, to a multipolar reality, with large states dominating so-called spheres of influence. What is then going to be decisive for global success and impact in the 21<sup>st</sup> century? It will be education, research and innovation. We already see the importance of technology in the ongoing conflict. I do not believe that a system which is not valuing the free flow of ideas, the education of critical citizens, academic freedom, fundamental research, open innovation systems has a chance to foster economic success, prosperity for its citizen and a bright future for its children. Beyond the tragedy that is evolving before our eyes, this seems to be the most important challenge.

Thank you for your attention and I wish Wageningen University and Research a flourishing future!