ACCELERATION AGENDA FOR INNOVATION IN EDUCATION

ASSOCIATION OF UNIVERSITIES, ASSOCIATION OF UNIVERSITIES OF APPLIED SCIENCES, SURF

2017

FOREWORD

The potential of how ICT can contribute to improving the quality of education is huge. But the effort needed to realise this potential is far from small, as institutions introducing innovation in education are finding on a daily basis. This reality was confirmed in Boston, where 10 Directors of university of applied sciences and research universities, including Harvard and MIT, EdTech startups and EdX, visited the MOOCs platform as part of a SURF study trip which took place in April 2017. Also there, substantial investments in innovation in education haven't automatically accelerated change in education. Although a large part of innovation in education needs to be organised within the institutions, collaboration can bring benefits in a wide range of areas. For example, the joint collaboration towards EdTech companies can improve the synergy between education and suppliers. Institutions can also, for example, work together to ensure that students are provided with digital teaching materials, and lecturers are able to (re)use each other's teaching materials. All institutions can also benefit from better combining the research into the effectiveness of innovation in education. With the Acceleration agenda for innovation in education, the Association of Research Universities, the Netherlands Association of Universities of Applied Sciences and SURF are jointly committed to seek synergy, whilst allowing space for each of their individual ambitions.

The Netherlands has an excellent digital and physical infrastructure and open culture of collaboration between the authorities, the academic world and the business world, allowing us the unique opportunity to adopt a global leading role with regard to innovation in education.

Institutions that invest in digitalisation and innovation in education will all encounter similar difficult issues. With the acceleration agenda we are expressing our ambition to move forwards together, by forging coalitions, sharing knowledge and researching what works and what doesn't work. We will share best practices and best failures with each other, boost developments and deliberately seek collaboration with EdTech companies. This is based on the principle that the accessibility to education will continued to be provided within a safe learning environment.

We are convinced that the implementation of this acceleration agenda will strengthen higher education in the Netherlands, both nationally and internationally. This is good news for our students, for the labour market they will join and for the Dutch economy. Successfully completing this agenda is a major challenge, but we have a great time ahead of us in which we can experiment and learn from and with each other, which is why we are happy to involve other parties, such as OCW (Ministry of Education, Culture and Science), NRO (Netherlands Initiative for Education Research), ISO (International Student Organisation) and LSVB (Dutch Student Union). Together we are putting the Netherlands on the map as the frontrunner in the area of innovation in education.

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The Netherlands Association of Universities, the Netherlands Association of Universities of Applied Sciences and SURF jointly present a agenda to accelerate innovation in education. The first inspiration for this came during the SURF 'bespoke education' study trip, which included research and applied science university administrators[1]. Within the Association of Universities, this acceleration agenda is a specific follow-up to the publications 'Dutch research universities and technologies in education'[2] and 'Digitalisation in university education', published at the start of the 2017 academic year[3]. In this way, the Association of Universities is providing content for the educational pillar of the 'digital society' project[4]. For the Association of Universities of Applied Sciences, the acceleration agenda is the fruit of its ambitions, set out in the strategic agenda '#Higher professional education 2025 - Agile and resilient'[5]. This acceleration agenda also includes the conclusions from the planning document 'Sharing digital teaching material' (Rob Fastenau), who carried out a survey between April and September 2017 on behalf of the Association of Universities and the Association of Universities of Applied Sciences on the opportunities for accelerating sharing of digital teaching materials. For SURF, this acceleration agenda is the kick-off to the Strategic Plan for 2018-2021.

WHY ACCELERATE NOW?

Information technology is permeating society ever faster and deeper. The opportunities provided by ICT are growing at an unprecedented rate. This has major consequences for how people live, work and learn. Education is facing the task of making good use of the opportunities provided by digital technology, and of dealing with the risks and threats.

There are many different reasons why the Netherlands should push hard to make use of technology, accelerating the rate of innovative teaching in higher education. Technology can make a contribution towards creating education that is more accessible, more made-to-measure, and which therefore results in lower drop-out rates and better results from students. Students themselves often seek more flexibility in education, so that they can combine studying, working and life, especially now that lifelong learning is growing in importance. Students live digitally and expect to also be able to make use of the benefits of ICT in their education. Finally, technology is developing at a rapid rate. The content of jobs and professions is changing at lightning speed, existing jobs are disappearing and new ones are being invented. This has a major impact on students, faculty members and the education process.

Alongside all the opportunities that digitalisation offers, there are also some risks. Technology in higher education is leading to some major shifts worldwide: private providers of online education and EdTech companies are carving out their own niches in the market for higher education. The use of study data offers major opportunities for customised tutoring, but also raises issues around privacy and security. The wide range of available applications means that a system needs to be imposed on options and interoperability, in order to prevent lecturers to be overwhelmed, and every course requiring that students learn to deal with a new digital landscape. No-one can predict how digitalisation will have changed higher education in ten years' time, but we can be sure that digitalisation will have a major impact. We are living in dynamic times: new opportunities are constantly appearing, and different parties then work to exploit these opportunities. Sitting on your hands and waiting to see what happens next is not an option. The acceleration agenda marks out the way ahead that research universities, universities of applied sciences and SURF want to plan together, in order to join forces to achieve our shared ambitions more rapidly.

The Netherlands is a compact, highly developed and well organised country with outstanding physical and digital infrastructures. This exceptional combination of characteristics means that our country has a unique opportunity to take the global lead in innovation in education. Although institutions may vary in how they see what lies in the future, and they may also attach different strategies to these, all institutions need to invest (heavily) over the next few years in digitalisation and innovation in education, and all institutions will encounter tricky issues in doing so. The acceleration agenda aims to make those investments more efficient and more effective, by looking for synergies wherever possible. We therefore want to focus on pooling initiatives, knowledge and experience, and getting to work quickly and practically on the topics where synergy is possible and opportunities exist for higher education in the Netherlands. We are taking a 'scrum' approach to this: we know which way we want to go, and we have defined a number of principal targets, but the way we will reach them is not defined in advance. We therefore are creating a platform where initiatives can be shared and reinforced.

WHAT OPPORTUNITIES DOES DIGITALISATION OFFER?

1 Better connection to the job market

The job market is changing rapidly. Graduates need to have digital skills for their jobs. That means casting a critical eye over the contents of curricula and attainment targets. New professions also demand new skills. By including digitalisation in the curriculum, we are better preparing our students for a rapidly digitalising job market. This means both applying ICT to specific subjects and skills that students own, with an eye to later professional use as well as being 'digitally savvy'. Being able to rapidly find your way through the information overload of the digital world requires exercising critical faculties.

2 Making education more flexible

Digitalisation can contribute to making education more flexible, if that suits the strategy and ambitions of the institution. If students can take modules online, if there are more opportunities for testing any time anywhere, if there are more combinations available to students who are designing their education, and if there is more variety in awarding (micro-)diplomas, then it becomes possible for students to pursue their education at the speed that best suits their talents, learning style and circumstances.

3 Learn smarter and better by using technology

Digitalisation can contribute to improvements in the quality of education. Face-to-face time can be used better, thanks to online preparation by the students. This offers new possibilities for project learning and distance learning (virtual classroom). Digital formative testing can give students an insight into their progress, and offer opportunities for customised tutoring. Learning analytics and modern student tracking systems keep students focused and add direction and depth to their study work. New technologies such as 3D imagers, Virtual Reality and online labs make it possible to teach in realistic practice environments.

HOW CAN WE ADVANCE?

We have plenty of ambition. The Dutch research universities, universities of applied sciences and SURF are working together to develop a short-term, concrete agenda for work over the next four years. They have set up a steering group that consists of administrators from the institutions. The steering group will present the agenda of work by May 2018 at the latest, to the boards of the Association of Universities, the Association of Universities of Applied Sciences and SURF. The institutions will drive the execution of the agenda of work by allocating people and funds. Not all institutions or courses will want or be able to accelerate at the same rate, and not all institutions will want or be able to set the same priorities. The approach that we envisage in this acceleration agenda offers space for the individual ambitions and targets of institutions, by assuming coalitions that will bring together resources, pool knowledge and will be facilitated in this by the Association of Universities, the Association of Universities of Applied Sciences and SURF. In this way, progress can be made across the board. Innovation in education is a broad term, and covers many different topics. The level to which collaboration is necessary in the area of innovation in education varies for each topic. For topics like making applications interoperable or making digital teaching materials available, the collaboration needs to be tighter, while in the area of content and teaching methodologies it is precisely the differentiation between institutions that matters. For some topics, you could talk about a common interest across sectors (research universities, universities of applied sciences, full-time versus part-time or distance learning), while there are other items where institutions deliberately want to differentiate themselves, and collaboration is either not on the agenda, or to a much lesser extent. This all requires an approach that takes control where it is necessary and achievable, and offers space and facilitation where that is what is wanted. Per topic there is therefore a deliberate choice of specific actions somewhere on the scale of information, sharing best practices, harmonisation to standardisation and centralising.

Institutions and teaching staff are all very busy with innovation in education, and many of them are contributing new developments to the goals of this acceleration agenda.

Higher education in the Netherlands is therefore by no means starting from square one with this acceleration agenda. At the same time, all the efforts and investments of the last few years have not as yet led to any large-scale changes in education. We can build on the basis of successful initiatives, but at the same time a sea change is needed if real acceleration is going to happen. The changes that digitalisation brings with it are fundamental: they are more than 'normal' organic changes, bigger steps need to be climbed that require more than normal efforts. Although no magic wand has yet been found to make it happen, it is crystal clear that higher education needs to have a shared vision, shared commitment and joint investment if it is to be able to cash in on the promise of ICT for education. With this acceleration agenda, the Association of Universities, the Association of Universities of Applied Sciences and SURF are committed to seeking a joint route to successful change. Reflection on why the impact of ICT on education so far has still been limited within many institutions, and why existing initiatives have still not delivered the desired effects, is just one part of this.

WHAT ARE WE GOING TO DO?

Actions Better connection to the job market

Digital literacy as part of the curriculum

We will improve the digital skills of our graduates. This involves basic ICT knowledge, information skills and computation skills, with the exact content varying per course. We will therefore be discussing with our lecturers, directors of education and deans which digital skills are relevant for each course, and how these can be added to the curriculum. As well as paying attention to digital skills, we also need to pay attention to the digital resilience of our students, and to ethical issues relating to digitalisation. We also need to analyse what we offer in terms of education: are there blank spots? Are we attracting enough students into areas such as data science, informatics and computer science? Will our future lecturers be well prepared for the new digital world in which they will be working? And are we also involving students from other areas in the challenges and issues that digitalisation brings with it?

Actions Making education more flexible

Institutions vary as to how they interpret and deliver on the concept of making education more flexible. Nevertheless, it is clear that flexible education is a(n international) trend: modularisation, micro-credentialing[6], online distance learning, hybrid forms with face-to-face and online teaching (also by other institutions) are becoming steadily more common. For institutions who want to be more flexible, there are specific issues to be addressed[7]. One of the challenges here is the need to enable standardisation and flexibility. Standardisation means of course having to invest first, before any profits can be made. So it is not self-evident. In the acceleration agenda, we lay down rules for formulating shared ambitions in relation to increasing flexibility and the necessary associated agreements and preconditions for offering flexible education. By organising shared preconditions in areas including identity management, and other technical and educational logistics prerequisites, it makes things simpler for the institutions who want to make more flexible education possible. In order to be able to offer students more flexible education, we are researching which infrastructural and organisational things higher education can set up jointly. We are also looking at what we can learn from successful initiatives by various institutions in the area of increasing flexibility. We are definitely looking at options for micro-credentials, offering a common educational catalogue and a student-centric portfolio.

Actions Learn smarter and better by using technology

Opening up to EdTech companies

Billions are being invested in EdTech companies. In the first six months of 2017, it was already 1.8 billion dollars[8]. Suppliers and start-ups are offering impressive products, but far from all of them are offering what higher education actually needs. Suppliers and start-ups also often fail to make use of standards that enable interoperability. To be able to make more use of the innovative drive of EdTech companies while at the same time having better coordination, we are going to experiment with EdTech companies in 'do-tanks'. We create the ideal preconditions, and make facilities available for institutions and companies to experiment together, and we make sure

that by working together we can influence new developments, can manage the direction of the market and can place demands on applications. Thanks to this collaboration, we can accelerate innovation in education and increase the adoption of these educational innovations within institutions. One point to bear in mind here are the European tender regulations. These regulations often get in the way of innovation in higher education. We are researching how we can best work together, facing and with the market, within the framework of the European legislation.

Sharing digital teaching materials

The availability of digital teaching materials has a huge impact on being able to offer more flexible education. As students have access to their learning materials all the time and everywhere, it becomes easier to study at your own pace, in your own location. The availability of many different types of material offers students the option to select materials that match their own preferences. If lecturers develop teaching materials jointly, that helps to improve the quality of the materials available. Publishers are investing hugely in the development of digital teaching materials.[9] The Netherlands not only wants to make all research data and results available under an open licence, but also all teaching materials.[10] We are working with publishers to seek a form of collaboration that delivers the best possible outcome for all parties: students, lecturers, libraries, institutions and publishers.

Moving to evidence-based innovation in education

The use of technology in education is a means, not an end in itself. The goal is to provide high quality education, that is provided as far as possible in a customised form and that prepares students for a technology intensive job market. The possibilities offered by technology to achieve this goal are very promising, but a lot of research is still needed in order to find out exactly how they can be used. Together with NRO (National Steering Council for Educational Research) we can deliver some impetus to the research into educational innovation in higher education. We are organising a national, multi-disciplinary research programme, so that research will be carried out into the effects and factors that determine success in the use of technology in higher education, and so that education can be shaped by evidence-based conclusions. In addition, we are setting up exchanges of the results of current research projects, in order to get more payback for the efforts being made in research.

Using study data

Because students are learning more online all the time, there are ever more data available. These data can deliver insight into the study process, and can be helpful for both students and lecturers. For example, suppliers who offer digital learning environments, or publishers who offer learning methods can make use of the study data in their products. But students do not learn in a single environment. For the best insights into progress during study, you need to combine data from different sources. Currently that is often not possible. In addition, those who provide education want to have control of the data and the analyses that are performed. We are ensuring that care is taken with privacy when handling student data. We sign clear agreements about this, and are collaborating on a secure and reliable infrastructure for study data.

MAKING SPACE FOR INNOVATION

In order to be able to achieve our ambitions, we need to make more room for innovation in education. [11] **Two points are especially urgent:**

- There is still not a sufficiently strong ‘shared vision’ of educational innovation within higher education, which means that educational innovation and digitalisation is not making progress or not enough progress on the preconditions and policy measures to apply to higher education. Institutions need OCW, NVAO, NWO, KNAW, ISO and LSVB in order to make space within the framework for educational innovation. Right now, there are too many rules and other pre-requisites within the framework that are hampering innovation in education.

- Lecturers do not have enough freedom or enough incentives to innovate. In academic education, the dominance of research over education plays an important role in this. In higher professional education, the emphasis is more on how teaching is delivered, than on innovation in education.

Actions Making space for innovation

Coordination of organising a broad consensus on the urgency of innovation in education.
The Association of Universities, the Association of Universities of Applied Sciences and SURF are organising a dialogue with OCW, NVAO, NWO, KNAW, ISO and LSVB on the importance of innovation in education, and are documenting jointly with these parties all the bottlenecks within the system, in order to come together and make room for innovation in education.

Accelerating the development of a vision for innovation in education
Accelerating innovation in education will stand or fall by having a clear vision of what innovation in education means. Each institution defines its own vision of innovation in education, and its own strategy to get there. But much can be learned from the experiences and visions of others.
We are therefore working together to create building blocks for both visions and policies that are inspiring and can be applied in practice for institutions who are developing or revising their own policies. The dialogue about the goals we are aiming for with educational innovation provides the foundation.

Facilitating professional development for lecturers
Lecturers are the spearhead for innovation in education. If lecturers have too little space and/or support, it will not be possible to achieve the ambitions in the acceleration agenda. Within the acceleration agenda, research and applied science universities will provide lecturers with the space needed for professional growth. Digitalisation makes education more about teamwork, where lecturers are supported by specialists in areas such as online teaching methodologies, instructional design, video and social media. We are working together to create or adjust the available professional growth opportunities for lecturers in the area of educational innovation, including via BKO (university teaching qualification) and BDB (university teaching skills qualification), and we are jointly researching how exactly we can best provide support to lecturers.

Footnotes

1 https://www.surf.nl/kennisbank/2017/surf-studiereis-onderwijs-op-maat-2017-naar-boston.html (in Dutch)
2 https://ankamulder.weblog.tudelft.nl/files/2017/08/Nederlandse-universiteiten-en-technologie-in-onderwijs-Anka-Mulder-Printversie.pdf (in Dutch)
3 http://vsnu.nl/files/documenten/VSNU Digitisation in academic education.pdf
4 http://www.vsnu.nl/en_GB/digitalsociety
5 http://www.verenigninghogescholen.nl/kennisbank/vereniging-hogescholen/artikelen/strategische-visie-hbo2025-wendbaar-weerbaar (in Dutch)
6 Micro-credentialing is "slicing and dicing" and can be compared to a mini-diploma, or a certificate (or badge) for learning in smaller units and having these certified. A micro-credential shows that specific expert content has been mastered (source: https://www.surf.nl/kennisbank/2016/begrippenkader-onderwijsinnovatie-met-ict.html). (in Dutch)
7 https://www.surf.nl/kennisbank/2016/notitie-flexibele-onderwijslogistiek-voor-flexibel-onderwijs-orientatie-en-inventarisatie.html (in Dutch)
8 http://hackeducation.com/2017/07/01/business-of-ed-tech
9 https://fd.nl/ondernemen/1180187/amerikaans-investeringsfonds-koopt-grootste-nederlandse-leverancier-schoolboeken (in Dutch)
10 See http://www.openaccess.nl/en and https://www.rijksoverheid.nl/documenten/beleidsnota-s/2015/07/07/de-waarde-n-van-weten-strategische-agenda-hoger-onderwijs-en-onderzoek-2015-2025 (in Dutch)
11 See also the report on Open and Connected Higher Education from Rob Fastenau, who published an opinion on the acceleration of innovation in education on behalf of the Association of Universities and the Association of Universities of Applied Sciences.

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