

REACHING NEW TARGET GROUPS THROUGH OPEN AND ONLINE EDUCATION

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Open and online education can be effectively applied to ‘new’ target groups in both the undergraduate and postgraduate segments. Amongst other resources, these target groups require tailored, flexible education formats, individual learning pathways, more accessible lifelong learning programmes and the opportunity to keep abreast of rapidly developing fields. This article describes institutions’ efforts to adapt to these developments on the basis of one case study from the higher professional education sector, and two case studies on education at research universities.

Investing in suitable education for new target groups

According to the specially-themed ‘Reaching new target groups’ edition (SURF, 2015), the higher education sector has ample reasons to invest in new target groups. Rapid social changes are creating demand for new skill-sets, also referred to as ‘21st century skills’. As the various articles in the specially-themed edition demonstrated, the higher education sector will have to adjust in order to meet the demands of its new target groups: education will have to become more flexible. As the articles also underline, both education institutions and the business community agree blended learning will be crucial in future. The availability of up-to-date content that enables businesses and their employees to keep up with rapidly evolving developments will be more relevant than extensive degree-oriented programmes. Collaboration and joint development of open and/or online education will allow for the reduction of costs and sharing of knowledge. Online and open education allows for a more accessible and effective lifelong learning process.

A multitude of questions, a diverse range of answers

The higher education sector can help address a wide range of questions. Which target groups are there, and what are their learning needs? Which didactic approaches are best suited to these needs? Will we be seeing more à la carte education? Does postgraduate open and online education require a different form of didactics than undergraduate education? Do universities of applied sciences and research universities apply a different approach in this area?

This article seeks to address these questions on the basis of case studies at Wageningen UR, Elevate Health (University Medical Centre Utrecht) and HAN University of Applied Sciences. As it turns out, there is a wide range of different approaches and blends, with varying degrees of openness. Both universities of applied sciences and research universities are reaching new target groups by offering increasingly ‘à la carte’ education. This format reflects the needs of both learners and the professional field. Whereas the research universities featured in these case studies are more focused on course or degree-oriented education tailored to the needs

of the learner, the higher professional education institutions tend to cater to the wishes of employers and employees. Most importantly, however, flexibilisation and modularisation are proving crucial in the effort to reach new target groups through open and online education.

Wageningen UR case study

Wageningen UR has a clearly-defined mission: improving global quality of life through its knowledge of the natural environment and natural processes within the domain of healthy nutrition and living environments. We are dedicated to ensuring that our knowledge reaches a broad range of target groups around the world. In service of this ideal, our institutional profile is based around the concept of an academic education ecosystem. This offers more possibilities than a traditional university with a physical campus: our education will also increasingly focus on target groups that do not attend campus and students that wish to acquire academic knowledge without necessarily wanting to obtain a degree certificate. Wageningen UR will thus be focusing on the development of both accredited online BSc and MSc programmes and online modules and courses (resulting in the attainment of credits) and the development of a range of open and online courses (MOOCs).

The first two online Master's programmes started in September 2015, with a total of 45 participants. The majority of students are combining the online Master's with a job and/or are bound to a specific location due to family-related circumstances. We will be offering more online MSc programmes in Wageningen UR's core focus areas over time. This will also benefit our on-campus students: as more courses become available in online format, students will be able to shape their study pathways more flexibly and adjust their study pace to their own individual learning style more effectively.

The open and online courses (MOOCs) developed in Wageningen are made available through edX as a part of Wageningen UR's objective to disseminate its knowledge to a large group of interested parties around the world. The research university will be using several of the MOOCs currently being developed as refresher courses for incoming students or 'standard' courses in the range of available education for on-campus students. In future, we aim to enable students to acquire knowledge that is not available within the institution by means of MOOCs or online courses offered by other research universities. This will facilitate the further differentiation of our learning pathways, allowing students to design their own individual programmes from their host institution.

When combined with subjects offered in open and online format, this should eventually result in a certificate with defined credit value. The cumulation of certificates with credit value will also enable students to enrol in BSc and MSc programmes. This solution will be especially useful to lifelong learners seeking to refresh or expand their knowledge and maintain their employability. Students will be able to opt for either a full academic degree or individual certificates.

We have invited institutions from around the world to organise their own additional education services such as working groups, additional lectures and assessments on the basis of our MOOCs. In the process, they will become 'educational hubs' for the knowledge developed here in Wageningen. This can be especially useful to emerging economies. Conditions for the use of non-open materials in online courses can be regulated by means of licensing agreements. For example, the 'food systems' course based on a MOOC developed in Wageningen could be made available to students at universities in Africa, who would then learn under the supervision of local lecturers capable of adjusting course content to reflect the local context.

The campus is and will remain the 'richest' learning environment, allowing for personal interaction and mutual inspiration. Existing online materials can be applied to intensify our focus on concepts such as blended learning and the 'flipped classroom', in order to free up capacity for more in-depth exploration of specific subjects, debate and project-based learning. Online students, professional learners and MOOC students will also be invited to take part in on-campus summer schools, practical lab training, conferences, hackathons and boot camps in order to get a taste of the 'Wageningen' experience and the inspiration that comes with personal interaction. A smart, flexible organisational structure will allow almost all students to acquire the specific knowledge and skills that simply cannot be learned online.

Elevate Health case study

Elevate is seeing a rise in global demand for affordable high-quality undergraduate and postgraduate education. In parallel to this development, students' expectations in terms of the accessibility and user-friendliness of education are also rising. If the education sector is to meet these demands, it will have to intensify its focus on social interaction, personalisation and 'deep learning' in the years to come.

Various types of open and online education

Online open education is experiencing a boom. All leading international institutions are currently investing in various forms of this new teaching format. Utrecht University and University Medical Centre Utrecht have decided to establish a platform for small-scale online education under the name 'Elevate Health', or Elevate for short. The platform is accessible to higher education institutions around the world seeking to offer – generally for a fee – SPOCs: Small Private Online Courses. Elevate also develops open and online education that is then offered free of charge in the form of MOOCs through the Coursera platform. The platform develops this education in collaboration with Utrecht University and the University of Amsterdam.

New target groups

Elevate was established in order to make higher education (and research results) structurally available to target groups that are currently still unable to access these resources. Elevate's target groups consist of professionals that opt for online learning due to the logistical challenges of combining a busy practice, family life and commuting, Master's students seeking affordable higher education and course participants from low and middle income countries. The price of this education can be lowered in these countries by charging higher fees to participants in Western nations.

Social interaction

The aspects of interaction and dialogue are key to online academic education. Students learn how to develop critical thinking skills and link their own knowledge to new concepts by juxtaposing different opinions. Online education thus requires an intensive focus on the optimisation of interactions with lecturers and fellow students. As a result, the aspect of interaction plays a prominent role in course design. There is also a range of available tools that can be applied in support of this process. These resources are expected to evolve over the years to come, making it easier to surmount technical obstacles as students become more accustomed to digital communication.

Personalisation

Participants in postgraduate education and other forms of teaching value flexibility. As a result, intensive attention is devoted to the aspect of 'user-friendliness' and the personalisation of teaching materials. For example, students can already choose

whether they wish to attain their learning objectives by reading an article, watching a video or taking a multiple-choice test. In future, robotisation and the smart use of learning analytics may yield even more opportunities for personalisation.

‘Deep learning’

Several decades ago, students would visit their professors in person, ensuring a genuine ‘deep learning’ process. However, lecturers operating within the framework of online learning often opt for an approach that results in ‘superficial learning’, such as the memorisation of factual knowledge. Although factual knowledge represents an important basic foundation, deeper forms of learning – such as the process of establishing connections and critical thinking skills – are also crucial. When it comes to online education, these types of learning tend to take different forms than they would in the case of their campus-based equivalent. In many cases, lecturers are still uncertain what approach to take or opt for the same time-consuming methods they would use in campus-based education. The latter option is simply not tenable in the longer term, especially in view of the expected increase in online student numbers. In an effort to address this situation, Elevate is working to identify strategies that enable students to achieve the same level of ‘deep learning’ without causing lecturer contact hours to rise at the same rate as student numbers. The preliminary outcomes of this study were published in September 2015.

Improving accessibility

Elevate is a not-for-profit not-for-loss initiative: any profits will be spent on research projects aimed at improving healthcare in low and middle income countries. Elevate also participates in the development of education for these countries, such as the recent development of a MOOC on Ebola. The aim is to connect a growing number of institutions and provide global access to the same high-quality affordable education available here in the Netherlands.

Case study: Master’s in Neurorehabilitation & Innovation at HAN University of Applied Sciences

The non-subsidised two-year Neurorehabilitation & Innovation Master’s programme (MNR) provided by HAN University of Applied Sciences offers students from paramedical and nursing professions the skills they need to become experts in their field. Neurological disorders are frequently complex, and require collaboration between a large number of occupational groups. This, in turn, requires an effectively organised care system. Furthermore, the care sector is developing at a rapid pace. Staff members with a MNR Master’s degree are assigned to coordinate the provision of care and implement healthcare reform and innovation.

MNR caters to a diverse range of target groups, each with their own diverse characteristics, motivations and wishes. Various MNR projects have been initiated as a part of the HAN-wide ‘Working and learning’ project. Key words include flexibilisation, modularisation, continuous learning tracks and tailored education. The deployment of open and online education is a crucial factor in the success of these educational innovations.

All projects are ultimately aimed at creating an open online Neurorehabilitation working and learning community. This will also comprise a continuous learning track tailored to lifelong learning, enabling students and professionals, managers, researchers and lecturers to jointly bridge the gaps between research, education and the professional practice. Open also means participants do not necessarily have to be enrolled at a HAN degree programme. The HAN already has some of the necessary ingredients for this working and learning community: in addition to MNR, the

institution boasts all the relevant nursing and paramedical Bachelor's programmes, a multidisciplinary minor in Neurorehabilitation and a Neurorehabilitation research group. Table 1 provides an overview of the various innovations at HAN and outlines the role of open and online education.

The didactic concept has remained unchanged at the request of both students and lecturers. MNR already applies online working methods such as virtual action learning and peer-to-peer review. Students and lecturers appreciate these working methods, but view live interaction with lecturers and fellow group members as a major benefit during their personal and professional development.

Tailor-made solutions are oriented towards the broader working and learning community, and are also designed to facilitate professionals working in the field rather than exclusively focusing on education. The motto is: 'Degree programmes for jobs, educational services for careers'.

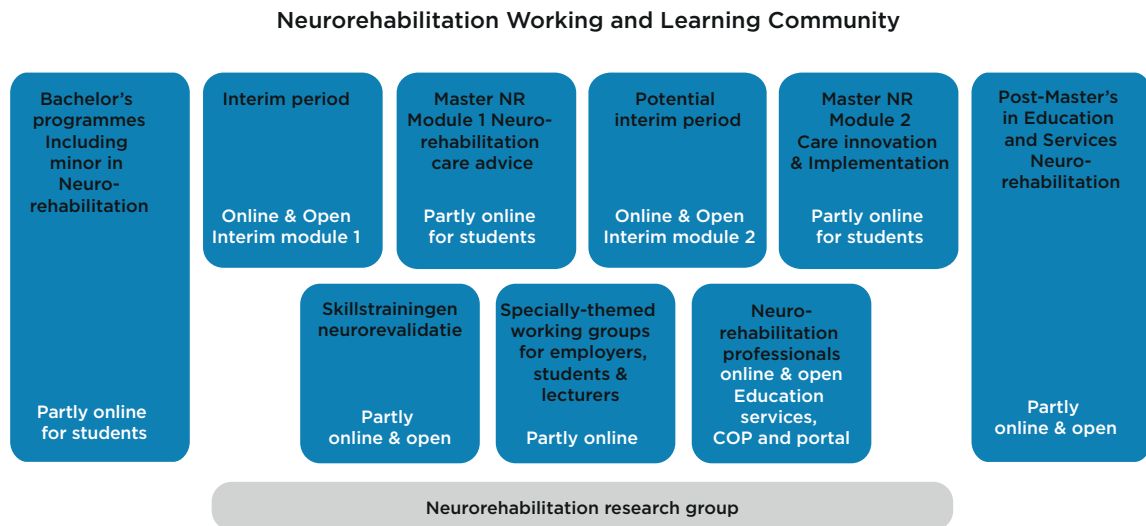


Figure 1. The Neurorehabilitation working and learning community at HAN University of Applied Sciences.

Literature

- SURF (2015). Specially-themed edition on Open and online education - Reaching new target groups. SURF, Utrecht, 2015. Available at <https://www.surf.nl/kennis-en-innovatie/kennisbank/2015/thema-uitgave-open-en-online-onderwijs-editie-nieuwe-doelgroepen-bereiken.html>

Target groups, characteristics and learning needs	Solutions	The role of open and online education
<p>Bachelor's students seeking to continue their studies immediately found themselves hampered by the required two years of work experience. As a result of this requirement, students from the HAN minor in Neurorehabilitation barely transferred to the MNR Master's programme.</p>	<ul style="list-style-type: none"> • Flexible intake: The Master's in Neurorehabilitation & Innovation currently comprises two one-year modules. • Abolition of work experience requirement for the first module, work placements – with alumni where possible – will also suffice. Students enrolled at the minor in Neurorehabilitation can transfer immediately. • Module 2 will require employment in the field and work experience, with the option of a tailored interim period. • Academic career counselling is more effectively harmonised with the overall educational continuum within the framework of lifelong learning. 	<p>Case studies on the profession and professional practice in relation to the programme, students are introduced to the Master's in Neurorehabilitation & Innovation through study trials that are partially offered in open online format.</p>
<p>Hesitant prospective students are uncertain about the level of the Master's and required combination of working and learning. This target group wishes to transfer to shorter learning tracks whereby they complete part of the curriculum and get a socially relevant certificate in order to gain experience. They can subsequently choose to either continue or discontinue their studies.</p>		
<p>Students want to see blended learning applied within the modules.</p>	<ul style="list-style-type: none"> • They prefer and value face-to-face education over other forms and view the online component as a supportive element. 	<p>Online virtual action learning, peer-to-peer review, the freedom to add course materials, electronic learning environment (closed).</p>
<p>Students in the periods between the minor in Neurorehabilitation and the Master's in Neurorehabilitation & Innovation and the periods between the two MNR modules want to remain involved and interested rather than give up.</p>	<ul style="list-style-type: none"> • Two appealing interim modules offering students an opportunity to prepare for the upcoming module at any time and location. 	<p>Interim modules offered in 'flipped classroom' format, online, partially open.</p>
<p>Alumni want personalised training and coaching, and are seeking to learn how to strategically position themselves within an institution and deal with changing legislation and regulations and the easy accessibility of new knowledge.</p>	<ul style="list-style-type: none"> • Working groups based around collaboration between alumni, managers and lecturers; exchange of knowledge on themes related to degree programme content and the professional practice. • Post-Master's range of education and services in collaboration with alumni and employers. • Community of Practice comprising open online components and face-to-face meetings. 	<p>Open and online: professional portal (Community of Practice comprising evidence-based guidelines, clinimetrics, literature, projects and fora. To be supplemented with online expert consultations and patient demonstrations at a later stage).</p> <p>Range of post-Master's courses, of which some components are offered in open online format and some are face-to-face.</p>
<p>Co-creation with managers and administrators. Harmonisation of substantive programme aspects with wishes formulated by the professional field.</p>		
<p>Targeted professional skills retraining for professionals with a minimum of absence time.</p>	<ul style="list-style-type: none"> • Post-Bachelor's courses for nursing staff and paramedics. 	<p>Online theoretical components in the form of knowledge clips and 'flipped classroom' learning.</p>

Table 1. Innovations at HAN University of Applied Sciences and the role of open and online education in this process.



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