

Knowledge exchange between colleges of higher professional education and the professional world

Summary

The importance of knowledge in our society is increasing – and therefore also the role played by the knowledge infrastructure. Colleges of Higher Professional Education are a part of this knowledge infrastructure. The Minister of Education, Culture and Science and the Minister of Economic Affairs have asked the Advisory Council for Scientific and Technological Policy (AWT) and the Education Council how the contribution of colleges of higher professional education to the knowledge society could be improved. In these recommendations, the exchange of knowledge between colleges of higher professional education and the professional world – also called *knowledge circulation* – is the central point of focus. Less attention is given to the collaboration between colleges of higher professional education with universities and other institutions of knowledge, though it should be said that this too could be considerably improved (via an exchange of personnel, study material, joint education and research projects, and joint use of equipment).

In these recommendations, 9 modalities of knowledge circulation are identified, such as guest teachers, contract teaching, the use of work placement experiences in education, etc. All of these forms of knowledge circulation function in practice, but much could be improved. In addition to matters that run less smoothly, a range of positive initiatives can also be mentioned that point to the fact that hard work is being done on making the college of higher professional education a centre of knowledge.

Findings

To prepare for these recommendations, interviews were held with 147 representatives of colleges of higher professional education (executive boards, education directors, etc.), professional associations, research institutes and employers. Leaving aside nuances, the following picture can be sketched from the round of interviews conducted – supplemented by reports from review committees, the education reports of the Inspectorate and the relevant literature:

1. *Alignment of curricula and demand*
The alignment between the curriculum and the requirements of the education world has improved, but the contacts with the various professions could be made more systematically; not so much via personal contacts as via trade associations, alumni, professional associations, etc. Competence-oriented teaching is a new point of focus.
2. *Work Placement*
Work placements are important for introducing students to the professional world, but they appear to play hardly any role in the context of knowledge circulation. The supervision provided is often marginal, so that there is seldom a synergy created between work placement supervision and education. Also, the experiences of the work placement students are insufficiently utilised in education.
3. *Dual education*
In general, dual education (education in combination of learning on the job) is seen as an important factor in the circulation of knowledge, but this modality has not yet been introduced throughout all colleges of higher professional education. The contacts between the colleges of higher professional education and large companies where large numbers of "dual students" can be placed are good in several cases, but mid-sized and

small companies complain that, once the colleges of higher professional education have placed their dual students, they then "leave them on their own".

4. *Guest teachers and the secondment of teachers*

Guest teachers from companies and institutions are being used everywhere, but secondment (or work placement) of teachers at companies and institutions has not been successful for practical reasons.

5. *Monitoring of innovations*

Generally speaking, there is hardly any monitoring of innovations via schooling, visits to trade fairs and congresses, etc. Systematic application of this modality depends especially on the human resources management within the institution.

6. *Supervision of starting businesses*

The attention given to starting businesses is increasing and the importance of a business attitude among students is being recognised more and more. A condition for this is that teachers be keenly aware of the importance of business acumen and have a personal knowledge of business; this is lacking in most sectors.

The general picture of the previous points is neither negative nor positive. Still, there is reason for concern. The colleges of higher professional education are being confronted with tasks and forms of knowledge circulation that are relatively new. There is the danger present that too much energy will be given to these new forms of knowledge development and exchange to the detriment of the aforementioned modalities. This is a cause for concern, seeing that those modalities still do not function sufficiently. The shortcomings in the circulation of knowledge will not be solved by adding new modalities to the already existing ones. This is important, all the more so because the extra attention being given to new modalities of knowledge circulation could be detrimental to the primary task of the colleges of higher professional education.

In the request for recommendations, attention is also requested for relatively new modalities of knowledge circulation. The findings can be summarised as follows:

7. *The removal of bottlenecks in the labour market*

Generally speaking, the quantitative bottlenecks on the labour market pertain to a demand for employees that exceeds the supply. The contribution of colleges of higher professional education to providing solutions to these bottlenecks include dual education, making study programmes more flexible and contract teaching. The synergy between regular education and non-regular education is, from this perspective on knowledge circulation, a point of concern.

With respect to solving the qualitative bottlenecks, the colleges of higher professional education can make a contribution by co-ordinating the curricula with the demand from society, by starting new study programmes and through demand-oriented contract activities. The introduction of competency-oriented teaching is also mentioned as a possibility, but the design of this is still in its infancy.

8. *Design and development*

In the law on higher education in the Netherlands 'research' in Higher Professional Education is still undefined. The Education Council and the AWT prefer the term design and development (D&D): the design and development of knowledge products that can be applied directly, such as physical products, production processes, consulting services, methodologies, manuals, etc. There are several arguments for D&D in colleges of higher professional education and there are now various examples that meet the relevant criteria.

In practice, the great majority of D&D is done by students in their graduation phase. This primarily pertains to assignments from companies and institutions. The supervision provided by teachers can play a limited role or be very intensive, with a work requirement or even an academic achievement requirement being a part of it.

Companies and institutions do not always have sufficient projects for 'research'.

Through supervising subjects for final projects, teachers come into contact with the professional world. This creates a synergy for the primary process, the education.

The prime motive for expanding the possibilities of design and development by *teachers* should, according to the AWT and the Education Council, be the interrelationship with education. To build up capacity for this, a certain critical mass is necessary. The concentration of D&D employees in so-called competency centres in a start-up phase, which is occurring in some places, is a possible option, all the more so when companies see this in a positive light. For now, such constructions, particularly the equipment-intensive sectors, seem suitable for subsidies from governments and the EU, or for the shared use of equipment at universities and research institutes. In the Netherlands there is a specific grant programme (ICES/KIS-3) which offers possibilities for the colleges of higher professional education to set up centres for design and development within a public-private collaboration.

Within the colleges of higher professional education a new position has been introduced: *lectureship*. Lecturers are expected to know how to *upgrade* the current teaching staffs – referred to in the Council for Higher Profession Education as "routine professionals" – to "innovation professionals". The focus in the activities of lecturers lies inordinately on 'research'. According to the information available up to now, no or scarce attention is given to other forms of knowledge circulation – supervision of work placement students and final study projects, guest teachers, teacher-training, monitoring of innovations in the professional world, the supervision of business starters, the synergy between regular and non-regular education. The AWT and the Education Council think that colleges of higher professional education need to improve the circulation of knowledge in broad terms.

9. *Internet support of knowledge circulation*

The Internet can support the circulation of knowledge. In practice, it has proved difficult to get a consortium for virtual higher education off the ground. ICES/KIS-3 offers the possibility to set up a public-private venture. It is hoped that the colleges of higher professional education will fully take advantage of this possibility.

The college of higher professional education as a (regional) centre of knowledge?

From the previous statements, it can be concluded that the road leading to the college of higher professional education as a centre of knowledge is still a long one. The circulation of knowledge could be improved, not only by strengthening the 9 modalities, but also by tailoring them specifically to the region. The college of higher professional education would, it could be said, only become a centre of knowledge if it can competently assume the role of regional knowledge centre.

The demand for a college of higher professional education as a regional knowledge centre has created a picture that shows that the college of higher professional education occupies a significant position regionally – external contacts primarily take place at the regional level for practical reasons – but not yet in the sense of a regional knowledge centre. With respect to the collaboration in the region, the contacts with the business sector in the region are not based on a policy for colleges of higher professional education that is specifically tailored to the region. In turn, for companies and other job-providing organisations, the college of higher professional education in the region is not always a natural partner for the exchange of knowledge

Recommendations

The colleges of higher professional education are firstly responsible for bringing all modalities of knowledge circulation to full fruition. A role has also been reserved for government.

- The *colleges of higher professional education* can launch numerous initiatives to strengthen the circulation of knowledge. In the recommendations, various examples are given that deserve to be followed: in collaboration with employers' organisations, the development of competency-oriented curricula, special work placement programmes, custom work for dual education, systematic approach to employers for guest teachers, making contacts with professional associations with respect to job-searching and training, setting up facilities for graduates that want to start their own business, custom work for contract teaching in which teachers from regular education are used, setting up expertise centres for design and development, the development of facilities for virtual education, etc.

A condition for being able to develop such initiatives is for the study programmes to be presented and function in the outside world in innovative networks of companies, institutions and institutes of knowledge. The management should also focus sharper attention on the world around them.

In addition to a focus that is directed more to the outside world, the internal organisation also needs to be addressed sufficiently. The HRM policy has been improved, but should be supplemented with a task differentiation for teachers that is focused on the knowledge profile.

The policy of colleges of higher professional education for improving the circulation of knowledge and the individual productivity of teachers in this area should be accounted for in annual reports and should be assessed in school inspections. After all, there is a direct connection between the success of the knowledge exchange with the professional world and the competency of the graduates. The circulation of knowledge, quality of teachers and the quality of the education are inextricably linked to one another.

- For the *government* – national and regional – a role has been reserved to support and encourage colleges of higher professional education in their management of knowledge. For the different discipline departments and the local governments, a well-understood self-interest could be at issue here.

One of the responsibilities of the *Minister of Education, Culture and Science*, in his discussion with colleges of higher professional education, is to enquire into the progress they are making in improving their knowledge profile. The colleges of higher professional education inform the Minister because it brings about a useful dialogue. The Minister also has the responsibility of keeping the structural funding up to standard. The colleges of higher professional education are expected to bring all modalities of knowledge circulation to fruition, but the structural funding must be sufficient to do so. Extra funds to stimulate separate modalities of knowledge circulation should actually not be necessary.

The *Ministry of Economic Affairs* can involve the college of higher professional education much more in the set of subsidy instruments for innovations. In principle, all regulations of the Ministry of Economic Affairs are open for the colleges of higher professional education, but this is not always explicitly stated. For the new ICES/KIS round, the colleges of higher professional education can, in collaboration with companies and institutions, submit proposals for getting knowledge circles off the ground.

Discipline Departments, such as the Ministry of Health, Welfare and Sports, the Ministry

for Housing, Regional Development and the Environment, the Ministry of Transport and Public Works, the Ministry of the Interior and the Department of Justice, could give colleges of higher professional education assignments for design and development in the area of welfare. The government departments could also involve the colleges of higher professional education more in 'their' knowledge networks. Colleges of higher professional education, after all, are a part of the public knowledge infrastructure (and the colleges of higher professional education should of course be able to fulfil this role).

The *provinces* are increasingly developing their own innovation policy. Colleges of higher professional education could be involved in this. The college of higher professional education could, in particular, have something to offer the regional small and medium-sized businesses. The contacts between provinces and the colleges of higher professional education in their region are not structurally based.