

PDF hosted at the Radboud Repository of the Radboud University Nijmegen

The following full text is a publisher's version.

For additional information about this publication click this link.

<http://hdl.handle.net/2066/68629>

Please be advised that this information was generated on 2021-06-22 and may be subject to change.

Erik de Gier, John Warmderdam, Marjolein de Boer and Krista van Mourik

European knowledge society, new social risks and universities

The Netherlands

European knowledge society, new social risks and universities – The Netherlands./ Erik de Gier, John Warmerdam, Marjolein de Boer and Krista van Mourik (ITS Applied Social Research, Radboud University Nijmegen) Nijmegen/Barcelona. 2008. www.nesor.eu

This report was co-financed by the European Commission's Socrates Programme (NESOR-project n° 2006-2817/001 SO2 61 OBGE)



This work is licensed under Creative Commons

Attribution-Non-Commercial-Share Alike 2.5 Spain

You are free:

- To copy, distribute, display and perform the work
- To make derivative works

Under the following conditions



Attribution. You must give the original author credit



Non-Commercial. You may not use this work for commercial purposes



Share Alike. If you alter, transform, or build upon this work, you may distribute the resulting work only under a licence identical to this one.

INDEX

1. Introduction.....	1
2. Method.....	3
3. Problem.....	4
4. Themes	6
4.1. Introduction	6
4.2. Discourse of the knowledge society	6
4.3. Perception of (new) social risks.....	12
4.4. Role and functions of universities and polytechnics.....	16
5. Conclusions and debate	18
6. Literature	20
7. Annexes	21

1. Introduction

This report summarizes the main findings of the country study of the Netherlands in the frame of Work Package 2 of the SOCRATES-project NESOR. WP2 is focused on the globalized knowledge-based society, new social risks and universities.

The aim of the larger project is to analyze:

- The state of art in different European countries,
- To examine the approaches of the reforms
- To revise the findings about the consequences of the reforms in order to derive a description of the role of the higher education in the European Social Model
- To contribute to the design of long term strategy concerning the future of higher education in Europe and the social cohesion of the EU.

The SOCRATES-project is focused on some of the main pillars of the New European Social Model as there are: employability, social inclusion and equal opportunities. The project proposes to revise the reference model of the Lisbon Strategy - the knowledge based society and economy - and to explore emerging new social inequalities based on the disposability and the use of knowledge in the emerging model of society, to look for the contribution of the universities to combat the new forms of social exclusion and to elaborate a model of higher education in the globalized knowledge-based society.

As can be seen in the naming of Work Package 2, three themes will be central in this country report:

- (1) The discourse of the knowledge economy in the Netherlands
- (2) The perception of (new) social risks in the Netherlands
- (3) The role and functions of universities and polytechnics in the Netherlands.

Work package 2 is primarily directed at reviewing the discussion of the knowledge-based society in the six selected EU member States and on empirical findings of the transition process. A second objective is to revise how European society perceives (new) social risks that go together with the transition to the knowledge-based society.

Finally, a third objective is to detect which functions in the transition process more in particular are assigned to academic as well as to professional universities or polytechnics.

2. Method

The method used in this study is primarily desk research of relevant documents, available national statistics, and empirical research findings, supplemented with some interviews with relevant stakeholders. In advance a questionnaire guideline was developed. This guideline was used both in the literature search as in the interviewing activities.

3. Problem

In the Netherlands the actual debate about the knowledge economy very much deals with the present and future innovation capacity of the Dutch economy as compared to other industrialized countries. The context of this debate is the EU-innovation policy, directed at for example market dynamics, the innovation of the public sector and the reinforcement of regional innovation politics. The EU-innovation policy is set within the context of the Lisbon -, Bologna- and Copenhagen-objectives on the European Social Model, higher education and professional education respectively.

The rather newly created (Dutch) Innovation Platform (See Box 1), chaired by the prime minister, is intended to be the main engine of the national debate on innovation and the knowledge society and is also coordinating this debate.

Box 1: The Dutch Innovation Platform

The Dutch Innovation Platform:

Initiated in 2003 by the prime ministers' cabinet office, with the purpose to leverage the Netherlands into the international top five with regard to higher education, research and innovation.

The innovation Platform will do this by assessing the actual knowledge and innovation system and by creating the proper conditions necessary for innovation and entrepreneurship.

The Platform consists of the prime minister (chairman) and a number of key players in politics, industry, science and education.

Participating in this debate is a number of stake holders, such as employer and employee organizations, representatives of multinationals and small- and medium sized businesses and finally a number of advisory councils directly linked to the Dutch corporatists socioeconomic system (such as the Social Economic Council, SER) or advisory councils more directly linked to the government and consisting of experts (such as the Scientific Council of Government Policy, WRR, the advisory council for science and technique, AWT and the Government Bureau of Policy Analysis, CPB).

Also, a number of ministries, such as the ministry of Economic Affairs (minEZ) and the ministry of Education and Science (minOCW) play an important role.

At first sight, this seems to be a rather complicated institutional pattern. However, as it will turn out later, there is a large area of consensus among the stakeholders about the way and manner the Dutch economy and society needs to anticipate on the knowledge society.

4. Themes

4.1. Introduction

First of all, we will synthesize the actual debate in the Netherlands about the knowledge economy. Then, our attention will shift to the actual perception of social risks. Finally, we will focus on the role and functions of universities and poly-techniques.

4.2. Discourse of the knowledge society

As has been stated yet, in the Netherlands the debate about the knowledge society very much concentrates on the innovative capacity of the Dutch economy. One of the main problems perceived in this respect is the existence of a so-called knowledge paradox or innovation paradox. The best circumscription of this paradox is that the Netherlands, as compared to other industrialized countries as such has a very good record in collecting scientific knowledge for the public domain, whereas at the same time the country doesn't seem to be able to transform this knowledge adequately into economic growth (Van Asseldonk 2004). As a consequence the Dutch economy is comparatively lagging behind with respect to innovation. It is the task of the Innovation Platform (IP) to tackle this problem by proposing new policy initiatives to the government. The IP sees five causes for the relatively backward position of the Netherlands:

- (1) Low public and private investments in knowledge. The Netherlands annually invests 12 billion euros less than the top three of investors and also remains behind the OECD average.
- (2) On the whole there is not a very favourable climate for innovation because vesting interests are strong. Because of that innovative entrepreneurship is not sufficiently stimulated. The same holds for the influx of young talent in science and industry.
- (3) There is still a strong egalitarian culture in the country, implying uniformity in education, work payment and work place performance.

- (4) Needed are improvements in the linking of the knowledge and innovation systems, more in particular between public and private players. An important success factor in this respect is mutual trust.
- (5) An integral strategy with respect to knowledge and innovation is lacking. In the past decade much public effort has been put in ‘activating the labour force’ and reducing unemployment. This has to be supplemented first and foremost, by ‘activating talents’ (Innovatieplatform 2006).

A key document of the Innovation Platform is the so-called *Knowledge Investment Agenda 2006 - 2016* (Innovation Platform 2006). In this document the IP sets out its ideas about innovation. The main focus indeed is on activating or a better use of human talents in the knowledge society. With better use is meant, more specifically ... *‘activating and vitalizing of talents of all people in all parts and layers of the Dutch population’*.

In the end the purpose is to re-instate the country in the top league of dynamic knowledge economies in the OECD.

A balance sheet of the actual state of affairs shows at the benefits side the following positive points:

- In general Dutch pupils score reasonably or good on international school tests. The performance of primary and secondary education therefore, is reasonably good;
- Internationally seen, the Netherlands has relatively low youth unemployment;
- Productivity of Dutch scientists is good, inclusive the number of international citations.

If we look on the other hand to the costs, a number of structural problems become visible, such as:

- Language skills of a number of pupils are underdeveloped at the moment they enter primary education;
- Early dropping out of the school system is substantial;
- Tertiary professional education is insufficiently linked to secondary professional education;

- Only one of all Dutch universities is ranked among the fifty best universities in the world;
- Participation in post-initial training is low for the low-educated, the elderly, women and non-working people;
- The number of graduates in sciences is relatively low.

To be able to combat the above mentioned deficiencies the Innovation Platform proposes a strategy directed at the whole chain of knowledge, from pre-education until innovation and entrepreneurship. This strategy has to consist of the following three parts:

- (a) a maximal educated working population during the whole working career and life course;
- (b) an outstanding knowledge base, including a prominent research infrastructure and adequate provisions for young scientific talent;
- (c) Creating a stimulating entrepreneurial climate by taking measures with respect to management skills and organizational culture (social innovation), lowering administrative burdens and rules and stimulating innovation by investment in R&D.

The Knowledge Investment Agenda contains a number of practical proposals relevant for all stakeholders involved, but in particular also for the actual government. Government is proposed to increase investments for education and research to an additional annual level of 3 billion euros in the coming eight years, spanning two cabinet terms.

The money to be invested has to be spent on four themes:

- (1) Financial means for universities have to be distributed more on the basis of quality and less on the bases of the number of students per university. At the same time, there has to be invested more money in research infrastructure; the influx of young scientific talent, also from abroad, has to increase, and finally science and industry will have to increase and widen their interaction
- (2) The Netherlands has to make choices for big research facilities that can compete internationally;

- (3) The accessibility of the country for foreign knowledge workers has to be increased;
- (4) Scientific knowledge has to be used more effectively (Borst a.o. 2007).

Before publishing its *Knowledge Investment Agenda* the Innovation Platform consulted all relevant stakeholders and private parties, inclusive the big multinational firms. The degree of consensus about both the diagnosis and the improvement strategy proposed by the Innovation Platform proved to be high.

If we look beyond the official discourse of the knowledge society, the resulting picture becomes a little bit more colored.

The Innovation paradox indeed is one of the greater problems with which the Dutch economy and society are wrestling. Collecting knowledge in the science field through academic research is rather well developed, but at the same time a substantial part of Dutch industry is not able to apply this knowledge in a proper way (Leijnse 2007_interview). This mostly concerns small- and medium sized business. The problem might be caused by a lack of sufficiently proper translation instruments or mechanisms from the academic world to industry. But it is also caused by cultural factors (See Box 2)

Box 2: An example of local transfer of academic knowledge to practice

Radboud University Nijmegen is one of the multidisciplinary Dutch research universities. It therefore consists of 9 faculties and some 22 specialized fundamental and applied research institutes. In its most recent Strategic Plan 2005-2009 '*The power of Quality*' societal impact of fundamental research and knowledge is explicitly mentioned as an important objective of university policy. Radboud University has the absolute intention to make a direct contribution to the new knowledge-based economy through different types of activities and also by collaborating with major corporations and the establishment of spin-off companies.

Relevant activities in this respect are, first of all, enlarging the amount of applied research activities in behalf of third parties (by stimulating 'academically enterprising' of all research groups) and the valorization of educational activities and organizing post-initial educational. Also important are: the introduction of an internal patent regulation which is also beneficial for the research group and the individual inventor(s) involved, knowledge protection by IPR's and activities directed at initializing spin-off companies.

With respect to spin-off, the university belongs to the national top-3 scorers of universities initializing spin-off companies (since 1985 on the whole some more than 300 spin-off companies have been created). At the campus site of Radboud University several supporting activities and facilities exist for spin-off companies. For instance, there is a spin-off help-desk at *Mercator Incubator Nijmegen*, which cooperates with regional authorities and the business community. Recently also the so-called *Innovation Lab* was opened for spin-off initiatives in the field of the natural sciences. Apart from this, some other lab- and housing facilities are available for spin-off activities. Next to this, to support so-called techno-starters, in 2006 *Knowledge Exploitation Radboud Nijmegen* (KERN) was initiated. In KERN the university narrowly collaborates with the Academic hospital UMC, the Arnhem/Nijmegen Polytechnic, local and regional government and the business community. KERN has been granted a four-year budget of about 5 million €, matched on a 50/50 basis between the university and the Dutch ministry of Economic Affairs. As a result yearly 10-20 technological spin-off companies are successfully initiated, for the biggest part by young promising researchers.

The guiding idea behind all these activities is the adding of value and ‘valorization’ of scientific knowledge (that is the process of disseminating and exploiting project outcomes to meet social needs). Compared to other Dutch universities the performance of Radboud University concerning the valorization of knowledge is substantially high. Radboud University also belongs to the top-3 universities with the highest part of contract activities in behalf of third parties.

Sources: Strategic Plan 2005-2009 & 2006 Research Report, VanderPasch 2007_interview

As has been said, conservative vesting interests are strongly developed in the Netherlands, both at the demand side (industry) and at the supply side (academic research) and these don’t offer the best fertile soil for innovation.

Research shows that only 25-50% of innovation in industry is mainly dependent from technological knowledge as such and the remaining 50-75% from what is called *social innovation* (Volberda a.o. 2007). Social innovation is defined as changing a firm’s organization, management and labour in a way that is new to the organization and/or the industry, with the effect of leveraging the firm’s technological knowledge base and improving organizational performance. Social innovation delivers the following benefits to organizations: flexible organizational forms, dynamic rather than routine management practices with a large absorption capacity and readiness to learn, a willingness to invest in employees and full deploy internal as well as external flexibility, openness to interaction with external partners and various knowledge institutions and mobilization of institutional stakeholders, from social partners, educational institutions to financial investors (Volberda a.o. 2007). In this perspective the focus on activating talents of the Innovation Platform can at the same time be seen as a form of social innovation in Dutch society.

On the other hand the actual system of knowledge production is not organized in a flexible and dynamic way. At the public side this system is based on 14 mainly publicly financed universities and a bigger number of polytechnics. The two layers of higher education are not integrated, but separate systems between which there is no extensive interaction. Universities focus on scientific education and scientific research, whereas the polytechnics specialize in professional education and applied research. According to Leijnse, this binary higher education system is in present form not very well suited for

the challenges the knowledge society brings with it. In section 4.4 we will come back on this.

Summarizing this section on the discourse of the knowledge economy in the Netherlands, first of all we can conclude that the Netherlands has a strong ambition to belong to the top league of best performing knowledge economies in the EU. At the same time, the production of knowledge to be applied for innovation purposes is not the problem. The real problem is the still existing big gap between knowledge production on the one hand and knowledge application in industry on the other hand. This ‘innovation paradox’ hinders the innovative powers of Dutch industry, in particular of small and medium sized businesses. The main explanation for the existing gap is threefold: the still dominance and persistence of conservative vesting interests both in industry and in higher education, an inner directed and also conserving attitude of a large part of Dutch industry, and finally, the sustaining persistence of a binary, divided and more or less obsolete institutional system of higher education in the Netherlands.

All this brings the Innovation Platform as well as all parties involved to the conclusion that to overcome these problems first of all a strong strategy of activating talents, inclusive top talents, in Dutch society has to be developed. The social risks that we will describe in the following section all are linked to the challenge of activating talents.

4.3. Perception of (new) social risks

A meticulous and extensive literature search (De Boer & Van Mourik 2007) brings us to the following preliminary list of (perceived) new social risks in relation the upcoming knowledge society:

- (a): Insufficient and unequal access to information and knowledge for certain social groups (Leijnse 2007)
- (b): Study performance of immigrants in secondary and higher education is behind that of nationals (OECD 2007)
- (c): Weak national commitment to life long learning for all age categories. Accent on students below the age of 28 (OECD 2007)
- (d) An increasing gap or social divide between low educated and high educated workers (De Gier 2007)

(e) Critical labour market transitions during the life course (De Gier 2007b)

(a): Insufficient and unequal access to knowledge for certain social groups

Leijnse put forward the question that in the Netherlands there is a strong and myopic identification with the need and availability in Dutch society of top talent. This one sided identification with top talent disadvantages some social groups with respect to access to knowledge. The main focus of universities and polytechnics is on young people that enter higher education after finishing secondary education. Disadvantaged groups here are in particular elderly people and elderly workers. They have almost no chances to get access for the first or second time to the higher education system once they have reached a working life status. As a consequence they will not be able to continuously developing their talents and employability. Apart from that, knowledge is not freely available to everyone. As such it is not a free public good. For this reason, Leijnse pleads for an *open source approach* for knowledge in the knowledge society. Internet offers all technical possibilities to organize knowledge via open sources that is freely accessible for each citizen (Leijnse 2007_interview). Open access to knowledge and information will not be sufficient to solve this risk. People in all age groups have to be able to work with knowledge in the information society. That implies that people have to be learned the right skills to deal and work with knowledge. If a society doesn't succeed in this, there will develop a big social divide between knowledge workers being able to work in a creative way with knowledge and information and workers that don't possess the proper skills.

(b): Study performance of immigrants in secondary and tertiary education is behind that of nationals

A recent extensive thematic review of Dutch tertiary education carried out by the OECD showed considerable deficiencies in the participation of ethnic minorities as compared to nationals (OECD 2007). Ethnic minorities, actually, not only participate less in the tertiary educational system, but also perform less. In particular, completion rates for non-western immigrants are lower than for other population groups. In addition, once ethnic minorities take part in tertiary education, they have a strong preference for polytechnics and much less for universities. This form of undesired segregation may be the result of selection processes that already start in primary and secondary education. A

little bit overstated one could say that two different streams of pupils and students develop from primary schools to higher education, a *black* stream and a *white* stream (Vink 2007). The black stream contains students with an ethnic minority background and develops along the line of lower and middle professional education to polytechnics. In contrast, the other (white) stream develops along the line of pre-scientific secondary education to universities.

In former times the Dutch educational system also contained clear second chance opportunities for those people who failed or underperformed during initial education. These were abolished in the past. If these opportunities still existed they could play an important role in overcoming the actual segregation tendencies (Rinnooy Kan 2007).

As a consequence, this not only is a clear and sustainable social risk for ethnic minorities, but also implies a certain amount of waste of human talents in the knowledge economy.

It must be stated that over time participation of non-westerners is increasing, both in polytechnics and universities. In 2004 7748 non-western immigrants went to a polytechnic, which equals 13.4% of all polytechnic entrants; and correspondingly 2242 non western immigrants went to the university. This figure equals 8.2% of all university entrants in that year.

(c): Weak national commitment to life long learning for all age categories

The same thematic OECD review pointed to another deficiency in the system of tertiary education in the Netherlands (OECD 2007). That is the almost total neglect of programs directed at life long learning. The tertiary system is focused on the age group 18-30 years old and almost doesn't serve older age groups. There are a small number of exceptions with respect to some part-time initiatives and there also is a possibility to go to the Open University which is specialized in distance learning. Enrolment in higher education beyond the age of 30 is roughly half of the OECD average.

About 15 percent of the working population actually participates in activities that might be classified as belonging to live long learning. This corresponds to the European average. At the same time countries like Sweden, Denmark, Finland and the UK are performing substantially better. An additional problem in the Netherlands is that the majority of the courses offered has a functional and applied character and doesn't really contribute to the acquisition of legally recognized certificates or diplomas. Therefore,

their significance in terms of investing in sustainable life long learning activities is still rather limited. The main explanation for this is twofold. Firstly, a national future-oriented strategy with respect to life long learning is almost absent, and secondly, companies as a rule do not stimulate their workforce to do courses alongside working (Platzer 2007).

The need for both government and industry to play a more active role in this field is increasing because for the next decade a shortage of higher educated is forecasted. In 2020 probably there will be a shortage of higher educated people in the Dutch economy of 200.000. Apart from that, more extensive life long learning activities contribute to better work chances for and mobility of the low educated, immigrants and older workers.

(d): An increasing gap, or social divide, between low educated and high educated workers

Labor market policy in the Netherlands is focused on activating the labor force as much as possible within the context of the Lissabon goals and the European Employment Strategy (EES). In 2010, 70 percent of the whole labor force will have to carry out paid work actively. The accompanying strategy of transforming the more traditional redistributive *welfare state* into a so-called *activating participation society* was initiated in the beginning of the nineties, a time with high unemployment and disability figures in the Netherlands. This strategy mainly contains of a mixture of limiting substantially entitlements on social security (unemployment benefits, disability benefits and curtailing the possibilities of early exit for older workers) and a further development of active labor market policies (in particular by introducing temporary subsidized work and financial incentives in the social security and tax system and reforming the administration of social security and the public employment services) (De Gier 2007a).

In principle, this change of strategy in general has been very successful until to-day. The number of beneficiaries has decreased not only with respect to unemployment and disability benefits, but also to some extent with respect to social assistance (for the long term unemployed people). However, some difficult to resolve problems still remain. Firstly, despite a decrease in the supply of low educated workers on the labor market in a context of a stable or even increasing demand of low educated workers, the socio-economic position of the low educated workers did not improve across a longer time

span, as might have been expected. Chances to become unemployed are twice or even three times higher as the chances of the high educated workers. Secondly, a large group of active low educated workers in industry and services is increasingly becoming dissatisfied because of a rather permanent pressure on their purchasing power related to increasing prices and rapidly rising and sometime excessive earnings of their bosses. For this group at this moment the activating participation society is perceived in terms of downward mobility instead of better occupational foresights. In sum, the transformation of the welfare state into an activating participation society for the moment is not beneficial for the low educated working and unemployed people. Their chances for upward mobility on the labor market are blocked to a large extent. For the biggest part, the benefits go to the high educated workers (De Gier 2007b).

(e) Critical labour market transitions during the life course

State policy directed at realizing an activating participation society that fits well with a globalized knowledge-based society, also implies making workers as such less vulnerable on increasingly flexible labour markets. Job security has to be exchanged for work security, creating a situation in which regular and successful job hopping becomes the standard instead of life time contracts. In fact, at the moment existing institutional worker protecting arrangements are limited or abolished in the field of social security and dismissal protection with the intention to increase labour mobility. In this context, all categories of workers will be particularly prone to social risks (or critical incidents) that might occur during transition periods on the labour market, such as from school to work, from fulltime to part-time work, from employment to unemployment, from caring to employment and from employment to retirement (De Gier 2007b).

4.4. Role and functions of universities and polytechnics

It seems obvious that one of the main conditions to solve the innovation paradox in Dutch society will be to overcome the deficiencies or at least to improve the existing binary system in higher education (universities and polytechnics). A potentially promising approach according to Leijnse might be to de-institutionalize the existing system of higher education and to transform it subsequently from a rather homogeneous system of comparable universities and polytechnics into a real network structure in

which both universities and polytechnics are linked by means of high performing research and educational knowledge centers. In this context knowledge has to be defined as a productive factor. A flexible network structure in his view will be better equipped to teach students in a more dynamic and challenging context how to deal with complex knowledge and innovation. A far-reaching reform of the higher education system will also contribute to preventing the (new) social risk not being able to deal properly with the increasing availability of knowledge in society (Leijnse 2007_interview).

However, this is not the only problem with respect the higher education system. Nauta, former participant in the Innovation Platform and lecturer of Innovation of the Arnhem-Nijmegen Polytechnic, criticizes the actual incentive structure as well as the financial system with which universities in the Netherlands are financed (Nauta 2007_interview). To begin with the latter, very important in this respect is the so-called first money stream. This is money meant to stimulate scientific academic research and scientific education on universities. To a large extent the existence and continuity of universities is dependent from this money delivered and distributed by the state. In addition universities compete for public research money that is redistributed via the National Science Organization (NOW) and also for money for contract research coming from private sources (industry, services) and from other more specific public sources (ministries, municipalities). Contrary to the still less important additional money streams, universities don't have to deliver a more precisely circumscribed research and educational output. So, this part of the output is debatable according to Nauta, from the viewpoint of the knowledge society. This part of their output hardly contributes to solving the existing innovation paradox. At the same time, in his view, polytechnics are caught in educational obligations and for that reason hardly contribute to innovative education, research and applications. A second deficiency in higher education is the shortage of incentives to stimulate entrepreneurial and risk-taking behavior of teaching and research staff. In the eyes of Nauta this type of behavior is a crucial precondition for technological innovation. Apart from the incentive structure, also a proper infrastructure for effective technology transfer from universities to industry is fairly absent in the Dutch higher education system. Compared to Oxford University, Cambridge University, Stanford University and Louvain University, Dutch universities seem to be rather lethargic.

5. Conclusions and debate

The Netherlands is aware of the need to anticipate on the coming knowledge society. Even more, the Netherlands wants to belong to the group of top performing countries in the European knowledge society. As the biggest threshold in realizing this is seen the so-called innovation paradox or problem to transfer scientific knowledge to practice.

Searching for explanations for the difficulty to resolve the innovation paradox the existing system of higher education as well as the way it is financed play an important role. This system is not sufficiently equipped for the knowledge society because it confirms to much vested interests. The system seems to be caught in the predominance of daily obligations.

To overcome the most important impediments, the Innovation Platform has been founded. Although this platform plays an important role in the debate about the future of the Dutch knowledge society, it is not acting as a change agent. What seems to be primarily needed is a far reaching reform of the system higher education from a mainly bureaucratic factory system (OECD 2007) to a less regulated dynamic network system in which knowledge is freely accessible for everyone. The main task of the future higher education system will be teaching students of all age groups how to deal and work with knowledge in a creative manner. In this context life long learning, consisting of a combination of formal learning and practical competence building has to play an important role.

In the same context the infrastructure for technology transfer has to be improved strongly. The best precondition to realize this is to introduce a more rewarding incentive structure for teaching and research staff at universities and polytechnics. The incentive structure will have to catalyze a more entrepreneurial and risk taking attitude of knowledge workers in the higher education system. Much can be learned in this respect from foreign universities and also from some other countries.

The existing system of higher education contributes to maintaining important social inequalities such as unequal access to knowledge, the unequal position of ethnic minorities and the almost exclusion of older people. This waste of talent is another reason for the urgency to transform the system of higher education and to bring it more

in conformity with the exigencies of the future knowledge society. That is mobilizing all available talents in Dutch society.

Apart from that, in the context of the globalized knowledge based society some more specific labour market risks are perceived, such as the increasing gap or social divide between low educated and high educated workers and the incidence of critical transitions in the life course of all categories of workers.

6. Literature

- Borst, Piet, Robert Dijkgraaf, Gerard Kleisterlee & Alexander Rinnooy Kan (2007), *Investeer in excellent onderzoek*. Het Financieele Dagblad 23 August, p. 7.
- De Boer, Marjolein Z& Krista van Mourik (2007), Literature survey NESOR, internal document ITS.
- De Gier, Erik, *Overpeinzingen bij een activerende participatiemaatschappij*. Oratie, Radboud Universiteit Nijmegen, 2007a.
- De Gier, Erik, ‘The winner takes it all’. Outsiders op de arbeidsmarkt. De Helling, No. 3., 2007b, pp 30-32.
- Innovatieplatform (2004), *Reflecties op het Nederlandse Innovatie Systeem*. Verslag ontwerpatelier van internationale experts.
- Innovatieplatform (2006), Kennisinvesteringsagenda 2006-2016. Nederland, Hét land van talenten. The Hague.
- Platzer, Bert, *Overheid mist visie leven-lang-leren*. Staatscourant, No. 190, 2 October 2007, pp 2.
- OECD (2006), *Thematic Review of Tertiary Education. The Netherlands*. Country Note by Simon Marginson, Thomas Weko, Nicola Channon, Terrtu Luukkonen, Jon Oberg. Paris.
- Van Asseldonk, Ton (2004), *Stroom! Nieuwe ontwerpparadigma’s voor het innovatiesysteem*. In: Innovatieplatform (2004), *Reflecties op het Nederlandse Innovatie Systeem*. Verslag ontwerpatelier van internationale experts, pp. 86-107.
- Radboud University (2005), The power of quality. Strategic Plan 2005-2009. Nijmegen.
- Radboud University (2007), *2006 Research Report*. Nijmegen.
- Rinnooy Kan (2007), De fictie van gelijke kansen. Nederlands onderwijs versterkt juist ongelijkheden en achterstanden. NRC-Handelsblad, 4 October.
- Vink, Anja (2007), *Dit onderwijs vergroot de achterstand*. NRC-Handelsblad M, September, pp. 9-27.
- Volberda, H.W., J.C.M. van den Ende; H.H. van Ark, J. Rotmans, L.L.G. Soete & N.K. de Vries (2007), What matters most for innovation? Multi-level complementarities between knowledge creation, transfer and utilization. Rotterdam.

7. Annexes

Annex 1: Interviews

Prof. Dr. Frans Leijnse (Open University)

Mr. Frans Nauta (Polytechnic Arnhem-Nijmegen)

Mr. Hein van der Pasch (Radboud University)

Annex 2:

Questionnaire Guidelines

Work Package 2: Globalised Knowledge-based Society, new social risks and universities

Designed by ITS – Radboud University Nijmegen

Introduction

In the framework of the EU-Socrates Program the NESOR-consortium, consisting of six academic and non academic partners in six different member states, carries out a project aimed at examining national approaches of the present reforms in higher education under the aegis of the Bologna and Copenhagen Declarations as well as at detecting the role of higher education in the European social model against the background of the developing knowledge society. On the basis of both exercises NESOR also wants to contribute to the design of long term strategic planning of higher education in the European knowledge-based society. The project will be carried out in 2007 and 2008. Results will be disseminated by a number of national and European conferences with policy makers, stakeholders and experts.

Work package 2 is primarily focused on reviewing the discussion of the knowledge-based society in the EU (more in particular in the six member states included in the project) and on empirical findings of the transition process. A second objective is to revise how European society perceives (new) social risks that go together with the transition to the knowledge-based society. Finally, a third objective is to detect which functions in the transition process more in particular are assigned to (academic as well as professional) universities.

Main themes of the Questionnaire

The three main themes of this questionnaire are:

- (a) review of the discussion of the knowledge-based society in the EU member states and the empirical findings of the transition process
 - knowledge economy
 - learning economy
 - knowledge society

- information society
 - network economy
- (b) revision of the perception of social risks in European society
- a divided society (high versus low skilled workers; increasing income disparities between high and low paid workers)
 - digital divide
 - knowledge divide
 - possible interrelations between social, digital and knowledge divide
 - rapid erosion of knowledge
 - battle for young talent
 - efficacy, efficiency and equality problems of higher professional and academic education (access, early exit, output)
 - employability
 - flexibility
 - workers mobility
 - transitions on the labour market (good versus bad transitions, transitions from work to temporary work or unemployment/ for educational reasons/ for caring reasons and vice versa, transitions from school to work and from work to pension)
 - work-life balance
 - transformation of academic labour market (access/exit, changing composition of labour market, more flexibility and more/different social risks for the higher educated)
 - long term unemployment
 - demographic risks (reduction of students)

- (c) description of the functions which are assigned to universities in the transition to the knowledge society
- providing a system of readable and comparable degrees
 - providing a system of credits (ECTS)
 - providing life long learning
 - promotion of mobility for students and staff (teachers, researchers)
 - European co-operation in quality assurance (ECVET, EQF)
 - European dimension in higher education (a European Higher Education Area)
 - European dimension in research (a European Research Area)
 - Valorisation of theoretical and academic research knowledge, inclusive development of spin-offs
 - Public-private networking/partnerships of universities, business communities, government, local authorities
 - Privatization of universities as a whole or partially with respect to research as well as education

Questions (guideline)

- (a) Discussion of the knowledge-based society
- (1) What are the driving forces of change?
 - (2) Which is the leading concept in the policy discourse (knowledge society, knowledge economy, learning society, new economy, information society, etc.)?
 - (3) Which is the positive or negative value assigned to the concept?
 - (4) Are there different discourses of the stakeholders on the knowledge society?
 - (5) Meticulous description of the relevant discourse(s) and roles/positions of relevant stakeholders at both the demand (government, trade unions, employers organisations, enterprises, experts) and supply side (universities, polytechnics).
 - (6) Empirical findings of the transition process (key indicators and sources used by different stakeholders)?

(b) Perception of social risks

- (1) Which are the new social risks in the knowledge economy (ageing of society, employability, transitional risks, rapid knowledge erosion, increasing income disparities, long term unemployment, uncertainty and safety, reinforcement of traditional mechanisms of exclusion) and how are they perceived?
- (2) Which strategies have been adopted to combat new social risks?
- (3) What is the role of learning & education and especially of higher education in these strategies? Do HE-systems contribute to the incidence of new social risks?
- (4) How can HE-systems be revised to combat these new risks?
- (5) Description of social risk perception by different stake holders.
- (6) Empirical findings (key indicators, sources, etc.)?

(c) Functions assigned to universities in the transition process

- (1) Which functions are assigned to higher education (poly-techniques and universities in the knowledge society)?
- (2) Which functions are assigned to vocational education & training in the knowledge society? Which role play education & training for the universities?
- (3) How can universities contribute to equal opportunities and the evasion of social inequalities against the background of budget restrictions and privatisation trends?
- (4) Are universities VET-institutions?
- (5) What are the main challenges for universities in the knowledge society and how do they anticipate on these challenges?
- (6) What is the relation between research and training?

Provisional outline for national reports work package 2

Title

- (i) Introduction
- (ii) Problem
- (iii) Themes
 - (iv.1) Discourse knowledge economy
 - (iv.2) Perception of (new) social risks
 - (iv.3) Role and functions of universities and polytechnics
- (iv) Conclusions and debate
- (v) Annexes
 - i. Interviews
 - ii. References (documents, reports, articles, etc.)
 - iii. Other

The national reports have to be based on documents study, available national statistics, empirical research findings and the interviews carried out with stakeholders.