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Abstract

I will outline the institutional structure of monitoring and improving the quality of higher education in The Netherlands. After critical assessment of recent educational policies a Parliamentary Committee of Inquiry proclaimed the rule of Evidence Based Interventions Only. From discussion and follow-up on that report I will draw the conclusion that more is needed than just a list of recommendations.

JEL-codes: I230, I280.

Keywords: education, quality monitoring, education policy.

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1. Introduction

Quality of education is an elusive concept, the more so the more abstract the goal of education is taken to be. It is easy to set the goal of a course in typewriting: bringing the student up to a level of typing a given amount of text within a specified time limit with the number of typing errors below a specified threshold. The lower the time limit and the lower the threshold, the higher the quality of the graduates. To measure the quality of education, we may measure the typing performance of students at entry and after graduation, to highlight the increase in the student's performance. But even in this simple case, we face the trade-off in two dimensions of quality (speed versus accuracy) and the problem of separating the contribution of the training method from the ability of the student (autonomous self-training might be more effective than a class based instruction program).

Higher education usually is a mixture of professional training and developing analytical ability and a critical, rational attitude. Standards for professional training can be derived from required or common skills in the profession's practice, although this may be more difficult for a philosopher than for a dentist. Analytical ability can essentially only be tested against indirect and subjective standards, and experienced professionals have to set required thresholds. In the end this means that quality can only be assessed against a distribution of performance within a profession, on scales that often remain implicit. One virtue of quality assessment may be that it at least compels to seek explicit specification of these scales.

Quality standards may be upheld by professional pride and dedication, and may be safeguarded and formalised by professional organisations. In doing so, these organisations may at the same time protect their members' market position, which immediately leads to an interesting policy question: should the government support such organisations (and give them influence in setting educational standards) or should it prevent monopolistic power to be vested in these organisations? Maintaining professional quality may be in the interest of consumers, but higher prices ensuing from monopolistic power is certainly not[1].

Protecting quality may be a welfare improving government activity in case of experience goods. There is no need for a government rule to forbid the sale of rotten fruit: the lack of quality is obvious. But education is an experience good in two ways. First, a potential student can only properly assess the quality of an

[1] A classic on earnings maximisation through discriminating monopoly pricing in a protected marekt is Kessel (1958).

education after participating, and often even only (long) after graduation. Second, buyers of the graduate's output are often also unable to assess output quality before entering a contract: how good is a medical docter's diagnosis and prescription, an engineer's calculation of the required strength of a steel bridge, an economist's policy advice, a school manager's educational concept? In case of experience goods, in particular with high risk from substandard quality (mortality, health, wealth, wellbeing) the government may provide a valuable service by watching over quality standards. But the existence of a potential problem is not a sufficient condition for government intervention. The market may very well generate its own solutions. Reputations may develop, quality certificates may be provided by commercial agents or interest groups (e.g student associations, newspapers and magazines, professional organisations) and the government may simply fail to deliver after granting itself exclusive rights: government monopolies usually face no countervailing power.

Regulation may have negative effects as it may undermine professional motivation. Monitonoring by key statistics (eg number of graduates, or number of enrolments) will lead management to focus on these numbers and ignore, or at least undervalue, unmeasured (and perhaps unmeasurable) quality dimensions in favour of measured characteristics. As professionals are usually well aware of the unmeasured characteristics, and as these characteristics may be very important for their sense of quality, such management by measurable characteristics may lead to dissatisfaction among professionals, diminish their motivation and in the end be harmful to true quality. Thus, there is an important choice between management by observable characterisitcs, or even by prescribing specific protocols and work methods, and investing in professional quality and quality awareness, and leave actual work methods to the discretion of the professionals themselves: trust versus bureaucracy.

Clearly, interest in quality of (higher) education raises interesting questions. Should the government intervene? If so, how? Will policies be effective? If the government itself is an important agent in the design of education and schools, is it proper to let the government also monitor and assess quality? Quis custodiet ipsos custodes, who will guard the guards themselves? In this paper we will set out the institutional and legal framework for quality control of higher education in The Netherlands, summarise recent discussions and experiences with evidcnce based interventions and in the end propose an independent watchdog to put policy makers on a leash.

2. The institutional and legal framework

Higher education in The Netherlands is essentally publicly provided. Even universities that once, long ago, have been founded privately are now fully publicly funded. Of course, there are many conditions for funding and higher education is heavily regulated. But here, we will focus excusively on policies and institutions aiming at safeguarding the quality of education.

2.1 The Law on Higher Education (1992)

The legal framework is specified in the Law on Higher Education and Academic Research ("*Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek*"). The Dutch government funds institutes of higher education: universities and institutes of higher professional education (professional schools[2]). A key condition for funding is accreditation. A student who succesfully completes a program at a funded university or professional school obtains an educational degree ("*graad*"). To receive government funding[3] and to be allowed to award recognised degrees an institute should meet requirements set for 8 topics, covering quality control, governance, curricula and student entry requirements. The Law imposes the job of accreditation to a separate institute and specifies its rules of operation. Independent accreditation was agreed by the European ministers of education when they set up the uniform European Bachelor-Master structure of higher education in 1999 (the Bologna Agreement).

The framework for assessment of an education for accreditation needs approval of the Minister of Education and should explicitly spell out the criteria for evaluation of an educational program. It should at least pay attention to:

- Intended final qualification level of the graduate, judged against what is internationally common and desirable
- Content and structure of the educational program
- Realised final qualification of the graduate, judged against what is internationally common and desirable
- Adequacy of evaluation, testing and examing students
- Quality and quantity of teaching staff and personnel policies that affect quality of the education
- General and program specific arrangements that affect the quality of the program, including student counselling and provisions that improve accessibility and feasibility of the program for students with a handicap

[2] The labeling of these institutes is in a state of flux. In Dutch they are called institutes of Higher Vocational Education. Increasingly, the call themselves, in English, University of Applied Sciences. Their legal admission standard for students and their academic level of instruction are lower than for university.

[3] Government funding is a complicated and not very transparant combination of lump sums and amounts per registered student and per graduate.

- Structure and organisation of internal quality management aimed at systematic impriovement of the education

Requests for accreditation are assessed by a committee of experts. As anticipated in the introduction, education quality is not measured directly. Standards for the graduates are essentially set as standards in the field and assessed by the experts. In addition, the protocol refers to quality of the input and to procedures for quality management.

An accreditation is valid for 6 years. Accreditation can also be given at the level of the institute, rather than for an educational program. The institute for accreditation is NVAO, the *Nederlands Vlaamse Accreditatie Organisatie* (Accreditation Institute of the Netherlands and Flanders), hence, also covering the Dutch speaking part of Belgium.

The assessments of NVAO certainly bite, as Table 1 shows. In 2014, most existing education programs were rated "sufficient", only a few were considered "excellent", but this is as intended by the grading instructions. Sufficient means the program is up to standard. 10% of the existing university programs and 7% of the professional programs either were required to improve or clarify certain aspects, or were withdrawn altogether (which happened for just a few programs). New programs were less easily accepted: only just under half (university) or one third (professional) of the new programs were accepted right away. Assessment at the institutional level also led to low rates of direct approval. It is clear that universities and professional schools have to take NVAO assessment seriously, as it is certainly no rubber stamp exercise.

Table 1. Accreditations processed by NVAO, Netherlands, 2014

	Existing programs					New programs			Institutes		
	totl	suff	good	excell	adjust	totl	pos	adj	totl	pos	adj
University	389	312	37	1	39	24	11	13	5	2	3
Professional	257	209	24	6	15	36	13	23	10	4	6

Source: *NVAO Jaarverslag 2014*. Pos is positive assesment, adj is adjustment required or withdrawn.

It is hardly possible to evaluate this system of quality assessment on its effects. Dutch higher education is generally perceived to be of high quality in international comparisons. Every now and then a problem may surface, with high coverage in press and politics (cases covered low standards for graduation, financial mismanagement), but the high profile of these cases also lead to action.

I have participated in the system on both sides (as an evaluator in NVAO assessments and as responsible for presentation of my own faculty of economics in assessment reports and site visit), which enable me to give some impressions

and observations. In my view, the evaluation protocol has developed into a highly detailed scheme of targets and (claimed) realisations that can easily be used by the universtities and schools under assessment to paint a rosy picture. In particular the detailed protocol for stating educational targets and indicating where and how in the curriculum these targets are met is to a large extent a bureaucratic excercise. True effectiveness cannot be measured by a cross-table of targets and curriculum components and the challenge for an assessment committee is to see and sense behind the screen of smooth reports and neatly aligned presentations. Universities even train their students and staff in preparation for site visits of an accreditation committee.

Yet, I do not consider the entire exercise as useless. An important virtue of the system is indeed the obligation to reflect on goals, targets and implementation of the educational program. In that sense, the preparation for an assessment can be a useful cleansing activity, generating awareness of weak and strong points, and generating all kinds of improvements. But the whole process can be made much leaner. As the evaluation is done by professionals from the disciplines under investigation, I would suggest to trust their judgement without imposing too much detail on how they should evaluate. Simple and verifiable indicators should certainly be used. Key variables may be structure and content of the curriculum, reading lists, textbooks and other course material used, exams, grading of exams and term papers and theses, professional standing of teaching staff as refected in their research performance. Standard administrative statistics on student flows should also be used: numbers entered, numbers graduated, details of drop-out, time to graduation. But in the end, as truly objective measures on educational quality are not available, and it is the professional judgment that counts, it should simply be given most weight.

Actually, in The Netherlands there has been a recent move towards reducing the bureaucratic and documentation burden of the protocol. Flanders has moved towards assessment based only on the institute's procedures of quality monitoring and some experiments in this direction have also been done in The Netherlands. I do not consider that an improvement, as it would simply ignore any assessment of the actual quality that is delivered. I prefer the Dutch way: more trust, less bureaucracy.

2.2 The Ministry of Education

The Inspectorate for Education at the Ministry of Education has a separate section for higher education. Its task is to assess and improve the quality of higher education. The following elements of this task are explicitly listed:

- assess and improve the quality of the system of higher education

- assess and improve the quality of the Dutch system of accreditation higher education
- assess and improve the quality of higher education
- assess and improve the quality of financial control, efficiency and continuity of funded institutes of higher education
- ad hoc investigations of institutes in case of serious problems

Since the start of accreditation through NVAO, on each of these topics, the key task of the Inspectorate is to assess compliance with the law. The Inspectorate reports annually on the quality of higher education and its financial situation. Interestingly, the Chief Inspector reports directly to Parliament, not to the Minister of Education. Assessing the system of accreditation does not entail evaluating NVAO but assessing the effectiveness of the system. It's not quite clear how they do this. One might say that the Inspectorate has a clear mission, as expressed in the first bullit point, and a very flexible program to implement this. In cases of public outcry such as mentioned above (substandard graduations, mismanagement), the Minister of Education orders an investigation by the Inspectorate[4].

The work of the Inspectorate can be exemplified by the most recent Annual Report, 2013/14. The report notes that generally, social and political pressure on higher education continues: it should deliver better education, reduce drop-out and shorten the time it takes to graduate. Growth in number of students tapers off, unemployment among graduates remains high, the Bachelor graduation rates have decreased in professional schools and increased in universities. Quality of education is evaluated by referring to outcomes of NVAO accreditation activities and surveys among students. The low quality of teacher colleges (training primary school teachers) has been a hot item in recent public debates and the Inspectorate reports on higher drop-out and lower graduation rates after reforms have been implemented. The Inspectorate also investigates selected problems. Recent reports are on selective admission to higher education, on exams, and on demands put on students in relation to time to graduate. The reports focus on formal aspects ("have the plans been implemented as agreed?"), not on effectiveness as understood in academic research. There is little direct reference to academic literature: most references

[4] An interesting recent case is a large agglomerate of schools for secondary vocational education (an ROC) in Leiden, that was ready for bankruptcy because of overexpansion and overspending on a huge campus and was rescued by financial support of the Ministry of Education (some 40 million euro). School management defended itself by pointing to jubilant support in the planning and development stage from the Board of Supervisors and local government (NRC, 10 December 2015). Interestingly, in another case (problems with unjustified awarding of diploma's by Inholland, a large professional school) the government reacted by a proposal for thighter regulation of quality control. The *Raad van State* (the Council of State, an institute for mandatory advice on proposed legislation) noted that the problem is not inadequate legislation but inadequate implementation: some schools simply do not follow the rules (Advies W05.12.0037/I, https://www.raadvanstate.nl/adviezen/zoeken-in-adviezen/tekst-advies.html?id=10514)

are to policy reports, to reports from advisory committees and to commissioned research reports.

Judged by its visible output, the Inspectorate serves to signal developments and to detect problems and bottlenecks. There is at best an indirect link to academic research. The impact of the Inspectorate on quality of education is, by nature, hard to assess.

2.3 The Council of Education

The Council of Education (" *Onderwijsraad*") advises the government on main features of education policies and legislation, from an independent stance. The Council, founded in 1919, advises the Minister of Education, on request and at its own initiative, but Parliament can also ask for advice. However, the annual work plan is set by the Minister of Education. The Council covers issues at all levels of education. The Work Plan 2015 lists 4 main themes: Education and the Knowledge Economy, Core functions of Education, Governance and Organisations, The Role of Teachers. The Council itself has 10 expert members, mostly academics, and is assisted by a staff of 10 professionals. There are frequent interactions and discussions with parliamentary committees.

3. The universities

Careers in the (Dutch) universities are built on research performance, research performance meaning publications. There are noticable differences among disciplines, but over the recent decades quantitative indicators have gained much weight across the entire academic spectre (number of publications, publications weighted by journal prestige, citations, Hirsch indexes etc). Complaints over drawbacks of using simple quantitative measures have increased, and rightly so (maximising number of publications per research result, substituting quantity for quality, deliberate reciprocal citations by authors, citation requirements by journal editors up to outright data manipulation and fraud), but certainly in economics (which I know best) the emphasis on visible research output has led to a marked increase in high level publications[5].

Whatever the drawbacks of the focus on visible research performance, such quality indicators are not available for quality of instruction. Performance is not easily observable in the public domain. Intense monitoring of teaching performance is too costly, the productivity of teaching is variable across students and hard to measure. Hence, by neccessity indirect measures will be used in

[5] NWO, the Dutch organisation that allocates government funds for research, has changed its criteria to reduce the impact of such measures.

formalised systems: quality of teaching material and teaching methods, teaching skills, student evaluations. This is indeed how the assessment for accreditation takes place. Until recently, universities themselves had modest monitoring of teaching quality at best. There were student evaluations, there were external surveys by students and by a leading Dutch weekly magazine: influential but not proper measures of relevant dimensions of educational quality. Most quality assessment, if any, was by peers: informal, implicit, intuitive. Visible indicators are reading lists, student enrollments, exam grades, invisible are reputations emerging in the corridors and at the coffee tables.

The system of accreditation has given a strong impetus to explicit quality management at the universities. Most now have formalised rules and policies to monitor and improve quality of teaching. For example, the University of Amsterdam has a handbook for quality management for application in all its faculties (*Kader Kwaliteitszorg*, Framework Quality Management). The essence is to create awareness of goals and targets, to monitor performance permanently and to turn the evaluations into improvements when neccseary and feasible.

One of the instruments for quality control is control of teacher quality. Dutch universities have agreed to require a minimum qualification for teaching. On top of their professional academic qualification, teaching staff in all disciplines should have the Basic Teacher Qualification. As this has only recently been introduced, experienced staff can get this certificate from proven proficiency. For new staff, there are courses on the didactic methodology of teaching.

It seems obvious that quality of education should be monitored, but it is an interesting question how much outside involvement is required. Certainly at the university level, but possibly at all levels of education, teaching is done by professionals who have a strong attachment to their profession. In many cases they will be strongly motivated to remain up-to-date in their discipline and to convince their students of the value of their specialisation. There exists a literature that indicates that teacher quality matters for student learning, but much of it is measured as a teacher fixed effect, and it is hard to pin down what makes up this quality. Most evidence is on primary and secondary education and to my knowledge the effect of quality monitoring of university teaching has not been measured. And as is well known, the danger of quantitative performance measurement is driving out internal motivation. It’s very well conceivable that the best policy is to invest in internalising quality awareness and quality pride in the professionals who have to do the teaching. At least it’s an interesting hypothesis.

4. The Dijsselbloem experience

The highest authority on the institutional structure and the rules of operation of schools is Parliament. However, other than the general rules of decision making in an open democracy, formal (such as majority voting) and informal (such as public debates), there is no system of quality control in the domain of education. To illustrate the issues and the dangers, consider the recent cases of massive policy intervention, the widespread discontent it caused and the response to this discontent.

Ín 2007-2008, a parliamentary commission of inquiry assessed national government policies on education ("*Commissie Dijsselbloem*")[6]. The focus was on secondary education, but the analysis has general relevance. The inquiry was set up to deal with widespread dissatisfaction among all parties with a stake in education: politicians, students, teachers, school boards, parents, everyone complained. During the 1990's, parliament had imposed three major reforms, affecting tracking in the lower stage of secondary education, teaching methods in the upper stage and reform of lower vocational education. On lower secondary education, there had been a long standing debate on postponing tracking (traditionally, the student population was split up at age 12). In upper secondary education, government imposed a switch towards more independent student learning, a new structure of the curriculum and larger school conglomerates offering several school types in the same institution. Lower vocational education was merged with the lower level of general education and more general education was injected in the lower vocational curriculum. This simple enumeration already suggests an incredibly ambitious overhaul of secondary education.

The first and essential point to realise is that a national, centrally determined structure of education inevitably will have to be a compromise. Education has an enormous impact on individual's life, on the social fabric of society, on economic performance and on the operation of the labour market. It's a key determinant of economic efficiency and of the distribution of wealth and welfare. The details of the production of human capital and the consequences of alternative structures, methods and policies are far from perfectly known. There is a host of opinions, an abundance of views, but only a modest amount of solid empirical knowledge. This calls for very careful decision making and a high quality and integrity of the process of selecting from the alternatives. Transparancy, honesty and clear motivation are essential ingredients. The report of the Dijsselbloem Committee shows that the national government can put the quality of education at risk and that careful procedures are needed. The

[6] Commissie Parlementair Onderzoek Onderwijsvernieuwingen (2008)

Dijsselbloem Committee is very critical about the decision making process, the content and the implementation of the three reforms.

Prior to curbing early selection and differentiation among lower secondary students, there were no pilots or experiments to test effectiveness in reaching intended goals. Earlier experiments in the 1970's and 1980's have been completely neglected. The time taken for implementing the reform was much too short. The Scientific Council on Government Policies advised 10 years, the few years that were actually allowed were in hindsight judged a mistake. The reforms in upper secondary education, to impose more independent learning on students ("*studiehuis*", residence of learning), were inspired by the free and voluntary experience of a single school, and then promoted for all schools in one stroke[7]. A critical report, on pilots by 13 schools on some components of the reform and more general concerns, by the Inspectorate for Education, was delivered to Parliament only *after* the vote on the proposal. A very negative commissioned expert report was never presented to Parliament ("not in conformity with the agreed research question"). Publication of the Annual Report 1998 of the Social Cultural Planning Bureau (a government research agency) was postponed by two weeks, as the Minister of Education did not agree with a statement on the risk of the reforms for children from weak social-economic backgrounds. The reforms on lower vocational education have been accompanied by pilot projects with bi-annual evaluations; the Dijsselbloem Report does not mention policy effects of the evaluations.

The Dijsselbloem Committee concludes quite clearly that the scientific foundation of the reforms was insufficient. Reliable available evidence has not been sufficiently employed. Pilots and experiments were mostly absent, results from pilots that have been held were ignored, experiments that were done did not match sound research principles. Complexity of the implementation of the reforms called for much more time, too may reforms were imposed simultaneously.

As this report by members of parliament themselves makes crystal clear: beware of legislators. Sure, they formulate lessons to be drawn from their investigations. The Inspectorate of Education should play a much stronger role, as the prime responsable agent for the quality of education. Its activities should be based on a politically sanctioned protocol. It should focus on the resulting output quality of education and leave didactic methods to schools and teachers. Research on education and development of a knowledge infrastructure is vital for innovation.

[7] There is scope for an interesting digression here. The *Studiehuis* was not compulsary but *ex post* it was generally taken to have been compulsory. Possibly, at the time of implementation, (some) schools were under the impression that it was compulsory, possibly schools did not want to be conservative and out of step with modern times.

The link between schools and research should be strengthened, in both directions: academic research should analyse practice, practice should have access to evidence. The government can play a stimulating role in implementing evidence based innovations in schools. The Committee even spells out a detailed protocol for such evidence based policy interventions:

Conditions for a careful policy process

- *The problem analysis is clear, supported by academic research and generally recognised by actors in the field*
- *The need for government intervention has been clearly demonstrated*
- *An evaluation of earlier policy is available*
- *A report on assessment of policy alternatives is available*
- *Spillovers and relationships with other policies have been considered and assessed*
- *The chosen policy option has been validated by academic research. If not, the new policy will be tried first in small scale pilots, with control groups, under supervision of academic researchers*
- *The results of the pilots are adequately evaluated and will be identifiably integrated in the policy*
- *Conditions for adequate implementation (budget, expertise, time) have been met*
- *The operational organisation is well defined*
- *The agents who have to implement the new policy in practice have been actively engaged in defining this policy and were well able to foresee the consequences for their own work*
- *There is sufficient support among all concerned, particularly among the professionals who have to implement the new policy*
- *Evaluations have been planned ahead. There will be no rush to adjustments before neccessity and benefits have been assessed.*

I would not call this formulation the golden standard for new policy interventions (it's a literal translation from the Dijsselbloem report); it has duplications and some conditions are clearly specific for the education reforms and their flaws that gave rise to the investigation. But clearly, it would be an incredible improvement if all major policy interventions would be introduced according to the core of the recommendation: demonstrate, with reliable empirical evidence, that the policy intervention will realise the stated goal, and if this evidence is not available, define binding, independent evaluation simultaneous with the policy intervention.

Alas, the wise recommendations from the Dijsselbloem Committee have simply gone to waste. In a reflection six years after publication of the Dijsselbloem report, the Education Council (Onderwijsraad 2014) noted that essentially, education policies were still made by Parliament in isolation from the workfloor, without sufficient interaction on the needs felt in the schools, without recognising the urgency and relevance of new policies as perceived in the field and with persisting problems of implementing the new policies. The Council concludes to negligible effects of the Dijsselbloem recommendations and continuing lack of trust between policy makers and school practice. In particular, the protocol for new policies, calling for sound evidence based interventions, has largely been ignored. In a sequel to this report the Council promotes less centralisation and uniformity in quality management in higher education, more autonomy for the universities and professional schools and emphasis on a culture of quality awareness and improvement (Onderwijsraad 2015).

5. Towards mandatory quality control in the public domain

In the old tradition of neoclassical welfare economics, the government is the wise, detached and distant authority that promotes the "public interest", it seeks to maximize a social welfare function, by setting rules for the private sector and correcting market failures. But alas, as public policy analysis and direct evidcnce have shown, the government is not a neutral maximiser of general social welfare: it is subject to power games, political manipulations and the private interests of politicians and civil servants. Paliament holds the ultimate power on the design of the system of education and claims a substantial authority over the content of the educational process. This gives it a strong indirect influence on the quality of education. If we cannot simply trust government and parliament to operate in solemn wisdom, the question arises on safeguarding quality at the very top of the pyramid: are there strong enough incentives to choose the right methods for given goals? Or, as noted in the introduction: Quis custodiet ipsos custodies?

Perhaps it is too strong a generalisation, but it appears that lawmakers have subjected virtually all private sector provision of goods and services to tight regulation, and kept their hands free to do as they please in public provisions, including education. Legislators seem to claim ultimate authority for themselves in such domains as social, economic and educational policies. The rules they impose for quality control in the private sector have no counterpart in their own legislative activity.

A new drug can only be offered for sale in the Dutch market after receiving permission from CBG, the Dutch Council for Assessment of Drugs or from

EMEA, the European Medicines Evaluation Agency[8]. Criteria for admission are farmaceutical quality, effectiveness and safety of the drug. Evidence is collected in three stages: tests on healthy volunteers for health risks, tests on patients (controlled, double blind experiments) and analysis of complaints among patients who use the drug. About 70% of the drugs passes stage 1, 50% passes stage 3. The Dutch admission authority CBG employs 300 professionals.[9]

Firms that offer raw animal food products (meat, fish, dairy, eggs) need a permit from the Netherlands Food Authority (NVWA). This requires compliance with rules on hygiene, used materials and administrative registration of the production process[10]. An academic institute at Wageningen University undertakes research to assess food quality and safety; the institute is academically independent but the workplan is determined jointly by the government (formerly Ministry of Agriculture, but now part of the Ministry of Economic Affairs). The organisation and authority structure is rather complex but there is a clear link between policies and academic research[11]. The Netherlands Food Authority employs 2471 workers (in full-time equivalents).[12]

Product safety is subject to regulation at European level. The approach here is to make the producer liable for damage caused by defaults of the product. The ruling does not apply to services[13].

Of course, legislation does not operate in a vacuum. Legislators can seek all the expert advice they desire and both laymen and experts can express their views in public debates. And in some cases, voluntary quality checks can be well developed. The Netherlands has a long tradition with scientifc advice on economic policy. CPB Netherlands Bureau of Economic Policy Analysis is part of the Ministry of Economic Affairs but operates independently, within its own legal status. It advises government and Parliament, initially on macroeconomic policies but increasingly also on a wide range of more specific policy issues, including issues in education. It has a strong disciplinary effect on the policy debate, and is authoritative for policy makers[14].

An interesting example of succesful coordination and integration of research and practice is Dutch agriculture. Agricultural productivity in the Netherlands ranks

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[8] Information taken from http://www.pdsb.nl/voor-patienten/onderzoek/hoe-komt-een-geneesmiddel-op-de-nederlandse-markt.aspx

[9] http://www.cbg-meb.nl/over-cbg/inhoud/werken-bij-het-cbg. While drugs require testing, this does not hold for treatment methods and protocols.

[10] https://www.nvwa.nl

[11] file:///C:/Users/Beheerder/Downloads/evaluatie-wettelijke-onderzoekstaken-voedselveiligheid.pdf

[12] Private mail communication NVWA September 5 2015

[13] http://www.professorvanboom.eu/pdf_files/VanBoom_VanDoorn_HandboekConsumentenrechtH13.pdf

[14] There are two more research bureaus with similar legal status: SCP (Social-cultural) and PLO (Living environment, ie spatial issues and environmental protection). They are not as influential as CPB.

among the top in the world, and Wageningen Agricultural University, as it was once called, is an internationally leading research centre: it's among the world's top-5 in Agriculture and Food Sciences, in Plant and Animal Sciences, and in Environment/Ecology, according to Essential Science Indicators (quoted in Spiertz and Kropff, 2011). In the second half of the 20th century, there was a tight network of education, research and extension. Spiertz and Kropff (2011, p 3) succinctly describe emergence, heydays and adjustment. "Public and private sectors have a long history of co-operation in the Dutch agricultural research and knowledge system. Already at the end of the 19th century some research stations (seed testing, dairy quality) were established in the Netherlands. Quite unique were the initiatives by growers in various horticultural branches to establish research stations for commodities such as vegetables, fruits, flowers. Small enterprises, like growers and farmers organized in agricultural boards, commodity boards and co-operatives, depended on the support of the government to establish research capacity for their own interest. The extension service expanded strongly after World War II when agricultural production and food security had a high priority in government policy. Under the responsibility of the Ministry of Agriculture a vast extension system was established with specialized groups at the national level and services with specialist and general extensions workers for each province/region. The socioeconomic extension service was originally a primary responsibility of the Agricultural Board (Landbouwschap). At the national level the aim was to disseminate knowledge from the university, state institutes and research stations to the regional extension services and to farmers and growers . At the local level this information was matched to the specific information needs of the individual farmer/grower." The system was changed when policy priorities shifted from maximixing production and profitability for the sector to interests of consumers and when the private companies took the lead in research aimed at their own profitability. In a new institutional arrangement there is still tight interaction between the university, research and private companies in public-private partnerships.

In the domain of labour market policies the relevance of academic research is increasingly recognised[15]. In case of major new legislation it is now fairly common to include an obligation to evaluate the workings of the law a few years after implementation. But often this does not entail much more than some superficial monitoring that does not pass the test of present research standards[16]. Some academic research has noticeable effect on policy interventions. For example, low measured effect of re-integration policies for unemployed was an argument for reduced spending on such policies (Van der Giezen and Koning, 2015, 43). But not all relevant and influential research is initiated or

[15] Dossier Activerende Sociale Zekerheid, *Economisch Statistische Berichten*, 47065, 26 maart 2015.
[16] http://www.rijksbegroting.nl/beleidsevaluaties/evaluaties-en-beleidsdoorlichtingen

commissioned by the government. In fact, Van der Giezen en Koning (o.c., 45) note that decentralisation of policies towards municipalities will require strong new efforts to convince local politicians of the value of an evidence based policy practice: "Institutions will give priority to daily implementation. Tight supervision will be needed to obtain serious evaluation of effectiveness". Koning (2015), from his experience both within the government and as an academic, describes the gap between governemt managers that implement policies and academics that want to evaluate and calls for integration of evaluation experts in the management teams.

The government intervenes massively in the social domain and in education. But there are no rules on verifiable, externally checked quality standards for the public domain. In the end, government is only held responsible by voters, once every four years, on a massive amount of decisions simultaneously. In The Netherlands, I know of only one exception: the government can, by explicit legal provision, be held responsable for road unsafety. The only other basis for action against the government would be based on the principle of "decent governance". The absence of a mandatory ex ante test on effectiveness of a policy intervention is in sharp contrast to the mandatory ex ante test on the legal quality of new legislation. Article 17 sub 1 of the Law of the Council of State: "We[17] shall hear the Department of Advising on proposals of law to Parliament". The Council of State advises Parliament on clarity, consistency with existing legislation and often also on effectiveness in reaching stated goals. However, as lawyers the members of the Council usually cannot claim expertise on assessing effectiveness of social, economic and educational policies.

In terms of regulation to safeguard quality and prevention of fooling consumers (or worse) governments have put up strict norms. The norms are binding, are monitored and violations are punished. But what is common in almost any domain of private provision is absent from provision in the public domain: the legislator can do as he pleases without any sanction on failure, except the weight of the failure in elections once every four years in a vote that covers a host of issues. As the Dutch case shows, this can go devastatingly wrong, be recognised as such but not corrected: recommendations can simply be ignored. Voluntary quality control does not suffice. In the case where it did work (agriculture) it was rooted in a strong sense of urgency, and took a long time to mature. That sense of urgency is now absent.
Just as the legislator ties the hands of the private sector, its own hands should be tied. The legislative body should set rules for the public sector. It should tie its own hands to prevent manipulations and misuse of public power. If "the government" is truly interested in the quality of (higher) education, it should

[17] "We" is the pluralis majestatis, ie a minister on behalf of the King.

allow truly independent assessment of its own policies, just as it requires from the private sector.

As noted, new drugs can only be offered for sale after solid empirical evidence is available on its claimed effects and its possible negative side effects. The Dutch agency to assess the evidence employs 300 professionals. Firms that offer raw animal food products (meat, fish, dairy, eggs) need a permit from the Netherlands Food Authority. The agency that watches over fresh food quality and safety employs 2500 fte employees. The Council on Education, a more or less independent agency to watch over the quality of education policy has 10 expert advisors and employs 10 professionals.

Suppose we would seek an education authority in comparable proportion as the drug and food authorities. Dutch health care expenditures were 94.2 billion euro[18] in 2013. Dutch households spent 271 billion euro on consumption, of which about 10% on food, ie, some 27 billion euro. The Dutch government spends 41.7 billion on education, households add another 3.8 billion, totalling some 45 billion euro. Crudely imposing proportionality with the food authority would justify an education watch dog of 4200 employees, proportionality with the drug admission authority would justify an education authority of 150 professionals. The latter would put it on a par with CPB, the agency that advises on economic policies (on a broad definition: CPB also advises on education policies). Crude approaches, wide margins, but substantially above the 10 part-time professionals on the Council of Education.

A Center for Assessment of Education (the Dijsselbloem Institute?) could be mandated to apply the Dijsselbloem protocol to all major policy interventions in education, it should be allowed to set its own research agenda, could advise government and parliament on request and should open a counter for interaction between research and practice. The organisational structure could be similar to that of CPB: under the umbrella of the Ministry of Education but strictly independent in analysis and choice of topics, with the obligation to provide knowledge relevant for policy issues and held to quality standards by the requirement to publish in leading international journals. An institute employing 100 professionals at 100 000 euro a year would have salary cost of 10 million euro, 0.02 percent of government expenditures on education. At far less than 1% of annual expenditures, a top-notch research institute could be operated. That's not even half the norm of expenditures on R&D that's often stated.

[18] http://www.geneesmiddelendebat.nl/toegang-tot-geneesmiddelen/prijs/kosten-geneesmiddelen-in-nederland

6. Transferring academic knowledge to the field

Van Welie (2013, chapter 5) notes that the international literature observes robust barriers between the abstract problems studied in academic research and the practical problems faced in schools. She investigated the feasibility of a mediating institution by asking school leaders to formulate significant questions and then search the literature for answers. She interviewed 6 leaders of secondary schools and asked them "what kind of scientific knowledge (practical, organizational, conceptual) would support the Principal in further ambitions and the development of school quality, and what are the problems, so far, with obtaining this type of academic knowledge?" Searching the literature for answers, only articles in peer-reviewed, top ranking journals were consided, and the reserch outcomes were to be amenable to school practices and ambitions. Answers to questions were summarized in an accessible format and took no more than 5 pages. In evaluation interviews, the school leaders expressed clear apreciation for the information they received.

The project suggests the potential for an intermediate institution that translates academic knowledge to practice in schools and conversely, that serves as a consulting agency for questions and problems that school management faces. As an interesting example in The Netherlands, she points to the link between Wageningen Agricultural University and farmers. As noted above, and also discussed by Van Welie (2013, 122), right from the start of the university, in the nineteenth century, regional testing stations were set up that brought farmers in contact with academic researchers. Today, there is still active interaction. To quote from Van Welie (2013, 122): "Largely supported by the opportunities from the internet, Wageningen is firmly associated with institutions and individuals workers in the domains of food production, the environment and health. Their website offers up-to-date reports and research outcomes considering current themes in the field (…) and, through a web-based information centre, workers in the field can submit research questions emerging from practice when no financial means for initiating research are available to them".

There are other budding examples. The Free University of Amsterdam has opened a website where demand and supply of knowledge may meet (www.lokaal15.nl). In the domain of education, TIER, Top Institute for Evidence Based Education Research at the University of Amsterdam, recently initiated such an interaction, with a Best Evidence Encyclopedia at its website (www.tier.nl). NRO, the Coordination Council for Research on Education (see below) has a similar website. But as non-committal arrangements, the effectiveness of such websites may be quite limited.

In labour economics, work on econometric methodology has focussed for a few decades on better methods to uncover causal effects rather than just associations or correlations. Applications of this new methodological emphasis have yielded many studies with immediate policy relevance, on the effects of labour market programmes, social and welfare policies and also on education policies (Van der Klaauw, 2014). This methodology is spilling over into economics of education (and other fields) and it is easy to find examples of research with high policy relevance.

Leuven, Lindahl, Oosterbeek and Webbink (2007) test the effect of extra funding for disadvantaged pupils on their achievement. Primary schools with a high proportion of children from disadvantaged families (low income, low skilled immigrants). Schools with at least 70% of their pupils from such disadvantaged backgrounds were eligible for additional subsidy per teacher of 10% of gross salary for two consecutve years. Schools were free to spend the extra subsidy, as long as it improved working conditions. The threshold was applied to the situation in the recent past (hence, fully exogenous) and the data allowed for a regression discontinuity design. There were no positive effects on student achievement (language, arithmetic, information) 3 years after the subsidy was paid. In fact, the effect was negative, though not always statistically significant. Schools above the threshold also obtained additional funding for computers and software (90 euro per pupil). Here the effects were also negative, in particular for girls.

Leuven, Oosterbeek and Van der Klaauw (2010) set up a controlled experiment in the Faculty of Economics at the University of Amsterdam to test the sensitivity of student performance to financial incentives. First year students were randomly assigned to three groups differing in the financial premium for completing all first years exams within one year. Typically, only 20% of students pass all their exams in one year, and on average, students collect only half their credit points for that year. In the large bonus group students would receive 1500 guilders (681 euro) for full compliance, in the small reward group, they would receive 1/3 of this amount, in the control group they would receive nothing. High ability students (by secondary school math score) perform better in the high bonus group, low ability students perform worse during the first year. These effects become more pronounced in later years. The results have obvious relevance for designing student loan and grant schedules.

7. Conclusion

A key recommendation of this paper is to strengthen the link between education policy and academic research. Research for perpetual improvement of products

and processes is common in the private sector. Binding standards for product quality and product liability have been widely imposed by the legislator on the private sector. Similar rules and practices are absent for public sector production: producers are not engaged in permanent research and development, legislators are not bound to any standard of effectiveness for their policy interventions.

A Center for Assessment of Education could fill both gaps. It could be given the responsability for a mandatory rule of evidence based (major) interventions; an ex ante assessment by lawyers only (in the Council of State) should not be considered sufficient. It could also be given the assignment to bridge the gap between academic research and school practices, in an institutional arrangement that goes beyond a website for non-committal confrontation of supply and demand. Valuable lessons can no doubt be learned from the experience in the agricultural knowledge network in the days before private firms took the lead in research and development.

A recent initiative, the *Nationaal Regie Orgaan Onderwijsonderzoek* (National Council for Coordination of Research on Education) does not seem to qualify for the tasks just outlined. While it is certainly laudible that research funded by NWO (the national institute that allocates government funding for academic research) and that in the boards civil servants, academic researchers and practicioners meet, it is doubtful if this will have sufficient effect on behaviour of policy makers and on actual school practice.

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