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Knowledge Management in a university department.

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The perspective of this paper is to evaluate knowledge management in a university department with a perspective of research management, which resembles that of and R&D department. Knowledge management would include management of researchers and of innovation processes as an organising and enabling process of management and application. University Business School departments will have to do more than the teaching and research. There is an emphasis on generating research projects together with private enterprises and disseminate research to the private sector. Many new criteria of success are very close to other private research centres, which have to be able to create foundations for research as well as results. The stimulation of a creative environment for knowledge and learning is a focus on leadership and management rather than administration, and raises important issues on how to evaluate qualities of university departments before the results.

The perspective of knowledge management is leaning on Tsoukas' perspective "of turning an unreflective practice into a reflective one" (2001:990). In universities and business schools the evaluation and success-criteria are heavily tied to production of articles and papers, as well as teaching performances. Produced articles and books are a good reflection of creative processes a few years before. Evaluations of results in terms of publications and evaluation of teaching is an ex-post perspective. A knowledge management would be interested in how to establish a creative and efficient intellectual culture to produce these results. The time dimension alone is important as management is supposed to stimulate the research environment by recruiting, by stimulating research and by creating collaborations in order to generate good routines.

The legitimacy of "management" is limited among researchers in the Danish university system. The norms among academics mostly reflect an attitude against management as it is expected to limit the individual rights to decide on research (Langberg & Lauridsen 2001: pp 82-83). Formally the manager can decide not on research topics, but on methods, which is quite fundamental, but it is hard to imagine elected managers doing this in a very strict manner. The paper is discussing how to create supplementary success-criteria to the ex-post publications, and how to get the "milestones " on both aspects of production (publication and teaching) and on social indicators legitimised in a research milieu.

The research management perspective is then to elucidate rules and create alliances to get interesting external resources to stimulate "the collective academic process". The stimulation of young researchers and Ph.D. students to take up responsibility of their own career, teaching and research as well as the collective is a part of the creation and implementation of rules in an academic university context, moving in the direction of a mode 2 institute (Gibbons et al. 1994, Jacob 2002)

The paper is an analysis of a case from the Copenhagen business school on how rules are made more explicit in a knowledge management perspective. Based on research on research management (Ernoe-Kjoelhede, E. et.al. 2001), but also experience as the head of department in a 3 years growth period from 1999-2001, when the department changed from around 40 people to nearly 90, including temporary research assistants. The main growth was in Ph.D. students and externally funded temporary researchers.

The discussion of development of relevant success criteria has to stress measures for each of the researchers in a career perspective as well as collective measures for the organisation, but these are overlapping and not uniform. The discussion will relate to the problems of forming success-criteria related to problems of 1) timing, 2) individual and collective, 3) teaching and research. How to create legitimacy of this form of knowledge management is a fundamental reflection for managers of research institutions.

1. Research management and evaluation.

Research management is a balance to manage researchers who know better themselves. The attitude to "steering" and "management" is often negative, though not necessarily for other forms of "framework management", or support to get more resources. A part of the management of research is the focus on evaluation of output of research investments, which has not been part of the usual tradition in academic life of the individual freedom to research. In recent years there is an emphasis on "value for money".

"In many countries, a growing concern has emerged "about the increasing cost of funding university-based research… and the need to obtain 'value for money' for public expenditure on higher education (OECD 1987, p. 19). Universities have been expected to become more efficient in their use of public resources and more accountable (Massy 1996)" (Geuna & Martin 2001, p. 3). Evaluation of both institutions and of research is focusing the relevance and importance of the research production and production of good candidates for employers.

Within knowledge producing firms, the management of knowledge, and the organisation for creativity and productivity has been tied to a flat organisation focussing on openness rather than closure leaving room for skunk work. The tendency has been toward more open and flexible organisation, and away from very bureaucratic fixed measures, as they do not grasp the complexity and especially the ambiguity of research (Iansiti 1995, Quinn et al. 1997).

The discussion of success-criteria in research and teaching keep coming up as both a part of the external evaluation, and a part of the career patterns and recommendations. Different criteria are used on evaluating performance criteria for funding of universities, and these are both tied to teaching, publications and peer reviews (Geuna & Martin, 2001). Many of the criteria used in European universities are narrowly tied to international publications in high quality journals. Nobody can contest, but it is not the only criteria, especially not in a management perspective. International publications are result of what happened at the department and research group some 2-3 years ago, but it is also a narrow perspective in a department, where the main part of the job is teaching. After all our jobs are defined as partly (34%) research, partly (65%) teaching and administration. The ex-post result in terms of research publications is a result of the capacity of the research environment to produce publication, to recruit good staff and good Ph.D.s. Another is to avoid that teaching is becoming only some ”thing” that has to be done, whereas the real thing in working life is research. It provides an effort to link teaching and research, and to form a creative research environment (Hemlin 2002).

As a department Management, Politics & Philosophy definitely need more international research publications. International publications are important in small language areas, even if some publications have to disseminate results to the local industry in Danish and publish for the research community in English. The results in terms of publications are results of a research process, and in the success-criteria should be the ability to form a creative and productive environment for research and teaching activities, where people take on responsibilities and act as self-managing researchers and teams both on the initiatives and implementation and to communicate the results to users like industry. The question remains to what kind of research environments may be a means to generate good results?

As research manager the results of the annual reporting is important. But without consideration of the innovative and productive capacity for the next years to come, this may not be the most significant sign of a good research department. Recruitment and socialising for research and teaching are the most important investment in generating capacity for results. This seems to be part of the discussion of how to manage knowledge workers in knowledge industries (Eccles, Nohria & Berkley 1992). Universities we have been much more concerned with more bureaucratic inspired measures only ex-post, and the strategies and project developments in the Danish context have been part of the social research council system.

Development of success-criteria in a university department could be seen as a measure to create legitimacy. What type of criteria could be relevant, and how could we perform better according to our own standards?

The important issue is not only to evaluate results ex-post, but also to evaluate the capacity to develop more results, as the earliest part of the knowledge accounting (Sveiby & Risling 1987). We do not want the auditor scenario using the rear mirror. We should not act as bookkeepers selling investments, but look at the capacity to develop in the future. This is why the processes to develop competence and resources are so important for managing and acting.

Knowledge management in this context is related to the development of a profile of success-criteria, thus not only developing measures for each of the researchers, it is also related to timing in a career perspective, which processes are better managed under a decentralised responsibility, and where a research manager may change processes and make a difference? As a department working with research on research, and on research management, this could provide a good basis for developing our own criteria and be active for our own purposes and for later self-assessment exercises.

Some new rules have come up in recent years, both from the top hierarchy of the Ministry, and from the top of the university. All have been tied to signals of: reputation and more international research publication, more external funding, and both more and better teaching. The effort to control the output of the investments in universities has lead to registrations and evaluations. Reflecting the ideas of a close evaluation of "value for money" in the university sector, a "development contract" with the ministry is established in 1999, promising some notified benchmarks, and measures, which are suggested by the universities themselves. The role of the development contract is still a bit uncertain. It is not a tw-way contract promising reources if the contract target is fulfilled. The contrct is a measurement list of promises, but it is not presented as a model favouring excellence and high ambitions, such as the British model could be interpreted. In the UK those who promise the most and perform accordingly are favoured with resources, whereas the less successful are punished (Geuna & Martin, 2001). The motivation for the development of excellence is a poor match for the Danish fundamental ideology of equality and regional redistribution of resources in a state university system.

2. Department level of management

The general purpose of the Department is to develop research and teaching within Management (including strategy and innovation), Politics and Philosophy. Teaching and research is organised as a matrix structure, and only some of the teaching programmes are directly managed from the department.[1]

The management structure in the Business school is a matrix structure, where the head of department is responsible for research, for administration and for supplying teaching to different studies. The study directors on the other hand are responsible for the studies, and may choose to pick external teachers, if the local offer is not good enough. The balance is delicate, and difficult, but has proven very strong for the creative development of new study-lines and educations. The matrix however insert some marketing principles in the offered teaching, and management has to open up for some of the issues known in other open multiple task organisations. Some of this approaches to a mode 2 research institute (Jacob 2002).

[1] This is described in section 2.2 p.7-

The main programmes form obligations for the department manager, and the responsibility to find teachers to fulfil these obligations. Some of the problems are that the importance has been to develop the new educations, and to make it work. In terms of evaluations, we are mostly evaluating the current implementation, rather than the change potential of creating the position in the productive capacity. The development of new profiles of educations such as the combined educations with philosophy and the master in Knowledge Management is a collective effort, often initiated by a group of researchers. The role of management is to stimulate initiatives, and allocate resources, but is much more involved in organising the framework than in the implementation.

The success-criteria of research publication may not always fit with the teaching and the service to the community and industry, but we have to have a systemic perception of the whole. If we cannot find the "whole in the parts" (Quinn 1985), then it is hard to see how a research system such as a department can survive. If pressures for research make teaching a non-prestigious tedious task, then management has to try to change the system and the capacity to reproduce the system. If we cannot recruit young scholars for the Ph.D. and the young researcher positions, then the system breaks down, which is why the effort to build a good research environment is a challenge for the good people to join and to stay, even with the public salaries and working conditions involved.

The development of criteria has a tendency to be very static and ex-post oriented. The flow and processes, and the individual learning and production versus the organisational level, is not very precise. The organisational learning is just as important as in other knowledge based firms, but with less concern. The evaluation also has to be related to the career flow, and investments in knowledge development. This is the motivation for stimulating productivity. But the process perspective does not relieve us of the registration of output, productivity and visibility of the results.

The investment in good performance at a later stage is an essential part of the argument. The article is both a research management article and a political argument fighting an ex-post steering of research. In the light after the event, we clearly see what was good and bad. The trouble is to drive in the fog, and estimate the images of what is essential and what is not, while driving (Brown 1997). These perspectives have been raised in the management and leadership for firms, Hampden-Turner (1990) is discussing the helmsman in the boat, and how he should steer in the wind to reach the right direction. The profit and result could be the target, but not the means for managing.

Some of the criteria are used for external evaluation, and often a part of the reputation game at the organisational level of the Business School, and other variables are tied to departments and research groups, and yet others to individual researchers. The specification of the level of measurement is neither very clear in the policy discussions at the universities, nor in the ministries.

A number of variables could be used for a more systemic success-criteria:

1. Quality of research
2. Teaching
3. Ph.D.- recruitment, environment and performance
4. Environment for developing research and teaching
5. External relations to industry
6. External funding
7. Administration

But these are very different levels of evaluations. The good research environment is both **a target** and hopefully also **a means** for developing research funding and –results.

2.1.Quality of research

Internationally the department of Management, Politics & Philosophy has a problem of being visible in the "right" journals. As a knowledge manager the ambitions were not seen as high enough. The international reputation is built on both visibility in journals, research collaboration, and conference and very much tied to individual researchers. In the last surveys Copenhagen Business School as such has not had the very best ranking compared to the business schools, with which we compare ourselves (Baden-Fuller 2000).

At the department level, the problem is to evaluate the production of all members of departments also in a broader perspective than the International refereed articles. The international publishing is supposed to be the quality stamp of the research, as it is exposed to peer reviews and comments. But with increasing number of journals, it is not recognised by all as quality stamp, and a selection is necessary. A discussion of journals and what journals are important has been running for some time. The former dean has asked for prioritised journals for publications in A, B and C. It is very difficult to apply such joint listing of journals for a heterogeneous department, and reflect not only a linear thinking, but also demand homogeneity. A number of ranking games both in the US (Anbar Electronic Intelligence, Starbucks citation index) and in Scandinavia (Engwall 1994) has shown the inconsistencies, and the problems of using the linear ranking 'beyond the well defined disciplines', which is obviously the problem in such a department. The use of refereed articles and peer reviews as quality stamp is the best we have for the time being, even if the quality stamp effect is questioned in new research management research (Hansson 2000, Benner & Sandström 2000).

Different disciplines use different media, publication strategies and target groups. Philosophers and historians have a tradition for mostly writing books rather than articles for journals. The group of Political scientists of the department mostly write books and Scandinavian articles, due to the analysis of the specific Scandinavian model and the relationships between the public sector and the private sector. The subject itself demands a reference to the geographical areas of specialisation. English and American articles are different, and need more explanation of the specificity of the Scandinavian cases.

The writing of books is much more timeconsuming than articles, yet in the Business School evaluation in the annual reports books count as an article. The focus on international publication is strangely enough mostly tied to articles in English. But as a small language area, we have obligations to publish both books and articles in Danish to create visibility in the Danish industry and other policy oriented user environments. A new field of management philosophy /philosophy of management as a new an interesting field across disciplines is developed by the research professors of the department (Kirkeby 1998, Thyssen 1997). Another field of management on the boundary of public and private is also developed within the department (Åkerstrøm Andersen 1996 and 1997). Both of these issues have created reputation not only among academic scholars, but also among managers in both enterprises and the public sector.

At department level, three collective books create a good visibility on main themes for the Danish public *"Spørgsmål om ledelse"(Questions on management)* (Mønsted & Poulfelt 1997), "*Viden om – ledelse, viden og virksomheden" (Knowledge on – Management, knowledge and the firm)* (Christensen 2000), and "Det handler om tillid" (It is all about trust) (Bordum & Wenneberg 2001). These collective works have been an occasion for a joint research process in the department, as they all cover themes relevant for different research projects that would benefit from a diversity of disciplines and research projects. The books give a good reputation and window to industry.

The diversity of disciplines and research projects call for occasions to create interaction. A supplementary evaluation of publications could be tied to their relevance for other researchers and for teaching. Does the research contribute to our teaching areas in a broad definition? How do we in a very heterogeneous institute form a combined list of criteria for relevance?

One way could be to look at relevance of publication, another to the relevance for management in a broad perspective. Restrictions are not very motivating, but a discussion in the publication-planning could take this aspect into consideration as it is in the appraisal interviews with the manager of the department. Specialisation and exotica are good, but not as the only publications for the institution.

The knowledge management is to make sure at the aggregated level, that at least some international publications appear each year, and that some of the researchers do an effort to disseminate research. In practice the responsibility is decentralised to researchers, and only touched upon in appraisal interviews and dialogues from time to time, when there is a need to stimulate the processes.

2.2. Teaching

All members of staff should be involved in teaching, as this is the basis of our work. The Universities are tied to the relationship to teaching. Even Ph.D. students have to do a certain number of hours of teaching.

As a whole the department is responsible for a certain amount of teaching, but also of certain themes and study lines both at bachelor level: HA-Fil (business economics and philosophy), at Master of Science level: cand.merc.-fil (business economics and philosophy), IMM (International Management and Marketing), and SOL (Strategy, Organisation and Management). On a number of executive educations or Masters, the department has been responsible for the development of first the Master of Business Administration, and later of the Master of Public Administration (MPA), where we have the main responsibility. We are also engaged in other programmes MBA, and different Bachelor programmes, the general bachelor (HA), the combination with computer science (HA-DØK), and other Master of Science teaching. A cross university course in management of innovation is the responsibility of the department.

New teaching programmes are developed, such as a new executive master in Knowledge Management, and a cross department bachelor in business economics and communication.
The optional courses at both Master and Bachelor level create the variety and the input for development. Teaching at the bachelor level of HA could be seen as a recruitment of good students for the Master level.

At CBS the problem is to create teaching that generate resources from the Ministry based on a measure for students finishing courses and passing exams. The financial model of the universities, including business schools is based on funds for students passing the steps of the study and exams. The funding model is based both at a basic funding for research, and on performance criteria for teaching. This implies that the management level of the School is concerned with the productivity of teaching and exams.

The teaching profile has been related to individual researcher's ideas of teaching. The coordination and management of priorities and relevance of teaching is becoming more and more important. Not only for formulating new studies, but also as a department with responsibility for teaching programmes and development. It is a kind of marketing model, where it is a process for the head of the department, for study directors and for the single staff (Ph.D., assistant professor, associate professor and professor) to make sure, that the quota of teaching is provided.

Because of a matrix structure, where the head of department is responsible for the permanent employed staff in terms of fulfilling research, administration and teaching obligations, then Study directors are responsible for the studies, the management structure is not very clear. The studies have to motivate permanent staff, and these also have to sell their capacity as a teacher. The study directors may choose permanent staff, or external part time teachers for the benefit of the studies. If permanent staff therefore is not well known (as new-comers), or if they have a poor teaching reputation, they may have difficulties in finding enough teaching. It is the obligation of the head of department to look into these problems and help to solved the distribution of work, also in the teaching obligations.

The teaching methods and courses are offered to all young teachers to create a learning environment as an input to a good teaching structure, both to recruit students and secure, that they pass with good grades and within the time schedule. The other part of teaching is more a knowledge management issue, to discuss how teaching is related to research. It is important that teaching is not a drain of energy, but related to research in the way that is relevant and interesting. In this way the dialogue and the effort to keep a high level of ambition could be some of these means as to provoke independent reflection, and self-governance of the students at a certain level.

A good environment for focus on mobilisation of resources for teaching projects related to research is important especially in our organisational structure, where the departments are research organised, and suppliers of teachers to different teaching programmes with a different management structure.

The whole idea of using success-criteria is usually in the CBS context tied to some kind of external evaluation or rating in the European context, such as the recent EQUIS evaluation.[2] One of the issues about teaching is that the Business school has developed a number of new educations, and managed to get a very good recruitment of students for these combined educations (ex. Philosophy-business economics, International business- culture, law – business administration, business economics-computer science). The diversity is an interesting profile for innovation in educations, and perceived as interesting for the students. However the relative crude indication in the EQUIS-evaluation, is that of the number of study specialisation is too high to be understood from outside the Business school. In this case overview and simplicity is more important than complexity and good study environments, and this is overestimating one dimension relative to the purpose of the different specialisations, or a standard measures for fuzzy problems.

2.3. Ph.D. – Recruitment and performance

The creation of a good and productive Ph.D.- environment is one of the challenges and benefits of research. The development of an European doctoral school is developed at a time, where resources for Ph.D. scholarships declined. The generation of external funding and collaborations with industry to fund Ph.D.s has been an important part of building up the research environment. The department had 6 Ph.D. students in 1999, when the doctoral scool in knowledge and management started up. At the end of 2001 there are 31 Ph.D-students and 21 have scholarships paid by external funds. Large research applications are important for financing Ph.D. scholarships. But large research teams also form a good research environment for the Ph.D. students.

[2] EQUIS (European Quality Impovement System) is an international system of strategic auditing procedures for Business schools in Europe, developed by the European Foundation of Management Development(EFMD). The Business school was evaluated in 2000.

The age-distribution in most universities in Denmark reflect a bulk of senior staff, who will be retiring in 6-10 years, and the mobilisation of the new generation has to be taken care of now, which stresses the Ph.D. programmes for developing a basis for recruitment.

In the National evaluation of the Danish Ph.D. system, one of the most important factors for a good success-rate for Ph.D.s is the environment with other Ph.D.students (Andersen et al. 2000). Evaluation of the Ph.D. field also stresses the necessity to develop good research environments for the students, to also finish on time, as a 3-year period for a Ph.D. scholarship is the norm. Ph.D. students are paid and considered members of staff in the 3-year period. They have a limited teaching obligation (20 % of the time), and stay in an office at the department.

The internationalisation of the Ph.D.-education provides a better network of recruitment, but also an improved internationalisation perspective and network for our own Ph.D.-students. The further development of both our own research school and of the EUDOKMA to a larger programme is important for the Ph.D. development. Exchange of students between universities is now taking place as EUDOKMA is accepted as a Marie Curie Training Site in the EU. Expansion of Ph.D. students at the Department of Management, Politics & Philosophy will both benefit to a good research environment, but will also draw on resources. The expansion is therefore closely related to the effort of generating external funding.

2.4. Environment for developing research and teaching

Most success-criteria are related to measurement of results. Results are ex-post evaluations of a process of investments in terms of resources. In a knowledge management perspective the good environment could be a variable to produce good research, as well as a target by itself, as so much working time is spent in the department. The problem resembles the paradoxes of innovation, where uncertainty, variety and complexity have to be created to provide a creative atmosphere, but the problem is to manage the openness and creativity, being responsible both for creativity and for productivity of research and teaching. Knowledge management is a special feature for creating the capacity for research and development projects. The creation of a potential for changes and for the mobilisation of new resources is an important criterion for the willingness to volunteer in new teams and projects dealing with development of both research and teaching. Good people, should not only be good researchers and teachers, but also have the social capabilities, inclusive the capacity to initiate projects, generate external funding and have an open mind for discussions in a cross disciplinary department and motivate young researchers and students. They should also have international contacts and be willing to share these with others.

The responsibility beyond the person him(her)self to the organisation is an essential qualification coming close to perspectives on organisational learning rather than individual learning. Some of the reputation variables, such as e.g. conferences are tasks of high importance for the institution, but implying a very heavy workload. Such types of tasks demand a good environment to make the collective responsible to share the obligations.

The open environment, occasions to meet and discuss is perceived as a benefit, and attractive environment. When asked about, what made Chicago Business School such a great place for economists as to produce several Nobel prices and nominated for Nobel prices, the economist Deirdre McCloskey (as one of the nominated) said, that one of the important aspects was to have lunches together, and discuss what they do.
A willingness to comment on other researchers work and project proposals, and willingness to go into joint work for applications is both an indicator of the good environment, but also improve the environment by itself.

A good environment demands that people are using and contributing to the milieu. They have to work and be in the offices enough to find occasions to meet. It this works well, if is a virtual circle, as it is beneficial to be in the department, and creates an environment, where other researchers want to join too. It is a delicate balance, as it can easily break into a vicious circle, if there is too much disturbance. Communication is good, but time to concentrate on work has to be protected as well.

2.5. External relations to industry

External relations are the foundation for avoiding the ivory tower, and create relations with industry and practice. This is perceived as important by itself in the development contract with the Ministry, and may be carried out in a variety of ways.

Research collaboration for developing research projects is one form. This may develop to co-funding or to industrial Ph.D.s, but also take the form of collaboration and co-writing with research interested staff in firms.

Work as consultants, reflections on learning from practice, as well as participation of practitioners in teaching cases provides a scenario of relevance for research, teaching, and industry. Giving speeches in a business context is a good form of business contacts for the reputation of the institution and the relevance of the research. Also participation in the media as experts provides an important image for the institutions reputation. These forms are found both as individual and as organisational contacts, but if developed as organisational learning more than individual learning, there is a better impact on the environments. The reputation to the outside however may still benefit also by the individual and private economic arrangements.

Conferences create visibility also internationally. The organisation of conferences and participation in conferences are important for a vivid research environment. We should make one conference every second year, and all academic staff should join conferences each year. The conference organisation activities however are very time-consuming, and a serious workload for the staff. In other countries this is one of the obligations of Ph.D.

students, but our system is different, and it is hard to get Ph.D.s involved in the organisation. Benefits of organising conferences are high at the institutional level, but the temptation at the individual level is very limited, and we cannot demand P.D. students to do this, except if they arrange conferences instead of teaching.

2.6. External funding

Fundraising is becoming more and more important as a competence for university researchers. At the department level, the dependency of external funding is high. Half of the resources for research (not including salary for permanent staff) are funded from outside (in 2000 and 2001). It is increasingly a demand for getting both public external funding, and that private firms are participating in the funding. The number of research programmes and projects in collaborations with industry and other research institutions have been very successful. The large programmes of Management, Organisation and Competence (LOK-research centere) and REMAP (REsearch MAnagement Processes under rapid change) both demanded a high percentage of co-financing both from partner reseearch institutions, and from industry.Other projects are also inlcuding collaborations with other universities and different public or private institutions: New Wage – a project of new principles in the public sector, and tourism and destination management. Applications for large grants in 2001 have been less successful, but they have to be made.

An important part of research time is used for writing applications and organising these research teams. Application procedures are tough whether for large project, or for Ph.D.s. The rewards for the permanent staff are few in terms of direct benefits. Only the pressure on resources for travelling and funding for Ph.D.s, this is one of the motivations for senior staff. Internationalisation and collaboration is not possible on the basis of the travel grants from inside the Business School. External funding is a necessity for internationalising.

External finance, consultancy and teaching in outside courses for industry are often seen as indicators of relevance for the society. This is not all easy to measure, but the reputation and external finance are easy indicators of utility and visibility of research.

2.7. Administration

The administrative function is not only the service to students, but also a mutual assistance to build up an organisation in a way that function. The rationality is not only economic, but also related to service levels and a good environment.

The department has a goal of creating an administration, which supports the activities, and where administrators are service minded, but have their own areas of responsibility. They are more administrators and organisers, than secretaries are in the traditional sense. Nobody actually have secretary assistance, as is the normal case in Danish universities. Only a few student research assistants and project employees offer these kinds of services.

3. What kind of measures do we accept?

The overall discussion of strength and weaknesses may be reflected upon in different qualitative essays. In different comparisons we need some kind of operationalisation of variables to measure. This will also open a discussion of relevance and methods, which I hope this paper will make open for discussion.

The change from qualitative methods to the quantification is often a bias towards more individualistic and more resultoriented measures of performance. The more process-oriented measures are often lost. This is one of the problems when criteria are developed, and is reflected in the following list of suggested criteria with a very different weight in the evaluation.

Criteria at the organisational level:

1. Research and reputation:

- Good reputation and extensive publishing, at least an average of 2 per researcher.
- 1 Conferences organised every second year for
- Innovations and new concept development – reputation of new ideas
- Initiatives for applications, at least one large application every year
- Guest lecturers: inviting guest lecturers from abroad every year
- Inviting guest lecturers from industry every year
- Referees for both Danish and international magazine articles
- Requested for executive programmes
- Requested for speeches in firms
- Requested for Government Committees
- Create and exploit variety and complexity
- Research-seminars – high participation and good critical spirit
- "Open doors policy"- openness to other researchers/disciplines
- Presence at the department

2. Ph.D. as research and teaching:

- Recruit 5 new Ph.D. per year
- Ph.D. successrate: 80% of Ph.D.s should finish their thesis for evaluation within the 3 year period
- Recruit foreign Ph.D. for exchange
- Good teaching performance for Ph.D.s

3. Teaching:

- Initiatives for new teaching activities, initiatives and involvement in groups for developing teaching
- Good teaching rating, well known among students.
- Good accomplishment rate in time and few drop outs
- Good employment rate, good reputation, and high salaries for graduates
- Employers satisfaction with graduates
- Participation in executive programmes

The above-mentioned variables for the department have to be fulfilled and managed. The head of department has to make sure that this performance is managed, and that the division of labour between researchers is used instead of making individual standardised variables. Publications lists are used for the annual reporting, and give a feedback for researchers to develop a strategy. In the reporting however there is a very stiff definition of publications, as a book counts as one article, even if it takes a lot longer to write. It may be more reasonable to give books the weight of 4-5 articles. This provides a clear signal to younger researchers.

It is however a problem when these variables are translated to individuals. All organisations have specialisation and division of labour, and the balance is to make sure, that over-performance in one area may compensate for under-performance in another. A time perspective becomes important, as the career- perspectives is one of the most relevant issues. Researchers have to participate to the fulfilment of the criteria for the department, and it is the complicated job of the manager to create the puzzle, to motivate and exploit the capabilities of the researchers, especially as the better half of a department work much more than the norm of 37 hours per week. Motivation has to be created until now with very little chance of generating better salaries or other benefits.

The individual level is important in a career perspective, as some of the criteria are used in most evaluation committees for new jobs, for permanent posts as associate professor and especially as professor.

Variables used in a career perspective to evaluate the individual level (Associate professors and professors):

- Internationally published articles
- Books as major works to publish research results.
- Publications should reflect both academic research and dissemination of research
- Conference arrangement
- Ph.D. recruitment and successes
- Good teaching performance and reflections on didactic and teaching methods
- Research management and generation of external funds.
- Relationship to practice

The individual level has to consider the division of labour and the competence profile of the individual researchers. Some are clearly better in publishing, and others maintain the department in teaching, funding and other arrangements. A few play the role of "the old guard" ("Tordenskjolds soldater"), being used both by the president, the dean and head of department for policy and representations externally as well as teaching and research, yet others have their strength in just one of the fields. The problem with this kind of criteria is to identify free riders. What cannot be accepted? The regular under-performance in teaching is not acceptable; also several years of under-performance in research publications will have to be reported. The economic management has become stricter at the business school, and the policy and demands have changed. At the time being we are in a vacuum, where sanctions are still nearly impossible. Dismissing people in the university sector is very difficult, and special benefits are hard to create with the unions.

4. Knowledge Management

The management problem is closely tied to what are the means to handle the kind of problems of organising in a department. The innovation and creation of research is tied to a system of motivation and commitment. There are very few sanctions, and most of the valuable people overwork seriously. The personal credibility, and the direct relationship to members of staff make it possible to solve also the new problems coming up. Asking researchers and Ph.D. students to take a special course or to work on an application for external funds is to ask people to do weekend work, and demand motivating and arguing that the proposals are relevant for both the organisation and the individual.

One of the benefits is sabbatical leave, and an effort to redistribute the annual teaching and administrative load of work. This is a timing problem, as this is usually a favour for people who have taken a special workload for a long time. Only the pressure from the level of the dean and faculty level for a balance of performance measures per year, implying that other people have to over-perform to pay for the sabbatical, even if the person have done so in his record the years before. The balance on persons and calendar years is quite a puzzle.

One of the means for the manager is the annual appraisal interview with members of staff. In this interview, everyone fills out a questionnaire on performance within: research, teaching, conferences, committees, applications and the plans for next year and the overall plan for the coming years. The dialogue intends to give feedback to the performance and the plans, and how the personal plans fit into the joint plans and developments in the organisation. Contrary to private firms, this has nothing to do with salary negotiations, as salaries are based on union standards. In troublesome cases, the discussion may result in a demand for a new discussion after 2 months, where some of the critical issues are corrected. Usually this is a discussion of how to relate the personal career and interests to the joint environment efforts. A part of the appraisal interview is discussing how the person is settled in the environment, both how the department support him/her and how he/she is contributing to the department.

A newly negotiated possibility for special salary increases is clear from the state and the academic unions. It looks as if there is a chance from 2002 to create a different system of sanctions, which has not been possible so far. Thus a change in the discussion of career will come into the appraisal interviews in a more direct way, and allow the manager to facour people who make a special contribution.

At the knowledge management level the Copenhagen Business School has worked on a cross-department evaluation. A number of departments have contributed with self-evaluations, and the next step is to have external international evaluators to look into the performance. [3] The effort to do this kind of evaluations is tied to the mentioned contract with the ministry, showing the development within management, and here the special issue of knowledge management is selected. The effort of evaluating at the business school level is new within research. The contract with the Ministry looks as a basis for allocation of resources for universities. The problem is that other issues of regional redistribution of resources is a serious policy, not to be changed, and thus affect the allocation of strategic funding, rather than ex-post benefits on the basis of performance. The performance and the evaluations of applications for research are fundamental for the allocation of research funds for projects, administered by research councils.

In order to develop the system as a knowledge manager, the structure and the different sources of resources has to be exploited. In recent years the public research councils have developed programmes for special priority areas, and most of these have demanded co-financing and collaboration with private firms. The idea co-financing is new in most universities, except for the EU-applications, and demands a well-structured assistance structure for teams who want to develop large projects. To encourage new people to go into the funding business, stimulation and support have to be elaborated. Once the system of financing is ready, resources are available for Ph.D. and travels, and the overhead is an important contribution to the Department resources.

Knowledge management is about leadership and commitment. It is not possible to make a good research environment if the manager is not going along and supporting not only in words and administrative resources, but also in her own practice. The system is changing from administration of public grants for teaching and research, to a system, where more and more of the resources have to be generated from outside. The old system was close to a bureaucratic administrative system, but without the entrepreneurship in new programmes and new applications, it is very hard to survive, and impossible to create an interesting and stimulating environment. The bureaucracy is still in a mode-1 type of university department. But the demands for many features change more to a mode-2 , and this is increasing the last few years, thus creatig a squeeze of the managing role.

5. Conclusion

This article is making an effort to present evaluation and success-criteria for researchers at a university. The author has been head of department for a 3-year period where the department has been growing seriously, and as problems are revealed at the concrete

[3] A report for this evaluation is presented: Mønsted & Hemlin (January 21, 2002) Evaluation of Knowledge Management (KM) at CBS. Report on Department of Management, Politics and Philosophy (MPP).

practical level, the article is trying to make clear how to manage with very few means of power.

The point of departure is the problems of making relevant criteria for performance close to the researchers themselves. The frustration about external measures has lead to reflections as a manager of how to measure performance of researchers with many roles. University roles include teaching, administration and research, and in a business school, this is complicated, as the university criteria are maintained, with some business relevance just added to the other dimensions. Studies in Australia (Ramsden 1998) focus motivations and building up a committed research environment. The problems of managing these environments demand respect for the complexity and commitments of and for people. The knowledge management is more close to the ideas in biotechnology, where the research could be perceived as a travel, where some results develop on the way, but where the type of results are very difficult to foresee (Rip & te Velde 1997).

The complexity and ambiguity may be interesting for an inspiring research environment, but a nightmare for external visibility, investors, and politicians. We have not been very good to focus communication for political and administrative level, for students and for researchers. The targeting of the communication is still to be outlined. Responsibility is decentralised and self-management is the most important management instrument. This has consequences for management to be seen as the co-ordinator, the stimulator and the fundraiser. Other roles such as mothering, nursing and servicing easily come in to create a personal relationship to the staff. Also the manager in a Scandinavian system has to go first to do some of the things she recommends. The authoritarian controlling manager has no change to direct a complex, ambiguous, anarchist milieu as a university department. But this does not mean that management is not possible. It only means that management is necessary as governance and with other means. It is an issue that demands further research.

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