

TOWARDS A SHARED MISSION

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Abstract: A mission shared by stakeholders, management and employees is a prerequisite for an engaging dialog about the many and substantial changes and challenges currently facing universities. Too often this essential dialog reveals mistrust and misunderstandings about the role and outcome of the universities. The sad result is that the dialog about university development, resources, leadership, governance etc. too often ends up in rather fruitless discussions and sometimes even mutual suspicion. This paper argues for having a dialog involving both internal and external stakeholders agreeing on a shared mission aiming at value creation (in the broadest interpretation). One important aspect of choosing value as the cornerstone of the mission of universities is to stress that the outcome is measured by external stakeholders and by their standards.

Most of the paper is devoted to discussing value in the context of universities. Although the economic aspects of value are important and cannot be ignored, we argue for a much richer interpretation of value that captures the many and varied results from universities.

A shared mission is a prerequisite for university management and leadership. It makes it possible to lead through processes that engage and excite while creating transparency and accountability.

The paper will be illustrated with examples from Denmark and the *Helios* initiative taken by the Danish Academy of Technical Sciences (ATV) under the headline “The value creating university – courage to do more”. As an illustration we use the mission statement of the IT University of

Copenhagen that has value creation as a key component.

Keywords: Shared mission, research management, university leadership and value creation.

I. INTRODUCTION

Universities are currently undergoing major changes not least to handle the globalisation, but also because of increasing expectations from society that the universities contribute to addressing mega-challenges such as water supply, energy, health, and aging populations. An open, frank and constructive dialog between stakeholders/society and the universities (all levels of management and employees) is essential for addressing the changes. However, for such a dialog to be fruitful it requires a shared view on the fundamental mission of a university. Far too often lack of such a shared mission hampers a constructive dialog and may even create distrust and mutual suspicion. It is not too surprising that the dialog fails if one part expects the universities to create new jobs on a short time-scale and others think that maintenance and interpretation of culture are the main tasks of universities.

A shared mission is an essential part of leading and managing a university. It is the foundation of the agreement with external stakeholders about the overall purpose and direction of the university. It is also the platform for all internal communication and the ultimate yardstick for key strategic decisions. It is our claim that too much energy is wasted both

internally and in discussions with external stakeholders when such a shared mission has not been established.

Many stakeholders turn to universities to seek for solutions, jobs, growth etc. It is, therefore, important that universities can respond to this. The responses given in these years by universities, in terms of innovation especially will significantly shape the future. However, a wider, more complex/rich and shared role of universities' capacities to create value is a more viable and sustainable way to address the challenges faced by society than single targeted initiatives to create jobs next year, or innovation next month.

The authors have over the past years participated in a Danish effort to make "value creation" a cornerstone of the mission of (Danish) universities. This effort is gaining momentum and supported both by the Danish Academy of the Technical Sciences ATV (ATV 2012), The Danish Council for Research Policy (DSR 2011) and has been discussed at a series of meetings and conferences.

Section II develops the idea of a shared mission based on value creation. However, this immediately poses the question of what is meant by value. This is addressed in section III. In section IV we discuss the importance of people in the value chains. Section V has some reflections on the time scale on which value surfaces. Finally, section VI discusses leadership and management practises supporting a shared mission focusing on value creation.

II. A MISSION BASED ON VALUE CREATION

It is proposed to let "value creation" be a key concept in the mission of universities. In this section we discuss key aspects of such value creation and some key properties of "value". The intention is not that all universities should have the same mission. Value used to characterise what is created at universities allows for a very broad range of interpretations. What we do propose is to have a close dialog both externally and internally about what aspects of value (determined by external standards) that are the most important for a particular university, whether it is a large public institution or a smaller and more focused organisation.

There are, however, some important aspects of value that we find important to stress. First and foremost *value must primarily be judged by external standards*. Whether one talk about the value created by graduates or the impact of research this can not only be judged by internal standards.

In our work in ATV/Helios we distinguish between three value chains: education, research and knowledge exchange. Each of these may of course be subdivided e.g. into undergraduate and graduate

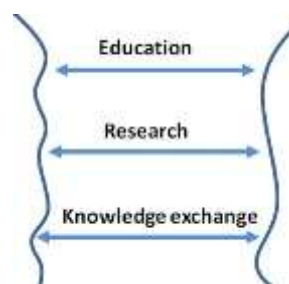


Fig. 1: The three value chains

knowledge exchange, illustrated in Figure 1. The knowledge exchange chain involves activities like research based support for public services, innovation, entrepreneurship etc. Please note that all three are bidirectional. Take for example the value chain for research, research challenges existing knowledge, policies and practices, however, it is also inspired by outside challenges ranging from mega-challenges as climate change to more narrow challenges like fighting a particular disease or understanding a new cultural phenomenon.

Despite the bidirectional nature of the three value chains they all produce some output (graduates, publications, new services etc.) which ultimately is what determines the overall value. This focus on output is a cornerstone of the "value creating university". Too often political discussions about universities focus is on the input not least how much money should be allocated to a university or how many students to admit, how large research grants have been obtained or what people are employed. These aspects are of course important for a successful university, but the interesting judgements must in our view be based on "what comes out of it". The dialog with stakeholders on output is the basis of creating mutual trust, transparency and responsible use of resources. The

term *scientific social responsibility* has been coined as a term characterising this (Krogsgaard-Larsen, Thostrup, and Besenbacher 2011).

To summarize the main points of this section:

- value creation serves as a basis for a dialog on a shared mission
- value is judged by external standards
- focus on the output

In the next section, we will discuss in more detail what “value” could be. Some may think of this only as “economic value”, however, we believe it is important to use a much richer interpretation. There is no doubt that universities create substantial economic values. As an example, economists have estimated the additional contribution of university graduates to BNP compared to employees with types of education. For Danish graduates this amounts to around 53.000 Euro per year (Junge 2010). OECD has estimated similar numbers for other countries. However, if one only interpreted value as economic value one would miss a large part of the value creation of universities.

III. VALUE CREATION

In this section, we will reflect on a number of key aspects of value as used when talking about “the value creating university”. A key part of this is to try to capture the richness and versatility of value ranging from new insight challenging political or cultural bastions to stimulating economic growth in a developing country through education.

A. Examples of values

To illustrate the variety of value we give a number of examples of value creation from the IT University of Copenhagen which has a mission statement containing the phrase “... making Denmark exceptionally good at creating value with IT”. Examples of value creation from the IT University:

- *graduates* (as mentioned above each contributes with around 53.000 Euro to BNP each year)
- contribution to *public debate* (a research project on e-voting has stirred up substantial public debate about the potentials and risks to democracy)
- new standard for *requirement specifications* (a research project resulting on a method

for writing requirement specifications for public IT-systems has led to significant improvements both in quality of products and reduction of costs).

- *start-ups* (a number of new companies have been started by faculty, ph.d. graduates and students)
- providing *access to global network* of researchers (through an active research group it is possible to establish personal contacts with almost any other researcher in the world – there are examples where companies have been able to get very quick access to research on a global scale and also in areas other than the ones of the local research group)
- *publications* (publishing papers in internationally recognized channels is important for many reasons; first and foremost the peer-review process is a delicate quality control (although not flawless); secondly, it is the entrance ticket to important dialog and feedback through publication, and it is of course an important channel to get the research results spread and become used)
- *history and culture* (even for a young field as IT there is significant value in recording and interpreting its history)
- *providing access to unique infrastructure* (for IT this is both unique technology such as super-/special purpose computers and “big data”)
- *participation* in committees, commissions, and advisory boards (researchers contribute to numerous committees etc. advising both central/local government and private organisations)
- *dissemination* of new research (both written and electronic media use researchers to explain and interpret research results and trends)

Although each of the examples given in the above list illustrates an important example of value creation, the most important thing to note about the list is the mutual interdependence of all the items on the list. Graduates are a very important channel for spreading new research, and they are also important for channelling feedback and new challenges back into the university. Creating and disseminating research results e.g. the new standard for requirement specification (mentioned above) is at the same time valuable in itself (because it leads to creation of better IT solutions), but using the results is also an important source of inspiration for new research. This *interdependence of all the items on*

the list is probably the most important value of a university, namely that the integration all the above ways of creating value and numerous others into an indispensable eco-system.

Universities are "the top of the ice berg" in our public educational system. They disseminate, generate and consolidate knowledge which is used in high-schools and primary schools via the training of teachers. Thus universities play a significant role in education, also for those who do not attend university.

B. Integration of value chains

The three value chains mentioned above are an abstraction that gives a simple platform that may be used as a first approximation. There are many examples of high quality education provided by other institutions than universities. Similarly, excellent research is done in industrial labs, museums, hospitals etc. *The unique value of a university is that it integrates multiple value chains* enabling students to get involved in research, education and research to influence each other, challenging and be challenged by developments in society and so on.

It is important to maintain a balance between the different value chains in order to preserve the delicate integration that we claim is the special and most important aspect of universities. Of course each university should find out what is their mix in a close dialog with their key stakeholders. However, allowing one of the value chains to completely dominate the others will in the long term harm the most important value creation aspect of universities namely the interplay and mutual inspiration from integrating the value chains.

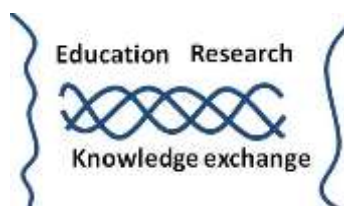


Fig. 2: Integrating the value chains

C. Unlocking value

The integrated nature of the value chains has a potential danger of making them invisible or at least less visible than they deserve. They may not be

visible at a quick glance from the outside, there is considerable tacit knowledge, and internally there may not be enough focus on exposing them. It may, for example, happen that graduates who come to a new job with updated knowledge that is not exploited. This means that the value is not unlocked. Similarly, the value of new research challenging existing practices, culture or policies is only unlocked if the researchers are in close dialog with those who are challenged. Since change is not always welcome and easy, there are of course numerous ways such a dialog may be hampered. Like money in a bank account the value is really symbolic until it is used for something one wants to achieve or acquire.

Unlocking the values of universities is a joint responsibility of the universities themselves and their external stakeholders, and trustful, open and constructive dialog is a key instrument.

D. Methaphores

One may wonder what could be a good metaphor for a university illustrating the diversity of the value creation while stressing its integrated nature. Could a coral reef be such a metaphor?

A coral reef is beautiful; it is one of the most extraordinary creations of the sea, vulnerable, created over a very long period of time and easy to destroy. One may sometimes get the impression that some believe that universities should be handled like the coral reefs. However, in our view this is not a suitable metaphor, because it does not provide a good platform for discussing the question of how universities handle the many and deep changes that is currently challenging them.

We believe that a sea or ocean is a better metaphor because a sea is at the same time provides a wide range of qualities such as:

- beauty
- food
- threats
- transportation
- variety

At the same time, the sea is indispensable and its value is not apparent at a first glance. Similarly to the university, all the value chain form an integrated

whole, where one cannot get the food without also accepting the threats of storms. Like the university, judging the value chains of the sea is complex and best done externally.

E. Value indicators

A logical consequence of the integrated nature of the value creation from universities is that it cannot be measured by a single or very simplistic yardstick. In particular, short-term financial result is not a good measure. The output of universities does have a significant economic value like the contribution to BNP by graduates, to job creation through collaborative projects/start-ups, through new products and services. However, there are many more dimensions of the value creation like maintaining and interpreting history and culture, dissemination of research, and enriching society with a knowledge base for policy making, regulation and the public debate in general.

There are numerous indicators for evaluating various aspects of the output from universities like citation indices, accreditations, awards/prizes etc. But just like the sea, it is important not to reduce the estimation of value to a single indicator. The real value of a university as well as the sea is the integrated eco-system from which different stakeholders may extract various valuable outcomes.

Despite the multidimensional nature of the value of universities there is maybe one common denominator on all or most of the many dimensions.

- *graduates* from a university are particularly valuable when they use what they have learned to *challenge existing practises*
- *research that challenges the existing* is indispensable for developing our societies whether the challenge is to science itself or to existing perceptions
- *challenging predominant political views, norms or prejudices* has always been an important role of universities

The common denominator in these and most other of the values coming from a university is: *challenge*. The stronger the challenge the more important/valuable the contribution may be. One may take a step more and claim that the more dimensions that are challenged the more value it

may create. For example, the chance of research having substantial impact is reduced if it only addresses one or a few aspects of a challenge.

Conversely, the universities are also constantly challenged by society. It is expected to contribute to addressing mega-challenges like climate, aging, water shortage and new cultural phenomena.

This duality of challenges is at the heart of the value chains linking universities to the society at large.

IV. VALUE IS REALIZED THROUGH PEOPLE

Like the sea, the value of a university is not immediately visible. It is realized in the interplay with the surroundings and most often through people. For example, when graduates use what they have learned in the jobs they get after graduation. This can take many forms e.g. contributing to new products or services, but also in more indirect ways by challenging established attitudes, viewpoints and practises.

The value creation from research is also most often realized through people. For example, in collaborations between industry and researchers where research is informed and inspired by real world challenges and where research based knowledge is used to develop existing products, practices and services in a company, a museum, a hospital, a school, public administration or numerous other places where challenges require new approaches and change.

In a recent study made by Harvard Business School it was documented that a funding scheme encouraging public private partnership established to foster transformation of research into commercial applications creates significant economic growth and job creation (Chai and Sheh 2013). The study focused on projects supporting high technology areas and reported decreases in the likelihood of bankruptcy and increases the average level of employment in companies participating in the supported joint research projects. Although the study focused on high technology areas we believe that the conclusions to be more general. A significant part of the value creation in the projects studied stem from the fact that these projects also integrate a number of value chains. Although not

directly supported by the grants many students get involved, get access to the research frontier and participate in the networking. Most often the projects lead to dissemination efforts, interviews in the media etc. We believe that such tightly integrated value chains will be the result of most projects where a number of partners get together to address significant challenges, no matter in what field or sector.

There are examples where research can be packaged as a product and “sold” without much interaction between researchers and those that apply the research and hence do not lead to much interaction. However, this is the exception; in most cases close human interaction is needed for the value creation. This is why the distinction between fundamental and applied research seldom is very useful. *The value of research is meeting challenges and not in its distance from practice.* Dialog is almost always needed to understand the true nature of these challenges.

V. TIME SCALE FOR VALUE CREATION

The timescale with which new insight is turned into changes can differ substantially and is seldom a good indicator of value. Hans Christian Ørsted discovered electromagnetism in 1820; this is an important foundation of many of today’s technologies including electric motors, mobile phones, computers and windmills – a time span of almost 200 years. Conversely, the discovery by Marshalls and Warren (Marshall and Warren 1983) in 1982 that ulcer is caused by the *Helicobacter pylori* bacteria revolutionized medical practice in a few years. In both cases the insight provided by the discoveries was inspired by a desire to understand that were important challenges both to external stakeholders and to the research community – and this is what makes them valuable.

Universities have a key role in collecting, maintaining and interpreting research accumulated over long periods of time. Quite often insight is reinterpreted several times as society develops. For example, the economic theories of Karl Marx have had a very different status over the past 150 years. Good research will often challenge society, its norms and what is considered obvious. A close dialog between universities and stakeholders is again a key to realizing the value. The insight

provided by research (both old and more recent) is embedded in graduates who challenge society by transforming the insight into change and development.

As with the sea the value creation of universities must be assessed on a long time scale. Underneath the surface can be a coral reef which is unique, created over hundreds of years and only accessible by a few with special resources. At the same time the sea provides food to many on a daily basis – and may do indefinitely if care is taken to preserve the delicate balance of its eco-system.

VI. VALUE STIMULATING LEADERSHIP

Agreeing on a shared mission is a first but very important step towards universities delivering valuable results. However, a shared mission is not sufficient. It is also necessary to develop leadership and management that strengthen the value chains, ensure a proper balance between them and ensures excitement about the mission both internally and externally.

University and research management is a frequently debated issue, there are even voices claiming that it is harmful. In our view, *leadership is about enabling an organization to create results* beyond what could have been created by the same people individually (without an organisation). There are unfortunately examples of harmful attempts to manage and lead. However, this should not be used to prevent the creation of successful organisations with leadership creating extraordinary results (value).

Very often the debate about university leadership is not really about the need for or qualities of leadership and management in itself; but a disagreement about the mission. If there is widespread disagreement about the mission then there is no platform on which to lead. We believe *that finding a shared mission that creates excitement both internally and from external stakeholders is a first and absolutely necessary step to make it possible to lead* and manage a university and hence to deliver extraordinary value/results.

With agreement about a shared mission from external stakeholders, not least the “owners” which for public universities is local or central

government, it becomes possible to agree on framework conditions that fulfil the “owners” legitimate expectations to results, use of resources, and direction without introducing detailed rules and regulations constraining education and research (as it is unfortunately often the case otherwise). This transparency and accountability is a cornerstone of the “value creating university”.

Examples of such framework conditions encouraging value creation are:

- focus on output and goals
- avoiding detailed regulation of internal processes
- focus on activities unlocking the values created
- defining major societal challenges requiring involvement from universities
- ambition and patience.

VII. CONCLUSIONS AND RECOMMENDATIONS

The value of a university is an integrated whole where a number of individual contributions stimulate and develop each other. In the big picture there are three value chains: education, research and knowledge exchange. Each of these may exist separately and there are many examples of excellent research or education done outside universities, however, *the unique aspect of a university is that integrates the three and all their subparts into a whole.*

Dialog and addressing challenges are key aspects of the value creation of universities. Dialog is necessary for transforming insight into value and for addressing challenges; whether it is the universities that challenge society with new insight or society that challenge universities to get involved in meeting challenges. These years, some of these challenges are global and important to all universities e.g. challenges related to energy, health, water, and aging. One of the results of such a dialog should be agreement on a shared mission.

The most important aspect of finding a mission shared by external stakeholders and internally is to enable management and leadership i.e. to ensure value creation beyond what can be achieved by an unorganized group of individuals.

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A. References

- ATV (2012): *Det værdiskabende universitet – fra enklave til nøglerolle*, Akademiet for de Tekniske Videnskaber ISBN: 987-87-7836-062-5
<http://www.atv.dk/da/publikationer/rapporter?download=49:det-vaerdiskabende-universitet-fra-enklave-til-noglerolle-rapport-fra-atv>
- Chai and Shih (2013): *Fostering Translational Research: Using Public-Private Partnerships to Improve Firm Survival, Employment Growth, and Innovative Performance*, Harvard Business School, January 2013. <http://ssrn.com/abstract=2197876>
- DSR (2012): *Årsrapport fra danmarks forskningspolitiske råd 2011*, Danmarks Forskningspolitiske Råd ,ISBN: 978-87-92776-40-2
- Junge (2010): *Notat om produktivitet og lange videregående uddannelser*, Centre for Economic and Business Research (<http://www.cebr.com>), Okt. 2010.
- Krogsgaard-Larsen, Thostrup, and Besenbacher (2011): Scientific Social Responsibility: A Call to Arms, *Angew. Chem. Int. Ed.* 2011, 50, 10738 – 10740.
- Marshall BJ, Warren JR (June 1983). Unidentified curved bacilli on gastric epithelium in active chronic gastritis, *Lancet* 321 (8336): 1273–5.