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Knowledge Transfer in the Media Society: Situation Analysis and Orientation Framework

HRK German Rectors' Conference

The Voice of the Universities

Ahrstraße 39
D-53175 Bonn
Germany

Tel.: +49/(0)228/887-0
Fax: +49/(0)228/887-110

post@hrk.de
www.hrk.de

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Resolution

To update and strengthen the commitment of higher education institutions (HEIs) to knowledge transfer in light of the significant technical and social changes taking place(1):

(1) HEIs recognise the legitimate claim of society, politics, and third-party funding bodies to knowledge transfer.

(2) HEIs shall pursue the broad and effective dissemination of their academic research ("broader impact"). The needs and expectations of the media society with regards to accessibility and current media standards are to be met.

(3) HEIs commit themselves to the task of knowledge transfer in the media society. This commitment applies to every level of HEIs and cannot be relinquished to others.

(4) HEIs are to incorporate the expectation of knowledge transfer into their strategies. This can be achieved through self-reflection regarding the status quo, and the development of mission statements.

The German Rectors' Conference issues the following situation analysis and orientation framework for this process.

[1] Knowledge transfer is traditionally limited to the interface between science and the wider economy. The term mostly refers to technology transfer, which is consequently often used as a synonym for knowledge transfer. This resolution is using the new and expanded understanding of the term, which relates to every form of communication that is (usually, but not always) based on an advance in scientific research.

I. Situation Analysis

1. Changes to the general conditions of knowledge transfer

Technological changes

Knowledge transfer is taking place under conditions that have changed dramatically over the past few years. From a technological perspective, the rise of the internet has increased the scope for communicating with different target groups, especially using new dissemination and interaction methods. New possibilities have emerged in terms of geography (location-specific and non-location-specific mediation) and time (transfer does not have to take place in the present), as well as new social options (inclusion of non-traditional recipients). These developments are illustrated by the differentiation of types of media:

- Universal full-service media for the general public
- Specialist programmes for interested sections of the public
- Social networks
- Personalised services

Social changes

Alongside the technological aspects, social changes are also affecting the transfer of knowledge by higher education institutions. The notion of an education and knowledge society increases the pressure on higher education institutions to make specific, target-oriented information available to society. This represents a challenge for higher education institutions, since knowledge transfer is defined by a tension between two different modes of communication:

Inherent tensions

- An (intra-)academic mode of communication
- A (traditional) public mode of communication

In academic communication, the acquisition of scientific knowledge comes first and foremost. The methodology and results should be precise, differentiated, and must be able to be understood across subjects. However, the level of differentiation as well as the reference to specific boundary conditions also serve to highlight the fragility of the findings: minor variations – of recordings or measurements, for example – can have a significant effect on the results. In contrast, the public mode of communication targets the wider public and practical relevance is considered most important. Non-expert recipients demand that the content be generally comprehensible. This necessary process of simplification often leads to the perceived lack of complexity to the research.

Differences between disciplines

This inherent tension in the transfer of knowledge also meets with difference between traditions within individual academic disciplines. Different subject areas have developed various models of knowledge transfer in order to negotiate the relationship between academic and public modes of communication:

At one end of the spectrum, there is a need for significant transformation, whereby it is necessary to 'translate' the scientific contents ("popularisation model"). At the other end, there is less distinction between scientific and non-scientific communication ("gradient model").

Moving beyond unidirectional mediation

The technological possibilities created by interactive information dissemination now mean that the previously unidirectional mediation of knowledge from those who possess knowledge to those who do not has become out-of-date. Information is not simply disseminated and exchanged between expert and user communities, but is also commented on and modified: this then blurs the line between the production and reception of scientific knowledge.

2. Perspectives of the higher education institutions

Communication objectives

Those responsible for public knowledge transfer in the higher education sector pursue various often-interrelated communication objectives that have certain desired effects. These targets can be broadly divided into the following areas (which may overlap):

- Education
- Consultation
- Legitimation
- Marketing

Expectations of the public

The expectations placed on HEIs by the public with regards to content vary depending on the particular demographic, the communication objectives, and the topic at hand:

- A share in the results of academic research
- Explanations relating to natural and human environments
- Scientific consultation
- Participation in regulating academic research
- Improvement of physical and psychological security

Higher education institutions are therefore expected to consider the extent to which their communication objectives are consistent with content-based expectations of the public when developing their knowledge transfer strategies. It is assumed that some of the public demands – for explanation and consultation, for example – can be very effectively reconciled with the communication objectives, whereas others – participation in academic regulation – may come into conflict with the right of HEIs to self-regulation.

When academics and higher education institutions communicate scientific content, a central question is the extent to which

academic communication standards also apply to public communication. Uncritically adapting content to meet the expectations of non-academic communication partners or to the norms of mass media is inherently problematic. One trade-off, for example, is between precision and comprehensibility in the communication of knowledge to the public. Another immanent conflict exists between the relevance of research within scientific communities and its relevance for the public, where there is often the temptation to exaggerate the potential of its practical application. Finally, it is necessary to ask if and how academics can be expected to move beyond descriptions and analyses to the articulation of normative aspects and preferred courses of action in their public communication.

Modes of communication

Public scientific communication can take place in a variety of different ways. These can be roughly divided into the following modes of communication, whereby there is also significant differentiation within these groupings:

- Journalism
- Self-representation (e.g. websites)
- Interactive online communication (social media)
- Non-journalistic mediation (e.g. science centres)
- Events (e.g. "long nights of science")
- Organised discourses (e.g. "science cafés")

Communication potential

These modes of communication differ in numerous ways. The following five criteria are intended to help determine the potential of different modes of communication for particular communication situations, objectives and target groups.

- Dissemination of scientific knowledge and knowledge about science
- Relevance through public visibility
- Regulation of the communication process and content
- Transformation for public reception
- Quality of the interaction with the communication partners

Different modes of communication will be chosen depending on the communication objective and target group. Every mode of communication has certain advantages that make it more or less suitable for pursuing particular goals. There may also be conflicting targets. Essentially, it is important to recognise the interdependencies that exist between the different modes of communication. For example, media self-representation or communication using social media networks may lead to topics being picked up by journalists. Conversely, journalistic reports can stimulate interest in a particular topic, which then leads to the accessing of information that is already available through media self-representation.

Communicators

The central question concerning the term "media contacts" is: who is the communicator of the knowledge transfer? For higher education institutions, essentially communicators are possible at four different levels:

- Academics (individual level)
- University sub-organisations (intermediary level)
- University (institutional level)
- Cross-university associations (institutional cooperation level)

Many academics hold the traditional understanding that individuals are the sole bearers of knowledge. In this line of thinking, knowledge transfer can then only happen through interaction with individuals. However, this perspective fundamentally obscures the complexity of knowledge transfer that necessarily arises from the professionalised division of labour. Moreover, as key institutions in the knowledge system, higher education institutions are obliged to provide the personal, financial and academic policy conditions for researchers. They can only fulfil their obligations in this sense if they ensure that the mediation of scientific results plays a significant role, too.

At the intermediary level between individual academics and the university, university sub-organisations such as faculties, departments, institutes, research clusters, specialist research groups and other projects are becoming increasingly important. This type of communicator involves collective actors whose homogeneity and resources determine how formalised and professionalised the knowledge transfer is. The expectations of third-party funders – commerce, private and public funding bodies – must also be taken into account.

Role of the former press offices

Almost all higher education institutions now have a department responsible for communications. The activities of the traditional press office have expanded to include internal communication, contact with alumni and maintenance of internet pages and social media sites. The university communications unit provides support to the university management and to the academics, and facilitates contact between academic staff and the media. In addition to press and public activities, the department also acts as a 'firewall' for communication crises. It cannot make a crisis disappear, of course; however it can help to minimise and soften its impact.

II. Reflections and orientation framework

Process of self-reassurance

University strategies can be developed based on processes of self-reassurance regarding the status quo, together with the creation of mission statements. One starting point for this process of self-

reflection is to recognise that knowledge transfer is characterised by a tension between the (intra-)academic and (traditional) public modes of communication. In every instance of knowledge transfer, then, it must be decided how to overcome this tension between the two modes. With this in mind, higher education institutions can initiate a process of self-reassurance that takes into account the different aspects, types and implications of knowledge transfer outlined in the previous chapters:

Orientation framework

Orientation framework:
Aspects, types and implications of knowledge transfer

Aspect	Types	Implications
Need for transformation of knowledge	o Popularisation model	⇨ Strict division between academic and non-academic; fundamental transformation necessary
	o Gradient model	⇨ No major division, only adaptation is necessary
Communication objectives	o Education	⇨ Intrinsic orientation towards the general public
	o Consultation	⇨ Academia as a source of expertise and problem-solving
	o Legitimation	⇨ Social anchoring
	o Marketing	⇨ Market success in competitive situations
Expectations from the public	o A share in the results of academic research	⇨ Easily combined with academic targets, active communication
	o Explanations relating to natural and human environments	⇨ Easily combined with academic targets, active communication
	o Scientific consultation	⇨ Easily combined with academic targets, active communication
	o Participation in regulating academic research	⇨ In conflict with HEI autonomy; less communication
	o Improving physical and psychological security	⇨ Ambivalent: can be combined with academic targets, though there is a high risk of disillusionment
Modes of communication	o Journalism	⇨ Journalist as the 'gatekeeper', linking of scientific and public relevance, limited control
	o Direct self-representation	⇨ Static, high degree of control, low dissemination potential
	o Participation in social media	⇨ Dynamic, limited control, high dissemination potential
	o Mediation institutions (e.g. museums)	⇨ Static 'lighthouse' with regional visibility, major investment
	o Events	⇨ Moderately dynamic, moderate control, very limited geographical and temporal scope
	o Organised discourses (e.g. civil dialogue)	⇨ Moderately dynamic, moderate control, more extensive geographical scope, moderate temporal scope
Types of media	o Full-service media programme	⇨ Undirected information requirements of wider society
	o Specialist programmes	⇨ Sections of society interested in science
	o Social networks	⇨ User communities, Web 2.0, high dissemination potential
	o Personalised services	⇨ Feed reader (mostly professional, high degree of control), user-generated content (mostly non-professional, no control)
Communicators	o Academics	⇨ Individual as bearer of knowledge
	o University sub-organisations	⇨ Collective actors with different levels of homogeneity and formalised structures
	o University	⇨ Professionalisation, organisation interests
	o Cross-university associations	⇨ Great need for coordination and consensus in heterogeneous structures

Importance of new media

This detailed orientation framework illustrates the growing importance of new media for knowledge transfer. New media are also changing the way that journalists engage with science: in a multi-stage flow diagram, for example, digital media would represent a central source for journalists. Online media and databases containing immediately accessible and up-to-date information thus often perform the kind of mediating role that was previously played by the press offices.

In general, the new media are lowering the threshold for communication. The previous paradigm, 'Public Understanding of Science and Humanities (PUSH)', is being superseded by 'Public Engagement with Science and Technology (PEST)': citizens and academics can communicate with one another directly and give each other feedback. The question remains, however, as to whether social media can establish sustainable new trans-scientific communication networks and communities. The active and passive uses of new media are difficult to regulate. HEIs should seek to actively shape the new communication options. For example, they could issue academics with regulations that specify how much they are to engage with the public via social networks and other lexica (especially Wikipedia). New developments in knowledge transfer may also extend to new forms of connection between science and entertainment. Whether these kinds of new formats can achieve long-term success remains to be seen.

Knowledge transfer is and will continue to be integral to the activities of HEIs. In the age of the education, knowledge, and media society, this task has intensified and HEIs must take an active role here.

This paper is an abridged version of the HRK publication 'Knowledge Transfer in the Media Society: Situation Analysis and Orientation Framework', Contributions to Higher Education Policy 3/2013, and is available in draft form at: http://www.hrk.de/themen/hochschulsystem/arbeitsfelder/neue-medien/