

*„Effective management of knowledge
requires hybrid solutions of
people and technology.“
(Thomas H. Davenport)*

Comprehensive Knowledge Management - a New Programme in Post Graduate Education

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I. Comprehensive Knowledge Management

The whole spectrum of dimensions having an impact on an organisations ability to use and develop its knowledge effectivately may include¹:

- Structures: Incentives, career opportunities, means of communication, ...
- Processes: knowledge processes, transparency of decision making, ...
- Strategies: knowledge goals and vision, ...
- People: free play for activity and creativity, ...
- Corporate Culture: values fostering or hampering the sharing of knowledge, ...
- Information and Communication Technologies: Intranet, Internet, etc.

¹ Mingers, S.: Wissensmanagement praktisch: Handlungsfelder rund um die Grundpfeiler des Unternehmens, Hernsteiner 8/99

- Space: spatial opportunities for communication and interaction

Analogous to these dimensions different types of instruments can be applied for the realisation of KM projects². These cover

- human resources: (action) training, coaching/mentoring, carrier plans, ...
- work: job enrichment, job rotation, job enlargement, quality circles, learning laboratories, group work, etc.
- communication: storytelling, interview, therapeutic talk, mission statement, metaphor, scenario technique, dialogue, ...
- problem solving: yellow/blue page, knowledge map, balanced score card, checklist, system simulation, creativity techniques, ...
- technological infrastructure: Intranet, Internet, expert systems, organisational memory systems, databases, ...
- spatial infrastructure: space management, think tank, knowledge broker, ...

For KM Tools the following functions can be distinguished³:

- Data/Information pull
- Data/Information push
- Knowledge representation and visualisation
- Data/Information publishing, structuring and linking
- Automatic Data/Information harvesting
- Knowledge communication and co-operation
- Administration of knowledge management tools
- Analysis of data for the generation of knowledge
- Computer based teaching and learning

² Roehl, H.: Instrumente der Wissensorganisation, Wiesbaden: Gabler 2000

³ Maier, R./Klosa, O.: Wissensmanagementsysteme, [http://www-wi.uni-regensburg.de/\(de\)/forschung/markt/markt.html](http://www-wi.uni-regensburg.de/(de)/forschung/markt/markt.html) (March 1st, 2002)

II. Educating Executives in KM

There exist educational programmes dedicated to KM at about 20 educational institutions but their contents are difficult to compare⁴. 12 of these programmes offer a degree at master's level and 10 of them are (also) taught in part time mode. 60 % of the providers have a Library and Information Studies (LIS) background and revised their LIS programmes or developed an alternative offer for another target group and profession.

The understanding of Knowledge Management described above has been the basis for the concept of a comprehensive programme for the education of executives at Donau-Universität Krems⁵. It emphasises the human issues as described above and is aimed at achieving a balance of the aspects involved in the above mentioned dimensions. The overall aim of the course is to impart the competence to the graduates to design KM projects adequately for their specific organisational environment and to conduct their implementation and evaluation. With regard to the very diverse backgrounds of participants, the context of their professional KM activities and the potential characteristics and necessities of the projects they are involved in, the course aims at conveying the basis for the selection and employment of a broad spectrum of concepts, tools and methods.

The duration of the part-time course is 2 semesters with 450 contact hours. The maximum number of participants per year is 24. The graduates will hold the title "Master of Advanced Studies (Knowledge Management), MAS". The course imparts to participants the capacity of the proper use of these dimensions by means of the following subject categories:

1. Theories and Approaches to KM (approx. 20 %)

organisational learning, roots and different approaches to KM, systems theory, etc.

⁴ Koch, M.: Knowledge Management - A Comparison of Educational Programs Worldwide, Bobcatsss 2002

⁵ Homepage: <http://www.donau-uni.ac.at/wim/>

2. Leadership and Management (approx. 20 %)

Leadership disciplines, organisational development, change management, human resource management, organisational culture, communication and decision making in teams, conflict management, strategic management and KM, simulations

3. Methods and Practices

- Non-Technological Methods (approx. 20 %)

Yellow pages, skills matrix, knowledge communities/CoPs, space management, knowledge audit, incentives, competitive intelligence, environmental scanning, knowledge organisation, measuring intellectual capital, balanced score card, KM and innovations management, terminology, ontology engineering, knowledge profiles, knowledge market, microarticle, process integration, space management, coaching, network management, etc.

- Technological Tools (approx. 20 %)

Organisational memory systems, success factors for the implementation of knowledge bases and knowledge centres, document management, "Business Intelligence" (data warehouse, OLAP, data mining, ...), workflow systems, process management tools, knowledge community systems, e-learning, software agents, etc.

4. Case Studies (approx. 20 %)

Practical experiences in organisations of different sizes and branches presented by consultants and (knowledge-) managers (about 50 case studies during the whole course).

The average age of the participants of the first course 2001/2002 was 38 years ranging from 30 to 51 years. Their educational background covers economy, technical fields, medicine, consulting, translation studies, psychology/-therapy, arts, etc. The participants are active as managers (top executives, human resources, marketing, finance, etc.) in the branches of telecommunications industry, software/hardware, consulting, research, non profit organisations, among others.

The majority of the faculty are external teachers and their selection aimed at a well-balanced composition out of scientists, consultants and practitioners realising KM projects in companies, whereas all of the scientists involved are experienced in consulting as well.

III. The results of the first course

To identify the results of the first course we will analyse the participants overall evaluation of the course and the subjects of their Master Theses. We focus on the question whether the participants are able to absorb and apply the multi-disciplinary view of knowledge.

A. Evaluation by participants

Beside the obligatory evaluation of each member of the faculty the participants were asked to give feedback on the concept of the course as a whole. Open questions were mentioned by individuals in the areas of

- getting a concrete vision of how to implement KM under certain individual circumstances;
- how to deal with the different, conflicting approaches in KM;
- if there is a necessity to differentiate between KM and other related management measures;
- a useful definition of knowledge and the importance of discussing and communicating one explicitly to employees during KM projects;
- the organisational and structural implementation of KM;
- the future development of KM through the next decade.

Asked for the personal changes triggered by the attendance at the course participants stated the following points as having been surprising and being regarded as important lessons learned:

- the number of different approaches of KM and the lack of a state of the art in the sense of an integrated and widely accepted concept;
- the impact of the organisational hierarchy on the knowledge and innovation culture;

- the fact that knowledge serves as a source of productivity and effectivity appears to be a relatively new conviction in the practices of management whereas the first corresponding theoretical statements date from the first half of the 20th century;
- the own view of an organisation has changed from a transparent and solid one towards an complex, diffuse system influenced by many factors;
- the conviction that KM is tantamount to Knowledge Organisation (thesauri, classification, etc.) had to be changed because of the discovery that the human aspect deserves attention;
- KM as a development of human resource management and business process reengineering;
- the disappointment of the expectation to receive a static recipe like "how to implement KM" instead of developing an understanding of the influences supported by methodology and instruments;
- to discover the lack of an differentiation of data, information, tacit and explicit knowledge in the own organisation. The latter shall be stressed in the future before making important decisions with an impact on the organisational knowledge;
- after the personal experience of several change and restructuring processes in their own organisation during the last years the manager in a multinational company expects to have acquired tools to develop the organisation's ability to innovate on the basis of these structural changes;
- KM as a specific kind of management in general is still difficult to seize and hardly takes shape.

As "highlights" related to the course as a whole the participants have mentioned

- the positive group dynamics despite fact of the very heterogeneous composition,
- the given overview to the different approaches to KM,
- the multi-disciplinarity of the subject as a whole,
- the practical methods of designing and implementing KM with consideration of the specific requirements of the organisation.

B. Master Theses

The subjects of the Master Theses of the first course may be distinguished as follows:

- focusing on specific dimensions and targets of KM
- focusing on specific types of organisations or user groups
- a combination of both

1. Focus on specific dimensions and targets of KM

11 Master Thesis subjects focus on specific dimensions, aspects or targets of KM. Participants have addressed the field of Methods and Tools like the technological topics *XML and Datawarehouse for SMEs* and non technical fields like *knowledge audit as a basis for the development of knowledge strategies*. One Thesis examines *organisational development as a root of KM*, another one the settings and methods of *analogue networking knowledge* including possible synergies with digital methods of networking knowledge.

Two participants have addressed aims of KM by choosing the usage of tacit knowledge in the context of Business Process Reengineering projects and KM for the improvement of innovation.

Other specific dimensions of KM inquired are:

- Instruments and Methods for KM and OL on the basis of constructivistic approaches
- Leadership requirements in learning organisations and methods to impact
- Success factors for KM besides IT
- Individual KM and Human Resources Management as an interface between individual and organisation
- The Knowledge Manager: an examination of the profession

2. Focus on specific types of organisations or user groups

7 projects focus on specific types of organisations or user groups. A participant who is working as a researcher in Functional Genomics and Bioinformatics puts the Integration of KM in biomedical research and life sciences centrestage ("*Bioknowmic*"). The employee of an airline who works as manager of the Crew Service Centre addresses the challenge to seize and distribute the knowledge of airline crews and the feedback of customers (Shift-work without a desk of one's own). Other projects are inquiring the specific demands of very small or medium sized companies, Museums and Schools.

Both a specific dimension of KM as well as a certain type of organisation or user group has been focused on in the projects

- *Knowledge networking and evaluation of the national intellectual capital of developing countries*
- *Virtual knowledge communities in freelance translating*

IV. Conclusion

Based on these findings, we may say that the concept of this course succeeded in general in imparting the participants the multi-disciplinarity of Knowledge and KM and to give an insight in the spectrum of different methods, tools and practices for designing a learning organisation. The multi-dimensional characteristics of the subject as well as the heterogeneous composition of the group have predominantly been regarded as an enrichment. Nevertheless for many participants it was not easy to cope with the (necessary, useful) confusion which appeared after the confrontation of their initially homogenous image of KM with the comprehensive approach of the course. For some participants also the dynamic and unconsolidated scientific status in the field has been difficult to handle. At the moment it actually is too early to evaluate the results of their practical projects.

Learnings for future courses are to put a stronger emphasis on transformation of the practical aspects of the lessons to the context and experiences of each participant by means of

- more parts of action learning in order to visualise the connections of KM to problems appearing in day-to-day work,
- essays on this subject and
- supervision on the personal role model as a future expert for KM.