

Opening Remarks

and

Guest Speeches

The 2nd University Administrators' Workshop: *Innovating Universities through Internationalisation*

Opening Remarks

by

Toshio Yokoyama

Distinguished Guests, Dear Colleagues from Asian Countries, Ladies and Gentlemen. It is my great honour and pleasure to welcome you here today on the occasion of the 2nd University Administrators' Workshop.

The theme chosen for this workshop is: Innovating Universities through Internationalisation. I am sure you will all agree that this sounds a readily comprehensible theme for us, but if we take into account that every participant gathered here is to represent the administrative side of his or her university's international activities, it is clear that our chosen theme is epoch-making, implying, as it does, that the future of our universities depends on the efforts of their administrators. In this, we have a message that challenges the conventional perception that universities should be governed solely by professors -- an idea formulated perhaps in nineteenth century Germany which was disseminated and took root in many Asian countries, particularly in Japan, around the turn of the nineteenth century. For myself, I do not believe that it is altogether out-dated for professorial bodies to be self-governing. On the other hand, I do believe that the role of university administrators has not always been properly defined, and is often under-estimated, particularly in Japan. For this reason, I feel that the time has come to search for new models of university organisations which encourage academics and administrators to co-operate in increasingly close and creative ways. This applies particularly to the field of international activities.

I emphasise this point because the twenty-first century is already revealing its own characteristics, one of which can be called, 'The Age of Intermediaries', in Japanese, '*Naka-dachi no Jidai*.' In the last century, academics, specialist groups and institutions alike tended to be too absorbed and inward-looking to think about the importance of intermediaries and the creative roles they played. In the minds of conventional scientists, for example, internationalisation too often meant a simple extension of relationships across national boundaries within their own fields. In this new age of profound change, however, when even the notions of Nature and Humanity are under

serious review, any new knowledge obtained, or any new question that comes up in laboratories and in study rooms needs to be considered in terms of its meaning for the entire human and ecological community on this planet. Everyone in academia must, therefore, continue discussions internationally and across disciplines; and for this, cultivate languages accessible across the borders of discipline and nation. It is in such a new global context that each university must open more varieties of intermediary channels and networks than ever before, to prepare for proper dialogues and co-operations not just within world academia but more importantly with society at large. I hope that many of you will share my prospects that this workshop will meet the challenges of this new stage in human history, the significance of which may become equivalent to that of the Renaissance in Europe some five hundred years ago.

The First University Administrators' Workshop held in Kyoto a year ago offered many of its participants their first experience to enjoy extensive discussions with their colleagues from different countries, free from interruption and disturbance from ever-demanding Presidents, Vice-Chancellors or other faculty members. My colleagues were relieved to discover that many of the administrative difficulties they had been facing individually in pursuing international activities were in fact common to us all.

The idea behind this Second Workshop is that we can take a further step forward in asking ourselves how we might support one another with regards to the capability of our respective international offices, or how might we all perform as good intermediaries for international co-operation, enriching our own experience and knowledge in the process of elevating others. This type of endeavour with a broad communal spirit is the very essence of the traditional idea of 'civilised society'.

For this workshop, Kyoto University sent requests for participation to member universities of the Asian group within the Association of Pacific-Rim Universities, as well as member universities of the Association of East Asian Research Universities, and a number of universities in Asia which have MoU agreements with Kyoto University. Similar letters were sent to universities in Japan that have made notable strategic efforts to internationalise their academic activities. The result is that more than twenty eminent universities in Asia have consented to send representatives to Kyoto, and for this, I should like to express my heart-felt gratitude. I should also like to take this opportunity to thank Vice-President, Professor Dr Ernst Rank of Technische Universität München, and Vice-Provost, Professor Dr William B. Lacy of the University of California, Davis, who have kindly agreed to give Guest Speeches before the working sessions. Both Vice-President Rank and Vice-Provost Lacy will, I am sure,

contribute greatly to our Workshop's proceedings, by sharing with us their views with regards to what is happening in and around their esteemed universities, and what kind of ideals or missions are guiding those institutions.

The City of Kyoto, Japan's old capital, has had a history of ups and downs for more than twelve hundred years long, and has, as the result, developed a rich tradition of seeking harmony with the environment. It is my sincere hope that holding this two-day workshop in such a cultural milieu will enhance mutual understanding and friendship among us, and foster chances to promote truly necessary international initiatives from among the participating universities.

Thank you for your kind attention.

Internationalization and TUM's strategy in the German 'Excellence Initiative'

Prof. Dr. Ernst Rank

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ABSTRACT

On 23 June 2005 the German federal and state governments agreed on an initiative to promote top-level research in Germany. The so-called *Excellence Initiative* aims to strengthen science and research in Germany in the long term, improve its international competitiveness and raise the profile of the top performers in academia and research.

The total budget of the initiative will be €1.9 billion for the period 2006 through 2011, which is split between three lines of funding:

- Graduate Schools to promote young researchers
- Clusters of Excellence to promote world-class research
- Institutional strategies to promote top-level university research.

This Excellence Initiative launched an unprecedented atmosphere of departure at German universities resulting in a total of nearly 500 proposals for the three lines of funding. On 13 October 2006 after a highly competitive international review process the results of the first round of the initiative were announced. Only three universities, the Karlsruhe University of Technology, the Ludwig-Maximilians-Universität München (LMU) and the Technische Universität München (TUM) were successful in all three lines, giving them the unofficial title of an 'Elite University' and the expectation of about 150 Mio € additional funding for the next five years.

In the proposal of Technische Universität München *internationalization* plays a very prominent role. The promotion of high-level international research cooperation is central in the 'TUM Institute for Advanced Study', which has been founded as a cornerstone of the institutional strategy. And the 'International Graduate School of Science and Engineering' has as one major goal to stimulate international research groups of students during their Master's and PhD studies, being supported by TUM and partner universities all over the world.

Starting from the general policy of TUM, the lecture will first focus on the overall strategy of the successful proposals, highlight their most important aspects and discuss the expectation from the projects over the next years especially in the context of further improving our international networks in research and education.

*At home in Bavaria –
Erfolgsstift in the world.*

**Internationalization and TUM's Strategy
in the German 'Excellence Initiative'**

Ernst Rank
Vice President
Technische Universität München
Germany

TUM: A Unique Profile

Superb Community

- 21,000 Students
- 400 Tenured Professors
- 4,040 Researchers
- 2,800 Graduates p.a.
- 730 Ph.D./Habils. p.a.
- 6,800 Employees
- 12 Departments

Entrepreneurial Spirit

- **Internationality:**
 - #1 AVH Senior Research Awards
 - Off-Shore Branch, Singapore
 - Fundraising >100 M€ since 1999
 - Third Party Funding: 147 M€ (05) = 31% of total Budget; #1 GER
- **Entrepreneurial Assets:**
 - UnternehmerTUM, TUM+Tech Ltd.

Innovative Strategies

- **Advanced Organizational Structure:** 1999 TUM constitution pioneered Bavarian Higher Education Act 2006
- **Centers of Excellence Strategy:** Competitive restructuring program *innovateTUM* (2003) allocates 10% total TUM resources to areas of excellence until 2008
- **Social & Cultural Awareness:** Linde Academy, Gender Responsibility

Kyoto, Feb. 1, 2007

INTERNATIONAL NETWORK: more than 150 partner universities

German Institute of Science and Technology in Singapore

Kyoto, Feb. 1, 2007

Excellence Initiative by the German Government

- "promote **top-level research** and improve the quality of German universities and research institutions, thereby making a significant contribution to strengthening science and research in Germany."
- **1.9 billion €** "fresh money" for German universities 2006 - 2011 (2 funding periods 2006-2010 and 2007-2011, 5 yrs. each)
- **Financing** by federal (75%), and state governments (25%)
- **Three Funding Lines:** Graduate Schools, Research Clusters and Institutional Strategies
- **Decision:** 13 October 2006

Kyoto, Feb. 1, 2007

Results of the Excellence Initiative (1st Funding Period)



- • 18 Graduate Schools
- • 17 Clusters of Excellence
- • 3 Institutional Strategies

- Concentration on 22 Universities
- Fields of Natural Sciences and Life Sciences more successful than Engineering and Humanities
- TUM one of the most successful universities

Kyoto, Feb. 1, 2007

1st Funding Line at TUM: Graduate Schools



International Graduate School of Science and Engineering

Coordinator: Prof. Rank



Graduate School of Systemic Neurosciences

Prof. Brandt / Prof. Grothe (LMU)
Prof. Kemnerth (TUM)

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2nd Funding Line at TUM: Clusters of Excellence

All		Cognition for Technical Systems	Coordinator: Prof. Buss
Astrophysics	Origin and Structure of the Universe – The Cluster of Excellence for Fundamental Physics	Coordinator: Prof. Paul	
Proteins	Munich Center for Integrative Protein Science (CIPSV)	Coordinators: LMU: Prof. Carell TUM: Prof. Sierra	
Photons	Munich Center for Advanced Photonics (MAP)	Coordinators: LMU: Prof. Habs / Prof. Krausz	
Nano	Nanosystems Initiative Munich (NIM)	Coordinators: LMU: Prof. Kathaus TUM: Prof. Abstreiter	

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3rd Funding Line: TUM. The Entrepreneurial University.



Funding:
56 Mio € (2006-2011)

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What does it take to be an entrepreneurial university?

"Entrepreneurship is the pursuit of opportunity beyond the resources one currently has under control."
Stevenson and Jarillo 1990

"How do universities, by means of entrepreneurial action, go about transforming themselves? Five elements constitute an irreducible minimum: a strengthened steering core; an expanded developmental periphery; a diversified funding base; a stimulated academic heartland; an integrated entrepreneurial culture."
Prof. Burton R. Clark (1998), Graduate School of Education, UCLA

Kyoto, Feb. 1, 2007



IAS TUM
Institute for Advanced Study

Kyoto, Feb. 1, 2007

TUM-IAS: The Vision

- Provide top-level scientists with the freedom and resources to pursue innovative research (*interdisciplinarity – high risk, high reward*)
- Interact with talented young scholars (*akademische Schulbildung*)
- Integrate distinguished visiting scientists (*internationality*)

➔ **Create a scholarly community of open scientific dialogue**




Headquarters Building

- Central location on Garching Campus
- Secured funding, doubled to 10 ME since submission of proposal

Kyoto, Feb. 1, 2007

Fellowship Programs: Genuine, Competitive



Carl von Linde Senior Research Fellowships
open to TUM faculty



Carl von Linde Junior Researcher Awards
for postdoctoral fellows from TUM



Rudolf Diesel Industrial Fellowships
for researchers from industry



Hans Fischer Fellowships
open for international scientists



Hans Fischer Tenure Track Professorships
for young scientists from outside



Research Start-Up Support

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Comprehensive Support

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Institute for Advanced Study

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... at all career stages

ε ducaTUM: Strengthens our alliance with High-School System

Student Admission Center (SAC) – International Recruiting Centers


Welcome Office – International Student Service Center

Academic Lecturer Program

Summer School Academy

Young Researchers Program:

- International Executive Headhunting
- Structural Fund for 'Rising Stars'
- Emeriti of Excellence Program
- Career Service Center



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Gender & Diversity

Comprehensive Support

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Institute for Advanced Study

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... a challenge for Good Corporate Governance

- Gender Consulting & Awareness
- Childcare / Home Office Workplaces
- Family Care Structural Fund
- Gender Issues Incentive Fund
- Vocational Training
- Parental Leave Compensation
- Munich Dual Career Center
- Fundraising Focus: Scholarships for talented women in science





IAS Liesel Beckmann
Symposium 2007:
dedicated to Gender & Diversity

Kyoto, Feb. 1, 2007



Kyoto, Feb. 1, 2007

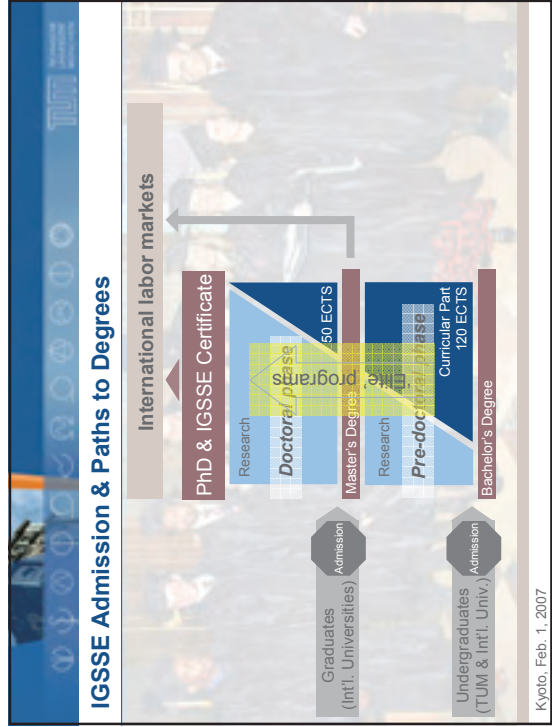
... to advance the spirit of community

- Best-Practice Administration
- Corporate Management Training
- Process and Quality Management
- Soft Skills and Cultural Awareness
- Good Corporate Governance – Health Care & Prevention Campaign
- TUM Corporate Communications Center

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The TUM Graduate School System

Kyoto, Feb. 1, 2007



Kyoto, Feb. 1, 2007

IGSSE Research Training Program

Scientific Mentoring

- Multiple supervision (PhD phase)
- Individual research training schedule for every student
- Student research groups interlink MSc and PhD phase

Modular Training Program

- Disciplinary training
- Trans-disciplinary training: e.g. summer schools
- International and industrial exchange
- Scientific skills training: research proposals, conferences, scientific leadership
- Soft skills training: business plan seminars, social awareness and communication skills, intercultural & ethical competence

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IGSSE Research Training Groups & MSc Programs

- 7 Research Training Groups (PhD Programs)
- 10 Int'l. Master Programs
- Based on existing structures (functional & funding secured)
- Interconnected by common research topics

BioMedTUM Biomedical Microsystems Engineering	CaCYDE Computational and Visual Data Exploration	CeSIM Center for Simulation Technology in Engineering	
MSC Medical Engineering	MSC Computational Science & Eng. MSC Computational Mechanics (COME)	MSC Computational Science & Eng. MSC Computational Mechanics (COME)	
ComPInt Material Science of Complex Interfaces	ESSE Energy Science & Engineering	ESPACE-GS Earth Oriented Space Science and Technology	NanoCat Nanodeviation of High Performance Catalysts
MSC Engineering Physics	MSC Renewable Energies MSC Electric Power Engineering	MSC ESPACE	MSC Chemistry MSC Chemical Process Eng. MSC Catalysis

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Multi-disciplinary IGSSE Young Researcher's Teams

Typical Team:

- 2 PhD students funded by IGSSE
- >= 2 PhD students funded by industry
- postdoc (team leader)
- Collaborating research groups at partner universities

Current state:

- 10 research team proposals approved
- Collaborating institutions:
 - Univ. Stanford, Univ. Tokyo, DTU, Weizman Inst., ETH Zürich, TU Vienna, Univ. New South Wales, Duke Univ., DLR, Fujitsu Labs, ...

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An Example: Numerical Simulation and Biomedical Technology

Optimize endoprosthesis and fracture fixation procedures

- Material identification
- Very fast transfer from CT-scan to simulation model for *individual surgery planning*
- Bone regeneration

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The TUM Business & Industry Network

Kyoto, Feb. 1, 2007

The Raitenhaslach TUM Study & Residence Center

Kyoto, Feb. 1, 2007

Enhancing International Learning, Discovery and Engagement Seven Essential Institutional Components

William B. Lacy

University of California, Davis

ABSTRACT

As the world becomes more complex and interconnected, it is critical that our colleges and universities effectively engage in international research and collaboration, and prepare our graduates to be proficient in foreign languages, knowledgeable of different cultures, and informed about international and global citizenship. A comprehensive and integrative approach to internationalizing our campuses is needed and should seek to affect all aspects of the institution, including undergraduate and graduate education, research and discovery, public service and engagement and the general campus climate and activities. Success in internationalizing the campus will require institutions to adopt seven essential institutional components or habits: (1) a clear, integrated, comprehensive approach; (2) strong and committed senior leadership; (3) committed leadership throughout the campus; (4) significant and broad faculty involvement; (5) commitment to meeting the diversity of student needs; (6) supportive organizations, structures, resources; and (7) mechanisms to build networks with partners and supporters. These components and organizational structures must be part of a comprehensive plan and assessment for each campus. Finally, these seven components should be considered in the context of a particular campus, its mission and values, history and culture, faculty, students and staff and the broader community in which it functions.

Paper to be presented at “The 2nd University Administrators Workshop: Innovating Universities through Internationalization”, Kyoto University, February 1, 2007

1/9/07

UC DAVIS

Enhancing International Learning, Discovery
and Engagement:
Seven Essential Institutional Components



William Lacy
-Vice Provost

Kyoto University, Japan
February 2007

UC DAVIS

**“The challenges of our world today
are problems without passports for
which we need blueprints without
borders.”**

Kofi Annan
Secretary General of the United Nations

UC DAVIS

Internationalizing for our Students

- *Improves learning and expands knowledge*
- *Benefits research and graduate study*
- *Prepares students for citizenship*

UC DAVIS

Internationalizing for our Institutions

- *Fosters faculty and staff renewal*
- *Improves institutional competitiveness*
- *Enhances learning, discovery and engagement*



Internationalizing for our Communities

- *Translates local expertise globally*
- *Expands service*
- *Connects local communities*



Internationalizing for our Nations

- *Enhances national security*
- *Benefits economic competitiveness*
- *Forges bridges for peace and collaboration*



Worldwide Calls for Internationalization of Higher Education

- *Association of Pacific Rim Universities*
(36 leading research universities in the region committed to internationalization)
- *Universities 21*
(18 universities worldwide seeking to create entrepreneurial education opportunities worldwide)
- *Bologna Declarations – 1999, 2005*
(45 European ministers of education committed to internationalizing higher education)



U.S. Calls for Internationalization of Higher Education

- *American Council on Education*
(Advancing Comprehensive Internationalization 2006)
- *National Association of State Universities and Land Grant Colleges*
The Presidential Role in Internationalizing the Campuses, 2004)
- *Association of International Education*
(Internationalizing the Campus: Profits of Success 2005)

Stephen Covey's Seven Habits of Highly Effective People:

1. *Be proactive*
2. *Begin with the end in mind*
3. *Prioritize*
4. *Seek solutions that benefit all parties*
5. *Seek first to understand, then to be understood*
6. *Synergize by finding ways to cooperate with everyone*
7. *Continually renew yourself*

Internationalizing the University: 7 Essential Institutional Components (Habits)

1. *Clear, integrated and comprehensive approach*
2. *Strong senior leadership*
3. *Committed leadership throughout campus*



Internationalizing the University: 7 Essential Institutional Components (Habits)

4. *Broad faculty involvement*
5. *Focus on student goals*
6. *Supportive organization and resources*
7. *Networks of partners and supporters*



Innovating Universities through Internationalization

1. *Internationalizing the Undergraduate Curriculum*
2. *Enhancing Undergraduate Experiences Abroad*
3. *Broadening International Graduate Education*



Innovating Universities through Internationalization

4. **Strengthening International Research Collaborations**
5. **Creating Campus International Communities**
6. **Expanding Campus Outreach and Engagement Abroad**



Potential Issues and Challenges

- *Increasing competition from other developed countries*
- *Our own self-imposed deterrents (e.g., security screening, visa applications)*
- *High costs and soft economy*
- *Enhanced quality and capacity of higher education in emerging countries*
- *Intellectual property protection*

Possible Actions to Innovate Universities through Internationalization

1. **Faculty led study abroad programs**
2. **International internships**
3. **University/govt. funded competitive programs**
4. **Co-sponsored conferences**
5. **Jointly offered satellite courses**



Possible Actions to Innovate Universities through Internationalization

6. **Overseas offices and branch campuses in Asia**
7. **University/industry international partnerships**
8. **Graduate student exchanges**
9. **International alumni engagement**
10. **International associations**



University Context

- Most comprehensive of the 10 University of California campuses with more than 100 academic majors and 80 graduate programs
- About 30,000 students
- 170,000 alumni worldwide
- \$2.3 billion annual budget
- \$544 million in research funding (12th among U.S. public universities)



UC Davis: Intellectual Powerhouse

- Member of the Association of American Universities (Membership limited to just 62 of 3,000+ U.S. universities)
- Member of the Association of Pacific Rim Universities
- 14th among public U.S. universities (U.S. News & World Report)
- 10th among all universities based on research and contributions to society (Washington Monthly)
- Awards more bachelor's and doctoral degrees in the biological sciences than any other U.S. university

The Campus Today: Our Students

- Student body grows
 - Undergraduate – 23,500
 - Graduate – 7,000
- Increasing Diversity
 - Asia/Asian American – 42%
 - European – 37%
 - South American/Mexican – 12%
 - African – 3%
- Nearly half of all undergrads participate in faculty research
- Two-thirds participate in internships-150 international



UC Davis: Comprehensive Research University

- 4 Colleges
 - Agricultural and Environmental Sciences
 - Biological Sciences
 - Engineering
 - Letters and Science
- 5 Professional Schools
 - Education
 - Law
 - Management
 - Medicine
 - Veterinary Medicine
- Lifelong Education





UC Davis: A Growing International Focus

- *Creation of Vice Provost-International Programs*
- *International cooperative agreements*
- *1900 international students*
- *1640 international scholars*
- *Over 1200 students annually participating in study abroad*
- *Top 25 in Peace Corp volunteers*
- *International alumni groups*



“We need to explore ways we can infuse an international dimension into all that we do—to move internationalism from the periphery to the center of our institution

Larry Vanderhoef, UC Davis Chancellor