

대학경쟁력 제고 컨퍼런스

World University Rankings Conference

2007. 1. 9(화), 14:00~18:00

KAIST 창의학습관(E11) 터만홀

대학경쟁력 제고 컨퍼런스

“21세기 지식기반사회에서 대학의 경쟁력 제고는 선택이 아닌 필수이며,
세계의 대학들은 국내의 경쟁을 뛰어 넘어 세계 대학 간의 경쟁시대로
진입하고 있습니다.”

KAIST

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대학경쟁력 제고 컨퍼런스 개최

2007. 1. 9(화), 14:00~18:00 / KAIST 창의학습관(E11) 터만홀

초대의 글

21세기 지식기반사회에서 대학의 경쟁력 제고는 선택이 아닌 필수이며, 세계의 대학들은 국내의 경쟁을 뛰어 넘어 세계 대학 간의 경쟁시대로 진입하고 있습니다.

이러한 시점에 한국과학기술원(KAIST)의 교육과 연구분야의 혁신을 주도하고 계시는 서 남표 총장님과 한동대학교의 학사교육을 성공적으로 이끌어 가시는 김 영길 총장님을 모시고 한국대학의 개혁과 경쟁력 제고 방안을 듣고, 대학 개혁을 일선에서 추진하고 있는 전국 각 대학의 기획처, 국제협력처, 교무처의 처(팀)장님들이 함께 아이디어와 경험을 나누는 컨퍼런스를 마련하게 된 것은 매우 시기적절하며 의미가 크다고 하겠습니다.

더욱이, 2004년부터 세계대학 순위를 발표하고 있는 영국 The Times Higher의 Editor, Mr. Martin Ince를 초청하여 대학평가의 중요성과 분석방법에 관한 강연이 기획되어 있습니다. 대학경쟁력 제고를 위하여 애쓰시는 전국 각 대학의 기획처, 국제협력처, 교무처의 처(팀)장 등 관계자 분들을 본 컨퍼런스에 정중히 초대합니다.

한국과학기술원 양 지 원 부총장 拜上

프로그램

| 일 시 | | 발표 및 내용 |
|--------------------|--------------------|-----------------------------------------------------------------------------------------------------|
| 13:30 ~ 13:50 | | 등 록 |
| 제1부 14:00~15:50 | 14:00 ~ 14:05(5분) | 개회식 - 사회자: 한국과학기술원 양지원 부총장 |
| | 14:05 ~ 14:45(40분) | 기조강연: The Role of University in the 21st Century - 강연자: 한국과학기술원 서남표 총장 |
| | 14:45 ~ 15:00(15분) | 질의응답 |
| | 15:00 ~ 15:40(40분) | 발표주제: A New Reformed University Education at Handong Global University - 발표자: 한동대학교 김영길 총장 |
| | 15:40 ~ 15:50(10분) | 질의응답 |
| | 15:50 ~ 16:10(20분) | 휴 식 |
| 제2부 16:10~18:00 | 16:10 ~ 16:40(30분) | 대학의 국제경쟁력 제고방안 토론 - 토론자: 고려대(정석우), 한양대(장석권), KAIST(권혁상) |
| | 16:40 ~ 17:30(50분) | 발표주제: The World University Rankings - 발표자: Martin Ince (THES editor), Ben Sowter (QS researcher) |
| | 17:30 ~ 17:50(20분) | 질의응답 |
| | 17:50 ~ 18:00(10분) | 정리 및 폐회식 |
| | 19:30 ~ (60분) | 만찬 |

만찬 장소(교직원회관 2층)



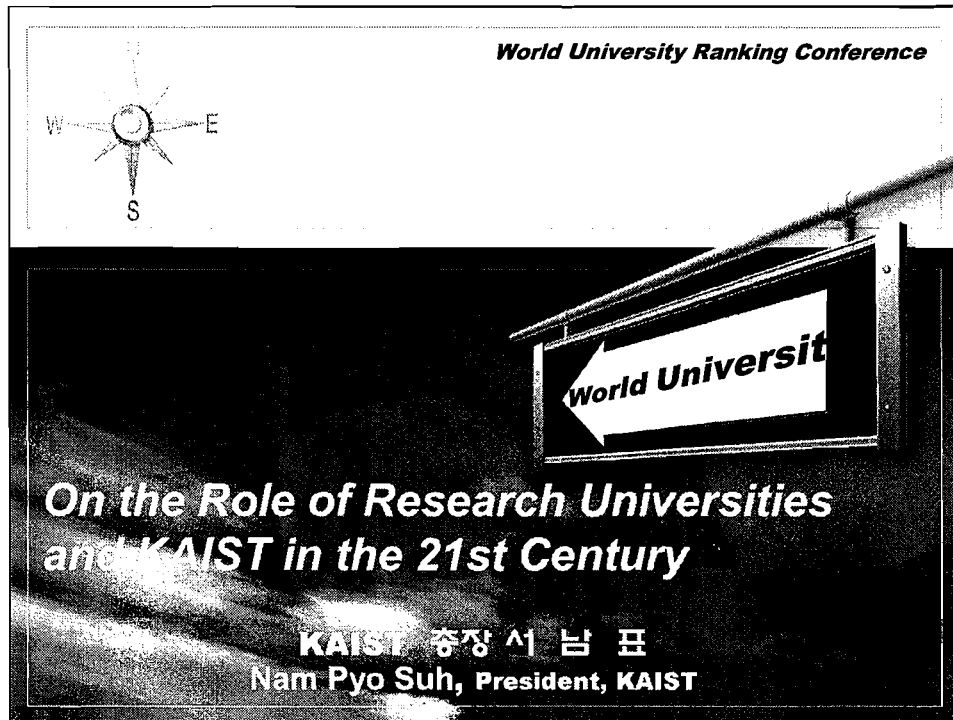
* 만찬 참석을 희망하신 분들을 위해서 교직원회관(E5) 2층에 뷔페식 만찬을 준비할 예정이오니 많은 참석을 부탁드립니다.

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The Role of University in the 21st Century

(한국과학기술원 서남표 총장)



***Thank you for coming to
WUR Conference & KAIST***

To my Korean colleagues,

*영어로 말을 하고 슬라이드가 영어로
된 것 죄송합니다.*

이해하여 주시기 바랍니다.

Outline of My Presentation

- 1. Role of Research Universities***
- 2. Introduction of KAIST***
- 3. Recent Initiatives of KAIST***
- 4. Implications of International Ranking***
- 5. Concluding Remarks***

Challenges for Research Universities

- 1. Improvement of the quality of life**
- 2. Research that can help economic development**
- 3. Advance knowledge base, e.g., materials science, computer science, information technology, biology, etc.**
- 4. Dealing with current issues for universities in the 21st century**
- 5. Critical factors in developing global university**

Role of Research Universities

Universities role in helping humanity

- 1. Knowledge generation -- DNA, information, materials science, computer science, etc.**
- 2. Generation of educated people -- successful in eradication of ignorance but not irrational behavior**
- 3. Microcosm of the society at large -- social experiment, exploration of risky ideas, modeling of ideal systems**
- 4. Research to solve problems faced by humanity and society**

Role of Research Universities

Economic Development and Research Universities

1. New England and research universities (MIT, Harvard, etc.)

Before 1950 -- shoes, textile, apparel mfg

1950 to 1980 -- computers, medical, defense research

1980 to date -- financial, software, biotech, defense research

2000 and beyond -- biotech, nanotech(?), medical/healthcare, IT

2. Korea and research universities

1945 to 1970 -- Education of undergraduate education

1970 to date -- Generation of highly educated people (KAIST)

*2000 and beyond -- Development of high tech industries led by
university research*

Role of Research Universities

Critical roles played by research universities and government

***In the U.S., it was the selective funding by government
and the research done at the selected research
universities that have developed the basis for
various academic fields and industrial base.***

Examples: DARPA/NSF -- Materials Research Labs

DARPA -- Computer Science Labs

NSF -- Basic research in physical sciences and engineering

NIH -- biology, medical science, bioengineering

Energy, Defense, NSF -- nanotechnology

***In Korea, the era of basic research was started in the
early 1970's with the establishment of KAIST.***

Role of Research Universities

Critical roles played by research universities and government

In Japan, the government invested R&D money in National Labs rather than selected universities, which was successful in the catch-up phase of Japanese industrial development, but not very successful in developing new ideas. (MITI vs Education Ministry)

Possible reasons:

- 1. Renewable of personnel***
- 2. Short-term research***
- 3. More D than R***
- 4. Industry-dominated agenda rather than research (curiosity) - dominated agenda***

Role of Research Universities

Current issues for universities in the 21st century

- 1. It differs from country to country, but in many countries the critical problems are both internal and external to universities.***
- 2. For many it is funding and availability of outstanding human resources (3% rule).***
- 3. Science and technology are changing faster than the ability to change for some universities.***
- 4. Education is becoming more capital intensive.***
- 5. Distribution vs Concentration (European model vs US model)***
- 6. Need to change research paradigm (Two ends of the research spectrum)***
- 7. Quantitative evaluation over qualitative assessment***

Role of Research Universities

Critical factors in developing global university

I would like to illustrate this by going through the recent changes we have made at KAIST.

Why, What , How.

Goals of KAIST

- 1. To make our school one of the best universities in the world**
- 2. To educate future leaders in industry, education, and public service, etc.**
- 3. To contribute to the economic development of Korea**
- 4. To improve the quality of life for everyone in the world**

Introduction to KAIST

- 1. Approximately 2,800 undergraduate students**
- 2. Approximately 5,000 graduate students**
- 3. About 680 faculty members, including 260 none-tenure track faculty**
- 4. Approximately 20% of the courses are in English**
- 5. Annual budget = Approx. US\$340 million**
- 6. Incoming freshmen class will be taught in English only**
- 7. Incoming freshmen class will have about 50 foreign students out of about 750 freshmen, which is larger than that of MIT.**
- 8. Majority of the faculty received their PhDs from the US**

Introduction to KAIST

- 1. 10 of the 18 National Engineering Prizes were receive by KAIST professors.**
- 2. 25% of Samsung Electronics PhDs are KAIST graduates.**
- 3. More than 10% of professors in Korea are KAIST PhDs.**
- 4. KAIST graduates are now professors in other countries, including MIT, NTU, etc.**
- 5. KAIST produced more than 31,000 graduates.**
- 6. The Number of papers written by KAIST professors is on par with those of MIT.**
- 7. 22% of our students are women students.**
- 8. Large number of patents were granted to KAIST professors.**

Introduction to KAIST

9. KAIST undergraduates may be as good as the best in the world. 70% come from “Science High Schools” and a school for gifted students.

These schools collectively produce about 1,800 graduates a year. Each one of these schools accept about 100 a year per school out of perhaps 100,000 high school graduates.

10. I believe KAIST would be one of the best universities if it were located in the U.S.

Anticipated Future Development

- National Level -

- 1. Stronger competition in capital intensive business**
- 2. Shifting out of energy intensive business**
- 3. Greater importance of technology and technology innovation**
- 4. More competition from abroad in education, etc.**

Anticipated Future Development

- Educational Level -

- 1. Increasing important role of the Internet**
- 2. New role for residential university**
- 3. Rapid obsolescence of professors**
- 4. More merit based systems**
- 5. Transformation of disciplines**

Anticipated Future Development

- Educational Level -

- 6. Greater importance of research at the interface
between and among disciplines**
- 7. Greater importance of biology, information
science, cognitive science, etc.**
- 8. Greater emphasis on technology innovation and
design**
- 9. Importance of good and effective education**

What are the characteristics of outstanding universities in the world?

- **Best in some or many fields of intellectual endeavor**
- **Give the student excellent educational experience**
 - **Produces outstanding graduates**
- **Generates scholarly outputs that impact the future of their field**
 - **Produces major technology innovations**
- **Produces new ideas that influence the thinking of others**
- **Influences the future direction of a nation, nations, and humanity**
 - **Establishes cultural norm for society**
 - **Many visitors want to come**

What are the pre-requisites of a great university?

- 1. Shared Culture and Values**
- 2. Human Resources**
- 3. Financial Resources**
- 4. Tradition**
- 5. Long-term Goals**
- 6. Strategies**
- 7. Implementation Policy**
- 8. Administrative structural framework**

Shared Culture and Values: The Foundation for a Great University

- **High ethical standards**
- **High regard for protection of intellectual property rights (IPR)**
- **High regard for intellectual achievements**
 - **Excellence in education**
- **Reward and recognition for outstanding contributions**
- **Allowing people to ask unthinkable questions**
- **High standards for academic achievements**
 - **Competitiveness**
 - **Community of scholars**

Implementation Policy

- **What structural changes do you need to make to achieve your goals?**
 - **Personnel policy?**
 - **Reward system?**
 - **Major fund raising?**
- **Relationship with your environment?**
 - **International visibility?**
 - **Professional conduct?**
 - **Ethical standards?**

Ultimate Goal of KAIST

**To be one of the best universities
in the world**

Current Emphasis at KAIST

- **Emphasis on Outstanding Teaching/Learning/Understanding**
- **Research excellence in important interface between disciplines**
- **Transfer power and responsibility to the faculty**
 - **Globalization**
- **Fund raising from private sources**

Emphasize on Education

KAIST must provide the best education to our students.

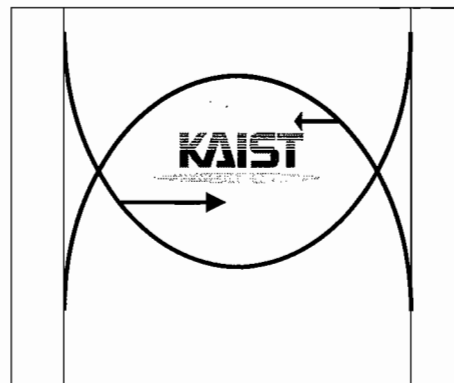
- a. Imaginative curriculum**
- b. Teaching innovation**
- c. Concomitant education in Analysis and Synthesis**
- d. Bilingual education**
- e. Dual degree program -- GIT, etc.**
- f. Encouragement of broad education -- minor and major curriculum**
- g. More opportunities and support for student-initiated projects**

Research Excellence

More emphasis at the two ends of the research spectrum

Effort & time
put into
Research

Impact



Basic or
Fundamental
Research

Technology
Innovation

Research Excellence

KAIST must be “leaders” in research through innovation and creative work.

- a. KAIST Institutes**
- b. Individual research**
- c. Hiring of outstanding faculty**
- d. Recruitment of bright and ambitious students**
- e. Secure research funding**
- f. Capture big ideas**
- g. Work hard**

Empowering the faculty

- a. Department-Centric Boundary-less System**
- b. Appointment of Department Heads**
- c. New tenure system**
- d. Distinguished KAIST professors**
- e. New faculty search process**
- f. Merit-based system (scale of 6)**

Globalization at KAIST

- **Increase foreign faculty : 80 professors till 2010"**
- **Increase Foreign students: 500 students till 2010"**
- **Implement dual degree programs**
- **Conduct all courses in English: recruiting 50 freshman foreign students in 2007 spring semester**
- **Build bilingual campus**

Fundraising

- a. Goal of \$ 1 Billion in seven years**
- b. Assignment of duties to VPs**
- c. Distributed fund raising system (80/20 rule)**
- d. President's Advisory Council (PAC)**
- e. Appointment of Dean for Development**
- f. Acquisition of land for future expansion**
- g. Honorary degrees**

Implications of International Ranking

- 1. It is taken seriously, especially by the press.**
- 2. It can be a useful metric for improving higher educational system.**
- 3. It must be done fairly and accurately based on reliable data. Otherwise, it can damage outstanding universities.**
- 4. It may be better to evaluate research universities apart from largely undergraduate institutions.**

Concluding Remarks

- 1. Thank you for coming to KAIST and Korea to share your perspectives with us.**
- 2. We would like to work with you to improve the ranking system and improve the quality of higher education in Korea and other countries.**
- 3. We should continue to improve higher education to help the future well-being of everyone in the world.**
- 4. Education is perhaps the most important endeavor of humankind.**

Thank you for your attention.

A New Reformed University Education at Handong Global University

(한동대학교 김영길 총장)



A New Reformed University Education
at
Handong Global University
“Global EDISON Academy”

Jan. 9, 2007

Young-Gil Kim, President
Handong Global University
Pohang, Korea
www.handong.edu

A New Reformed University Education
at
Handong Global University(HGU)
“Global EDISON Academy”
Young-Gil Kim, President

<Summary>

HGU's education has been trying to be student-education focused and the market-driven and shifting towards globalization and digital world since 1995. Students are admitted as freshman without major declaration, and choose their major field of study freely after finding their best talent and potential. Every student is required to take double major for cultivating problem-solving ability. The multidisciplinary knowledge is essential for competent leadership. HGU requires to all students to study English and Chinese for global communication ability, and also requires students to be familiar with any computer platforms. In 2002, HGU also opened the Handong International Law School.

Every student belongs to a team leader under a professor, and they care of one another in a team. HGU students also learn how valuable it is to work together diligently by working with their team members. Team students conduct together the team project of the real world. Every student of HGU has a duty for social service to learn how to serve other people. HGU is conducting all exams without monitors under the “Handong Honor Code” since its opening in 1995. Educational philosophy of HGU is the holistic approach combining professional capability with character and spiritual educations as a Christian University.

Global EDISON Academy (GEA) was established in 2006 at HGU for the purpose of a cross-disciplinary, higher education of Global Entrepreneurship integrating technology, business, and law on the basis of character education for future global leaders. GEA offers selected elite students who have an aspiration to become global leaders and CEOs in corporations a degree program in global entrepreneurship. It is to educate the students with the whole-person education with a global perspective including their personality and leadership, the elements essential for future global leaders. Its purpose is to train the students to become creators of new businesses rather than contributors for businesses created by someone else.

Introduction

We are now living in a rapidly challenging, dynamic global world. Thus, the 21st century presents unparalleled risks as well as opportunities for the whole world; all the nations and the societies in it, and thus, for university educations as well. “Why Not Change the World?” has been the slogan that Handong Global University (HGU) consistently uses to challenge its students. In this 21st century, thinking and working globally will ever be critical for survival and prosperity for all mankind sharing one globe. HGU’s vision from its inception has been to transform the world through cooperative global education - by nurturing a whole person with global perspective for leadership throughout the world, especially the developing countries. As global citizens, we are required to develop a global mindset, i.e., increase our capacity to think and work on a global and intercultural basis. This can be accomplished through a new higher education that meets the challenges of the 21st century.

In solving complex problems in the global context, it is not sufficient for future global leaders merely to be well prepared only in academic and technical fields. They must also be trained to think and act with global leadership qualities as well. Universities must provide global leadership training and education that combines academic and technical education with training in business ethics, social responsibility, environmental protection and a mutually beneficial, cooperative perspective. Above all, future global leaders must be honest, trustworthy, and truly dependable. University education faces a real challenge to offer education on effective character development combined with practical experience in social service and international cooperation. In order for universities to be competitive in the global stage of the 21st century, universities must prepare their students to work not only at the highest degree of complexity, but also across every traditional boundary between different academic disciplines, academia, industries, governments, nations, and peoples on the globe. “Universities can make great contribution to the global village by helping to define and promote the shared values of a truly global society.” as stated by Dr. Charles Vest, former President of MIT in 2001.

“Education teaches more than students. It teaches all of us to see beyond our borders and boundaries, both real and imagined. It teaches us to overcome stereotypes and appreciate cultures other than our own. In so doing, it gives us hope for a brighter future by advancing freedom, opportunity and understanding.” said Margaret Spellings, the U.S. Secretary of Education at the seventh annual International Education Week with the theme of International Education: Engaging in Global Partnerships and Opportunities in Seoul, Korea, on November 3, 2006.

Handong Global University (HGU) opened its doors for higher education in 1995 in Pohang, Korea. As the name signifies, Handong Global University was established from the very beginning with a founding focus to become a *global* university that would transform not only Korea, but also to help other developing countries on the globe as well. Korea was an underdeveloped country in the 1950s after the Korean War, but it has now grown to be the 11th economic power in the world. Providing good education to a talented population was an important factor of South Korea's success story. It is hard to find other examples in world history where a country that received aid from international organizations has transformed itself into a country that provides economic assistance to other countries within a few decades. Educational assistance to underdeveloped countries is a duty that Korean universities, Government, various organizations in the private sector should pursue actively. It is a moral obligation and a way of guaranteeing Korea's future prosperity in the world.

Since its opening in 1995, HGU is actively pursuing the education of emerging future leaders of developing countries and countries in transition for their capacity building through exchange of knowledge and sharing in a spirit of solidarity. Poverty is a problem that is hard to solve without active support and help from advanced countries. Currently, at HGU, there are 149 foreign students from around 40 countries and this number constitutes just 4 percent of the total student body. Providing more support to developing countries in Asia and Africa through education is a way through which Korea can pay back the debt Korea owe to international society from 50 years ago. It is also a way through which Korea can invest in the future. Korea should instill the spirit of Korea in the minds of students from countries that will soon emerge on the center stage of the world economy, where Korea will want them as its partners in the future.

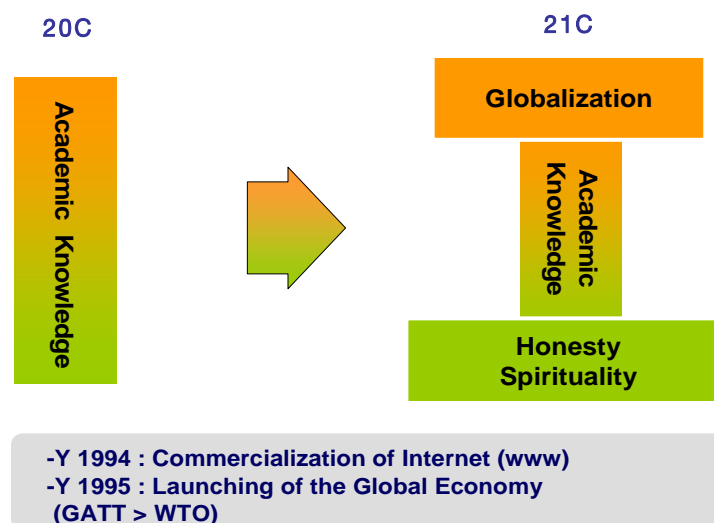
When Handong was planned to establish a new university in 1994, there was a total of 159 universities in Korea. I asked myself "Why do we need one more university?" When the first graduates of Handong go into the world in the 21st century, they will face a totally different world of technology driven global world. So, Handong must educate their students employing a new educational curricula needed in the 21st century of global community. The 21st century University stands in dire need of a paradigm shift, calling for a revolutionary and fresh approach. Handong must prepare our young students to live and work in an increasingly complex and challenging dynamic world.

HGU's Global Educational Philosophy and Initiatives

The educational paradigm of the 21st century will be far different from that of the 20th century that brought the unprecedented economic prosperity that we experienced. The 21st century universities stand in dire need of a paradigm shift, calling for a revolutionary and fresh approach that is commensurate with the new way of things in the new century. HGU is here to fulfill that requirement. HGU aims to prepare honest and professionally competent students to live and function successfully in the increasingly complex and challenging dynamic global world.

The mid 90's were the epoch-making years in which the world slipped into the information technology-driven global community due to a number of significant events. They were the commercial use of the World Wide Web (www) that began around 1994 and WTO (World Trade Organization) that replaced GATT (General Agreement on Tariffs and Trade) that gave impetus for the global economy. The establishment and opening of Handong Global University (HGU) in 1995 also coincide with the IT-driven global world for the 21st century. HGU's educational framework for this 21st century can be depicted using the Chinese character for “engineering”(工) as shown below.

{The Shift and Change of the Educational Paradigm from the 20th to the 21st century}



The base foundation in the railway-shape structure corresponds to moral and spiritual aspect of education that should form the basis of any education while the vertical component of the structure signifies knowledge element of education. The upper bar points to the globalization aspect of the education. The stability of the entire structure depends primarily on the stability and strength of its foundation and of the “I,” or the vertical member to a lesser extent. Therefore, knowledge accumulated without the firm foundation will result in weakening or even collapse of the entire educational structure, and can greatly harm the society rather than helping.

In the past industrial age of the 20th century, the assets and primary drivers of economic prosperity were largely machinery and capital, i.e., material resources or things. People were also considered as things that were necessary, but replaceable. However, in reality, human beings are four-dimensional beings, consisting of a physical body, mental intelligence, an emotional heart and a spirit. Thus, true education for human being consists not only of the conveyance and transmittance of knowledge, but also of the cultivation of the intellectual, moral, and spiritual realm beyond one’s physical body. Especially in this high-speed information society of the 21st century when the highest priority is placed upon efficiency and expediency, educating a whole-person complete with academic, moral and spiritual development is becoming more essential ever. Indeed, more and more corporations worldwide are beginning to recognize spirituality as an important ingredient for corporate success.

Ongoing Global Educational Activities at HGU

Handong Global University was established from the very beginning in 1995 with a founding focus to become a global university. HGU has many students from around the world. As of 2006, they include: Afghanistan, Albania, Argentina, Australia, Bolivia, Brazil, Bulgaria, Burundi, Canada, Cambodia, Cameroon, China, Congo, Germany, England, Fiji, Ghana, Haiti, Hungary, India, Indonesia, Israel, Japan, Jordan, Kyrgyz, Laos, Malaysia, Mexico, Mongolia, New Zealand, Nepal, North Korea, Pakistan, Papua New Guinea, Philippines, Russia, Rwanda, Saudi Arabia, South Africa, Swaziland, Thailand, Tunisia, Uganda, United States, Uzbekistan, and Vietnam, etc, to name a few, and the number is growing. Most of the students from the developing countries have full scholarships from HGU. HGU is also a member institution of the Global Engineering Education Exchange (GEEE), administered by the Institute of International Education in New York. (www.iie.org).

There are a number of joint global educational programs with educational institutions of developing countries. So far, international students from as many as 40 nations have come to study at Handong. The International Joint MBA Program of HGU in collaboration with the Institute of Finance and Economics (IFE) in Ulaanbaatar, Mongolia: This program started in 1999, and as of 2005, some 50 Mongolian Graduates from the joint program are working at various Mongolian government agencies, multinational companies, banks and universities. Due to the IFE's long-standing request to include IT and Law to the program, it will be upgraded to the Global Enterprise-MBA program next year.

1. The Joint MBA Program with Ministry of Higher and Secondary Specialized Education of Uzbekistan and Tashkent State University of Economics: Cooperation and agreement with the "ISTEDOD" Foundation of Uzbekistan was established for an educational program in 2003. An agreement was also signed for establishment of a Joint MBA program with Tashkent State University of Economics in September 2003. In December 2005 as part of the program, young experts and about 20 professors of leading universities selected by Uzbekistan government were invited for a short term intensive training at HGU for launching the newly created Global Enterprise-MBA in 2007.
2. An Agreement of Cooperation with Ministry Higher Education, Afghanistan and Khandahar University to develop an educational exchange program in April 2003 and HGU has been sending faculty and student instructors to Afghanistan to teach computer skills each summer and sending visiting professors for engineering courses at entirely HGU's expense.

Both HGU and UNESCO (United Nations Educational, Scientific and Cultural Organization) will partner for training of Global Leadership of Developing Countries as an UNESCO UNITWIN (University Education Twinning and Networking scheme) program.

3. In 2005, HGU also established the Global Institute for Ideas and Innovation (GIII) specifically to address the Information Technology Education and its direct application to actual businesses for the third world countries. The newly created GIII is a think tank in Information Technology (IT) and its strategy and education.

One of its functions is to help the third-world countries to formulate new policies and strategies for IT, which field is so vital for them to catch up with the developed countries in this information age. It also helps devise new educational strategies for them that are very much needed to keep up with the rapidly evolving educational paradigm in the new century. The field of study for the think tank will be expanded in the future to include environmental, pollution and life science fields that are also important for the developing countries.

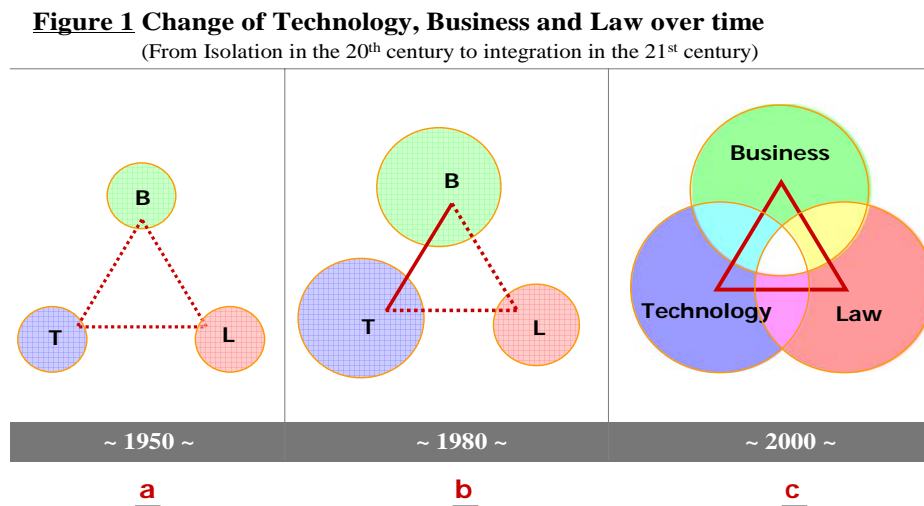
Its third function is to teach the students entrepreneurship and how to start a new enterprise with hands-on practice using the topics that the students learned in the class. As part of the effort to bring entrepreneurship to the school curriculum and teach HGS students entrepreneurship using real hands-on projects, it initiated a new educational program and its spawning projects called business practicum. The program links all three fields of study vital for modern business directly to the hands-on projects: technology, business and law. If some of the student projects actually germinate, they will be linked with the incubation center currently in operation at the school.

The First Global Enterprise-MBA at HGU

With the emergence of the post-industrial age with blurred demarcation among the traditionally separate academic disciplines, there have been attempts to offer some combined degree programs of mixed kindred fields of study and profession. A few examples are the techno-MBA program combining management and technology and joint degree programs combining business (MBA) and Law (JD) degrees. However, there is not a single graduate degree program integrating all three academic disciplines of technology, business, and law with global perspectives, which is essential in the 21st century of rapid globalization with increasing complexity. Also, the kind of curriculums offered for the business students in the developed countries are not totally appropriate for the students who are looking to lead the developing countries since the environment and circumstance for the developing countries are quite different than those of the developed countries. The future leaders for the developing countries face unique problems that only developing countries face, such as those Korea had to overcome to break out of the vicious cycle that it once faced in the 60's and 70's to achieve the development it was able to achieve so far.

To address such needs, Handong Global University (HGU) initiated in 2005 a new advanced, cross-disciplinary, graduate-degree level program, named the Global Enterprise “Entrepreneurship”-MBA. The Global Enterprise-MBA program of HGU attempted to integrate the three traditionally separate fields above, namely, Technology, Business, and Law, based on character education. The program deals not only with administration and management of business, but also active promotion and advancement of global business with global perspective. The program is designed primarily to provide the high-level education required for advancement of business in the technology-driven global world for top & senior executives poised to take on significant corporate leadership roles. The Global Enterprise-MBA program is different from the traditional MBA or executive MBA programs in the sense that the latter concentrates mainly on business and administration aspects only while the former addresses the global aspects of business.

The basic concept of the HGU’s Global Enterprise-MBA is depicted in Figures 1 and 2.

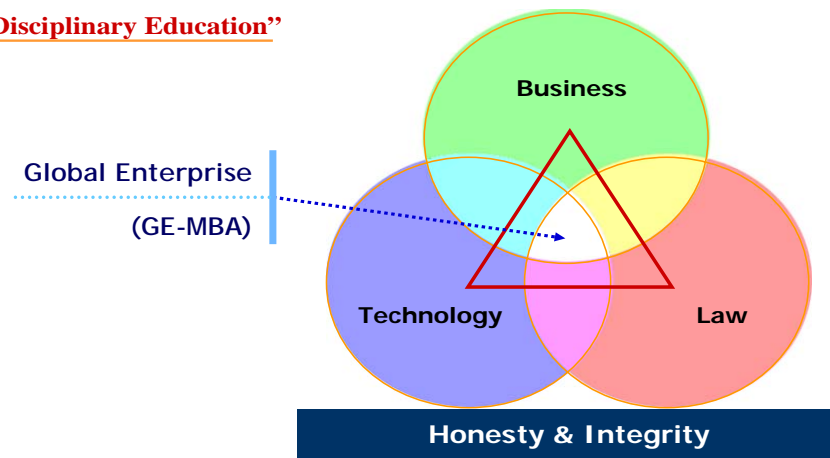


In the industrial period of the sixties, technology, business, and law disciplines were largely separate and unrelated among each other since their domains were small and were far apart among each other as shown in Fig 1a above. As technology advanced rapidly in the eighties, the domain of technology and that of resulting business grew, nevertheless, the interaction between technology and law still remained very little or sporadic at best as shown in Fig 1b. However, in the information and knowledge-driven global world of the

21st century, the domains of technology, business, and law have greatly expanded – to the extent that the three actually overlap and intersect greatly as seen in Fig 1c above. Eventually, the three intersecting circles will fuse and form a tight crystalline structure, a ruggedly interlocked, comprehensive knowledge structure in the new century which knowledge is vital for true global leadership as illustrated further in Figure 2 below.

Figure 2 Educational Concept for “Global Enterprise - MBA”

“Cross-Disciplinary Education”



The same is the case with the educational philosophy of the Global Enterprise-MBA that is to offer integrated disciplines of the three essential elements that form a tight crystalline structure as illustrated above.

As the next step to the Global Enterprise-MBA program mentioned above, HGU is also creating a new initiative, an education program called the Global Enterprise Leadership, in an attempt to provide the students further training in character building and insight in leadership. The educational concept of the HGU’s Global Enterprise Leadership program is based on a holistic approach combining professional training with ethical and character education that has been the long-standing goal of HGU from its inception. The HGU has had a strong passion for implementing the total education of a whole person for the Global Enterprise-MBA program, and the new Global Enterprise Leadership program is the rendition of that effort. In addition to addressing the multidisciplinary education encompassing the three related fields mentioned above, the Global Enterprise Leadership curriculum was designed to expose the students to world history and great ideas of

historical figures of high moral and ethical characters as well as providing opportunities for the students to become competent leaders with passionate commitments for betterment of mankind for the people they serve.

The program includes the newly generated courses with a purpose to teach the students entrepreneurship and practical aspects of starting a new business using their technical or business skills they learned at HGU. The courses consist of Business Law Practicum, IT business practicum and Business Management Practicum that respectively cover the basic law, business and technology knowledge in practical sense needed to start and operate a new company. Students are encouraged to select a product/service which they want to start a business with, select a company structure and partners and prepare a real business plan and other materials for fund raising activities. Qualified proposals are presented to actual investors, angel or venture capitalists. Those that make to the final proposal and get actual funding are introduced to the incubation center at HGU that has been in operation. A course from the program, Business Law Practicum, is now being offered at Handong International Law School (HILS) with great enthusiasm. Since the course has been very popular especially among the students from the developing countries, it is being expanded to a multi-course, multi-semester program. The program will help the students to learn about free enterprises and their advantages and disadvantages, related ethical issues and practical aspects that will help them to start a new business or help others to start a new business once they get back to their home countries.

The First Global Legal Education in Asia at HGU

The Handong International Law School (HILS) (Dean Lynn Buzzard) was opened in March 2002 to meet the compelling need for Korea and for Asia to globalize Asian legal education. HGU had this vision that Asia must become more global in the legal field. Asia must educate a new generation of Asians in law and equip them not only to serve their peoples and nations but also their neighbors and Asia.

For strategic and practical reasons, HILS has started with the US Law School curriculum taught in English and is preparing the students for the BAR examinations and licenses in the US jointly with several US Law Schools. HILS has very diverse students pool from all over the world. HILS students are being trained to become global lawyers by having them study international and US laws and expect them to study laws of their own laws in their respective country.

As of 2006, students from over 18 countries are studying at HILS. HILS offers full scholarship to students from developing countries. So far, 22 students passed the U.S. bars (Tennessee, Missouri, New York).

Global EDISON Academy (GEA)

In 2006, Global EDISON Academy (GEA) was established at HGU for the purpose of a cross-disciplinary, higher education of Global Entrepreneurship integrating technology, business, and law on the basis of character education for future global leaders. GEA was designated a government sponsored pilot program intended to try out amalgamation of different engineering and business fields in December 2006 by the Ministry of Science and Technology (MOST) and KOSEF (Korea Science and Engineering Foundation).

The primary purpose of the MOST program is to promote the cross-disciplinary education on the undergraduate level. However, Global EDISON Academy program goes much beyond in scope than that intended by the MOST. It is to educate the students with the whole-person education with a global perspective including their personality and leadership, the elements essential for future global leaders.

Global EDISON Academy (GEA) offers a few, selected elite students who have an aspiration to become global leaders and CEOs in corporations a degree program in global entrepreneurship. Its purpose is to train the students to become creators of new businesses rather than contributors for businesses created by someone else. It is to provide not only multidiscipline whole-whole leadership training essential for global leadership but also actual application of the knowledge learned in class for practical cases and each student is required to finish a useful business plan that they carry with them after graduation along with a diploma.

The word, EDISON, is an acronym signifying the mottos of the academy described below as well as to symbolize the culture and philosophy of the famous inventor, Thomas E Edison, who established laboratories that produced practical inventions and pragmatic applications that were led to entrepreneurship, which are the main philosophy of the Global EDISON Academy.

The Global EDISON Academy's mottos signified by the word EDISON are:

E.D.I.S.O.N.

E : Education of Competent and Honest Global Leadership

Global Vision and World-Competitive, Professional Ability Education

Education of Global Perspective - Communications, Intercultural Competencies

D : Dynamic & Creative Cross-Disciplinary Academic Curricula

Fusion among Technology, Business, and Law with Character Education

Education of Individual Talent and Creativity – No Designation of Major at the Entrance: Double Major, Free Choice of Courses

I : Integrity and Uprightness for Sound Character Building

Ethics and Morality Education

Education of Honesty – Unsupervised Exam(Honor Codes)

S : Synergistic Outcome through Cooperation

Team Work and Mentorship Education

Education of Community: Dormitory Life Training, Teams with Professor Team Leader

O : Open and Borderless Global Educational Partnership

Help Capacity-Building for Developing Countries through Education
(UNESCO UNIVERSITY TWINING & NETWORKING)

Oversea Field Research, HDS Out-Reach

N : Nurturing of the Whole Person for Peace and Prosperity

Transforming the World with a Comprehensive Worldview

Education of Whole Person – Knowledge, Personality, Spirit

Epilogue

In this technology-driven global world of the 21 Century, we are experiencing a revolution in information and knowledge, and have entered the age of globalization in which all parts of the world are connected and competing with one another. Universities are facing new challenges as well. The twenty-first century is called the age of ‘3C’ - Competition, Change, and Customer. In order to survive, universities must implement changes geared toward this future society continuously and rapidly so that customers of education, the students, may compete on the world stage.

The environment we are facing demands paradigmatic and radical changes as opposed to gradual changes. The shift in paradigm requires total and fundamental changes in 3P: Persons, Processes, and Products. The Persons (i.e. professors) must adapt to the new age, adjusting the Processes of education, in order to create the Products (i.e., new human resources.)

In this global community of the 21st century, universities have to prepare future students to work at the highest levels of complexity, and across every traditional boundary between academic disciplines, academia, industry, and government, and between nations and peoples around the globe.

Opening Minds to the World

“Peace and prosperity in the 21st century depend on increasing capacity of people to think and work on a global and intercultural basis. As technology opens borders, educational and professional exchanges opens mind”

Institute of International Education (IIE), New York, www.iie.org

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The Author:

Dr. Young-Gil Kim is the founding and chartered president of Handong Global University (HGU) in Pohang, Korea since 1995. Since then, he nurtured HGU to what it is today with his new educational philosophy based on cross-border, multidisciplinary and whole-person education with global perspective commensurate with the 21st Century. One of his on-going interests in education has been training the future leaders of the developing countries for the world's peace and prosperity.

Prior to becoming the president of HGU, Dr. Kim was a professor of material science and engineering at the Korea Advanced Institute of Science and Technology (KAIST) for 15 years. While Dr. Kim was in the United States, he worked at NASA-Lewis Research Center in Cleveland, Ohio, on high-temperature alloys for aerospace applications. He also worked at US Army Construction Engineering Research Laboratory (CERL) at Urbana-Champaign, Illinois, and at the Research and Development Center of the International Nickel Company (INCO), in Suffern, New York.

Due to his scientific achievements in the States, he received NASA-Tech Brief Awards (1976, 1981) and also US Industrial Research "IR-100" award (1981). Since the chartered president of HGU in 1995, Dr. Kim pioneered a new educational curriculum for this global, technology-driven market place of the 21st century. For those innovative programs, HGU received excellence awards for education reforms from the Ministry of Education of the Republic of Korea for three consecutive years in 1996-1998 as a model university for 21st century. In 2006, HGU has received a grant of US \$16 Million spread for four years as a part of the "NURI" (New University for Regional Innovation) project for the global education of integrating biotechnology and mechatronics from the Ministry of Education & Human Resources of Korean Government. While in Korea, Dr. Kim received the KING SEJONG CULTURAL AWARD of Science & Technology Field in 1986 from Korean Government, and was selected as "The Scientist of the Year" in 1987 by Science Reporter's Club in Korea. In 2005, he also received "Christian Academy Award" for his contribution in Creation Science.

Dr. Kim received Bachelors Degree in Metallurgical Engineering from Seoul National University, Seoul, Korea, in 1964, Masters Degree in Metallurgical Engineering from University of Missouri-Rolla in 1969, and Ph.D. in Material Science & Engineering from Rensselaer Polytechnic Institute, Troy, New York, in 1972. Dr. Kim also received a Ph.D. in International Management Honoris Causa from the Institute of Finance and Economics (IFE) of Mongolia in 2003.

The World University Rankings

(Martin Ince(THES editor))

The World University Rankings



Ranking the world's universities

- Martin Ince
- Contributing editor, THES



Seoul, Korea
9 January 2007

The THES

- Since 1971
- Weekly newspaper formerly associated with The Times [of London]
- Group including TES
- Online at www.thes.co.uk since 1994

Why rank universities

- Interest in ranking things and people
 - Hospitals
 - Schools
 - Local authorities
 - Rich lists; Britain, world, Asian British, footballers
 - Universities: The Times

National Rankings

- The Times
 - produced by John O'Leary, editor of THES
 - Institutions as well as subjects

Criteria for subjects include:

- Teaching quality
- Research quality
- Entry standards
- Employability

National rankings (2)

- Criteria for institutions include
 - Teaching standards
 - Staff/student ratio
 - Library spending
 - Facilities spending
 - Good degrees
 - Jobs
 - Research

The US Comparison

- US News and World Report “America’s Best Colleges”
 - Mainly about how likely you are to graduate
 - Also student experience eg class size
 - However, many other tables eg liberal arts, business, engineering colleges
 - Main table has 18 columns of data
 - Likewise McLean’s et al including Korea

Why world rankings?

- Long overdue: higher education has always been very international
- Unique position of the THES
- Universities becoming more global
- Knowledge the real factor in international competitiveness
- Increasing desire for comparative information

Why world rankings (2)?

- GATS
- EU and Bologna
- 3 million students outside home country
- BTA
- UK as a major source and destination
- UK as major collaborator, eg several Korean universities
- UK universities opening in China and elsewhere
- Importance of English

In addition

- Interest from governments – UK Treasury
- EU, Germany
- Shanghai

How to do it?

- Audience not just possible students
- Internationally mobile staff
- Internationally mobile money
- Focus on:
 - Teaching
 - Research
 - International orientation

How to do this

- Extensive data gathering exercise
- Mainly by UK firm QS
- Mix of data sources
- National
- Institutional
- Direct contact



Citations

- Like peer review
- Classic measure of research quality
- Use ESI from Thomson
- Our consultant Evidence Ltd



Comparison with Shanghai Jiao Tong

- Not a newspaper
- Nobel + Fields prizes
- These used twice
- Science and Nature
- Science and Social Science citations
- Theirs is a unique and valuable effort
- 500 rather than our 200

In addition...

- Subject specific data not feasible
- Reasons of space as well as data gathering
- But we did use what we term the faculty-specific data
- This is a far less subtle exercise

Faculty-specific data

- Peer opinion
- Citations per paper
- Not aggregated

What did we find?

- Harvard
- The US – 56 in top 200
- Harvard's lead the smallest yet
- Oxford and Cambridge also well placed
- But that's only part of the story

Our main finding

- The top 200 includes universities in 30 states
- US, UK, Australia, Netherlands
- Korea, China, Japan
- Thailand, Malaysia
- Continental Europe
- Developing world small (1 in 2004, 2 in 2005, only Unam in 2006)

International commitment

- US shows up badly
- Macquarie top in staff
- London School of Economics top in students
- Yale among few US with international staff

Peer review

- Harvard
- Oxford and Cambridge
- Well-liked universities all over the world
- Little evidence of patriotism bias
- US, UK, Australia, Japan, China, Singapore dominate the top 20

Citations

- Medical faculty is a big plus
- Or major biomedical income
- CalTech the winner, then Harvard, Stanford, MIT, Texas
- Big country effect is at work here

Staff/student ratio

- Winner Duke, US
- US, French, Swiss, Netherlands etc institutions all well placed
- Harvard shows badly here
- Asian and European universities well-placed
- Weak correlation with research – but not zero

Take home message

- Small variations don't matter much
- A position can be gained by many combinations of weakness and strength
- eg, many Asian institutions do well despite scoring zero on citations

Subsets

- Our faculty-level opinion produced some good surprises
- Cambridge and Oxford top for science
- Followed by Berkeley and then Harvard
- Citations tell a different story
- But Cambridge, Harvard Oxford in biomedicine

Technology

- Harvard at 21
- MIT and Berkeley at 1 and 2
- IIT at 3
- Many good specialist institutions eg KAIST

Arts, humanities, social sciences

- Harvard
- Table has less Asian presence
- A few big-name people make a big difference

Korea's Universities; how good?

- We find three in the top 200
- They are Seoul National, Korea and KAIST
- They appear at 63, 150 and 198

....in detail

- Peer review

Seoul National 43/100, more than
institutions with similar overall score

Korea University 25/100, less than nearby
institutions

KAIST 24/100, also lower than neighbours

....however

- Employer scores generally low

Seoul National 13/100

Korea 8

KAIST 11

Research

- Citations per person
- Seoul National 4/100
- Korea 1/100
- KAIST 12/100

International orientation

- Overseas staff and students
- Seoul National 15 for students, 23 staff
- Korea 19 for students, 5 staff
- KAIST 6 for students, 14 staff

Teaching

- Staff/student ratio

Seoul National 57/100

Korea 55

KAIST 29

In the top 500...

- Pohang 240-250
- Chonbuk National 400-450
- Yonsei 450-500
- Pusan National 450-500
- Hanyang 450-500

...and almost

- Kyung Hee 500-550
- Chungnam National 500-550
- Sungkyunkwan 500-550
- Chonnam National 500-550
- Sogang 500-550
- Ehwa Women's 500-550
- Kyungpook 500-550

In general..

- Large teaching institutions
- Show poorly in citations
- Not very international
- Strategic decision for them
- Same issue in the UK

What we didn't find

- Data on 500 institutions
- Have to teach undergraduates
- Subset data on non-university institutions
 - Government labs eg LLNL, both civil and military, MPS, CNRS
 - Companies eg IBM
 - Some prefer patents
 - US and European domination

Things that don't work

- Library spending
- Course cost
- Completion
- Entry standards
- Wealth
- Alumni giving

Response

- More work than writing the thing
- Last year about 30 newspaper articles in Mexico alone
- Interest from media, universities etc across Europe and Asia
- Less from the US

Types of response

- Who told you that?
- Reject the whole idea
- Complain about their position
- Think it is about right
- Wonder how to do better

How to do better

- Publish more in the right places
- Be more international
- Be better represented academically around the world
- Have better employer links
- Have enough staff to teach your students

Future developments

- New data
- Any suggestions?

Refine existing data, eg from employers

More global reach, eg Africa

New analyses

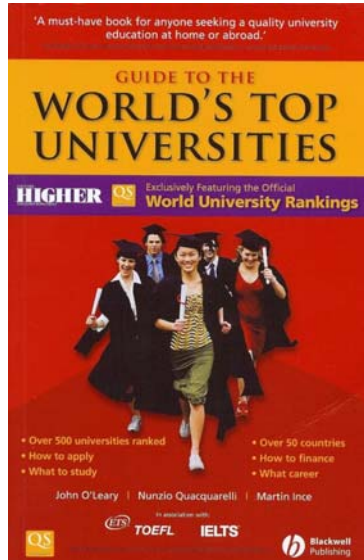
New entrants

And most importantly....

The book

- First published October 2006
- 500 institutions including articles on the top group and shorter details on the rest
- Data in groups of 50

.... See www.topuniversities.com



...really the last slide

- Thanks to
John O'Leary, editor of The THES
Nunzio Quacquarelli, QS
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