K-MOOC: How Learning Can Be Shared

July 31, 2015

Youngwha Kee
(President, National Institute for Lifelong Education)

Hyoung-Shik Park
(Deputy Director, University Finance Division, Ministry of Education)
I. Introduction
Objective

To efficiently promote lifelong education in accordance with Article 19 of the Lifelong Education Act, so as to advance the system of lifelong learning for the public.

Competent Organization

Ministry of Education, Republic of Korea

Vision

To be the national center of lifelong learning and help everyone achieve the goals they set.

Contact

Homepage: www.nile.or.kr  email: kmooc@nile.or.kr
@nile_kr  facebook.com/nilekr
blog.naver.com/nile.kr
NILE offers a wide range of lifelong education programs in South Korea.

- Bachelor’s Degree Examination for Self-Education
- Academic Credit Bank System
- K-MOOC
- Literacy Education for Adults
- Lifelong Learning Universities
- Lifelong Learning Account System
- National Center for Parents
- Regional Lifelong Learning System
- National Center for Multicultural Education
- Lifelong Educator Certification System
Lifelong Learning System to Maximize Learning

Learning experiences for each individual are recorded in the learning account, to be used in connection with the qualifications system for employment.

Various types of learning and experiences inside and outside of school are recognized as academic credits. Once the credits meet certain criteria, the student obtains a degree.

To foster qualified personnel in a certain field, this system allows them to complete certified education and training courses and obtain the necessary qualifications without having to sit through the examination (certified lifelong educator, childcare educator, social welfare officer).

Self-taught students are given the opportunity to obtain a bachelor’s degree and pursue their dreams. They must pass an examination to obtain a degree.
Ⅱ. Foundation of K-MOOC

: ICT and e-Learning
- South Korea has ranked top in ICT for 4 consecutive years, thanks to its cutting-edge ICT climate.
- Ratio of household internet access (1st), number of subscriptions to wireless hi-speed internet service (3rd), etc.

### ICT Development Index

<table>
<thead>
<tr>
<th>2013 rank</th>
<th>country</th>
<th>Change in rank from 2012</th>
<th>2013 index</th>
<th>2012 index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Korea</td>
<td>No change</td>
<td>8.57</td>
<td>8.51</td>
</tr>
<tr>
<td>2</td>
<td>Sweden</td>
<td>No change</td>
<td>8.45</td>
<td>8.41</td>
</tr>
<tr>
<td>3</td>
<td>Iceland</td>
<td>(+1)</td>
<td>8.36</td>
<td>8.12</td>
</tr>
<tr>
<td>4</td>
<td>Denmark</td>
<td>(-1)</td>
<td>8.35</td>
<td>8.18</td>
</tr>
<tr>
<td>5</td>
<td>Finland</td>
<td>No change</td>
<td>8.24</td>
<td>7.99</td>
</tr>
<tr>
<td>6</td>
<td>Norway</td>
<td>No change</td>
<td>8.13</td>
<td>7.97</td>
</tr>
<tr>
<td>7</td>
<td>The Netherlands</td>
<td>No change</td>
<td>8.00</td>
<td>7.85</td>
</tr>
<tr>
<td>8</td>
<td>United Kingdom</td>
<td>(+3)</td>
<td>7.98</td>
<td>7.63</td>
</tr>
<tr>
<td>9</td>
<td>Luxembourg</td>
<td>No change</td>
<td>7.93</td>
<td>7.76</td>
</tr>
<tr>
<td>10</td>
<td>Hong Kong</td>
<td>No change</td>
<td>7.92</td>
<td>7.66</td>
</tr>
</tbody>
</table>

※ The ICT Development Index an index used to compare and analyze the level of ICT development between the ITU member countries. It is used to examine the different patterns of ICT development by country, measure the digital divide, and analyze the growth potentials.
Progress of Education Informatization

**Infrastructure**
- Audio/visual education
- Computer-based education
- Internet-based education

**Promotion of ICT**
- Comprehensive Development Plan for Education Informatization (2001)
- Accreditation of cyber university (2001)
- Plan for the Utilization of University Information (2002)
- University e-learning center by region (2003)
- u-Learning research school (2003)

**Advancement of Service**
- Launch of the KOCW service (2007)
- Accreditation of special graduate school for cyber university (2009)
- Strategies for smart education (‘11-‘15) (2011)
- Launch of the e-textbook online service (2012)
- The 5th Education Informatization Master Plan (‘14-‘18) (2014)

**Smart education**
- ICT-based education
- e-Learning
- u-Learning

**Smart education**
Progress of e-Learning in Korea: From 1996 to present

**ICT-based Education**
- Characteristics of Learning: Computer-Assisted Instruction (CAI), Web-Based Instruction (WBI)
- Major Services: EDUnet (text communications), EBS satellite broadcast, Cyber learning textbook
- Major Devices: Desktop PC
- Period: Since 1996

**e-Learning**
- Characteristics of Learning: Learning Management System (LMS)
- Major Services: Cyber home instruction, EBS internet broadcast for university examination
- Major Devices: Internet PC
- Period: Since 2003

**u-Learning**
- Characteristics of Learning: m-Learning
- Major Services: Mobile content, augmented reality content
- Major Devices: Mobile laptop, PDA, PMP
- Period: Since 2005

**Smart Learning**
- Characteristics of Learning: Adapted instruction
- Major Services: Digital textbook, use of SNS
- Major Devices: Smartphone, smart TV
- Period: Since 2010

**Flash Learning**
- Characteristics of Learning: Activity-based instruction
- Major Services: K-MOOC
- Major Devices: BYOD (Bring Your Own Device)
- Period: Since 2013

e-Learning Trends in South Korea (KERIS, 2015)
2014: e-Learning Industry

- Global e-learning market: worth $65.5 B (up 11% in 5 years)
- South Korean e-learning industry: worth KRW 3,214.2 B (approx. US$2.7 bn)
- 1,691 e-learning providers and 26,189 industry workers in South Korea

Global e-Learning growth rates by region

- Driven by Russia
- Driven by India, China, and Australia

The South Korean e-learning industry has shown a steady growth rate of 9% p.a. for the past 5 years.

Source: Docebo e-learning market trends & forecast 2014-2016 report

Source: ROK Ministry of Trade, Industry and Energy
e-Learning in South Korea

- e-learning has reaffirmed its significance as a growth industry and has been increasingly used by individuals, businesses, and education institutions.

- Introduction rate of e-learning ('14): e-learning students (individual) – 57.6%;
  businesses (300 employees or more) – 66.1%;
  educational institutions – 86.7%; public corporations – 82.0%

More than 80% of primary/secondary school students (individuals) and 82.9% of 4-year universities utilize e-learning.

※ South Korean Government’s Plan for e-Learning Industry Development

Strategy
- Qualitative ⇒ Quantitative growth
- Online learning ⇒ Smart learning
- Supply oriented ⇒ Demand oriented
- Domestic demand ⇒ More exports

Policy Challenges
- Improvement of e-Learning Ecosystem
  - Create a fair market environment
  - Improve the e-learning product and company certification system
- Greater Platform for Technology Innovation & Creative Thinking
  - Boost e-learning R&Ds
  - Train e-learning experts
- Utilization of e-Learning
  - Promote e-learning for industries
  - Introduce e-learning to the public sector
  - Assist the marginalized in e-learning use
- Overseas Market for e-Learning Industries
  - Encourage e-learning exports
  - Expand global exchanges
Ⅲ. E-Learning for EFA (Education For All)

Entry Rates into higher Education in South Korea

Despite high entry rates into university and universally available higher education, the gap in educational capacities between universities limits opportunities.

OECD (2010), Education at a Glance.
### Stages of Higher Education Informatization

<table>
<thead>
<tr>
<th>Birth</th>
<th>Infancy</th>
<th>Growth</th>
<th>Development</th>
<th>Advancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>’70 – ’80s</td>
<td>’90s</td>
<td>’00s</td>
<td>’10s</td>
<td>After ’15</td>
</tr>
<tr>
<td>Introduced electronic calculators for computerization at work</td>
<td>Started the national education network for universities</td>
<td>Started the use of the information and communications convergence system environment</td>
<td>Increased demand for a comprehensive integrated information system for universities</td>
<td>Need for innovative professor-assisted learning methods such as for MOOC</td>
</tr>
<tr>
<td>Transferred academic, administrative, and other types of university management online</td>
<td>Helped the growth and management of the network with the introduction of hi-speed networks (such as ATMs), while past online coverage had been limited to handling simple, everyday tasks</td>
<td>Offered assistance service to students</td>
<td>Reinforced privacy and security monitoring</td>
<td>Increasing need for the joint use of the information system infrastructure for efficient assistance</td>
</tr>
<tr>
<td>Started the reorganization of the informatization system (e.g., construction of information center at university)</td>
<td>Offered professor assisted learning online</td>
<td>Offered open demand-oriented learning services (e.g., online and remote learning)</td>
<td>Introduced the early phase of smart campus (e.g., e-portfolio, use of diverse devices)</td>
<td>Need for expanded smart campus services via stable device-free network</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Need for stronger governance to ensure strategic and comprehensive informatization</td>
</tr>
</tbody>
</table>

ICT University Education (Comprehensive Development Plan for the Informatization of National Universities, 2015)
1. KOCW (Korea Open Course Ware)
   An open hub and knowledge source that provides integrated lecture content from Korean universities and abroad

2. RISS (Research Information Service System)
   A channel that provides diverse academic resources to researchers

3. Cyber University
   - 21 cyber universities in South Korea
     - 18 schools offer 4-year bachelor’s degree courses
     - 9 universities have 16 special graduate schools

4. Open University
   - 4 colleges / 22 departments
   - Master’s degree courses provided in 19 departments
   - 32 regional universities in South Korea
1. **KOCW (Korea Open Course Ware)**

   - This service allows users to utilize the lectures and relevant materials disclosed by universities.

   This is a hub of education/knowledge resources unique to the conditions of South Korea, adopted in line with OER (open educational resources).

   ※ **KOCW Content**

<table>
<thead>
<tr>
<th>Category</th>
<th>Institution Type</th>
<th>No. of Institutions</th>
<th>No. of Subjects</th>
<th>No. of Lecture Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>University</td>
<td>157</td>
<td>7,721</td>
<td>122,717</td>
</tr>
<tr>
<td></td>
<td>Relevant Institution</td>
<td>22</td>
<td>1,711</td>
<td>3,331</td>
</tr>
<tr>
<td>Global</td>
<td>Overseas University</td>
<td>8</td>
<td>353</td>
<td>538</td>
</tr>
<tr>
<td></td>
<td>OAI Institution</td>
<td>3</td>
<td>122,485</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>190</td>
<td>9,785</td>
<td>249,071</td>
</tr>
</tbody>
</table>

   ※ **2014: KOCW Performance**

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased No. of Open Lectures</td>
<td>5,820</td>
<td>6,437</td>
</tr>
<tr>
<td>Utilization of KOCW Services (Page Views, M=million)</td>
<td>22M</td>
<td>37M</td>
</tr>
</tbody>
</table>
2. RISS (Research Information Service System)

- This is one of the most renowned channels allowing access to academic research information and resources. Diverse forms of academic content are collected from Korean and overseas universities and research institutes, available for researchers to search by bibliographic metadata and full text. If necessary, the data may also be downloaded.

※ Use of RISS by Year

- No. of Users (Unit: 1,000 Persons)
  - 2007: 1,108
  - 2010: 1,753
  - 2013: 2,571

- No. of Searches (Unit: 1,000 Searches)
  - 2007: 16M
  - 2010: 38M
  - 2013: 55M

Source: e-Learning White Paper (Korea Education & Research Information Service (KERIS), 2014)
3. Cyber University

- There are 32 cyber universities in total (19 cyber universities pursuant to the Higher Education Act and 2 lifelong learning facilities in the form of distance learning universities pursuant to the Lifelong Education Act).
- An increasing number of workers, with degrees from community colleges or higher, choose to transfer to cyber university for their vocational education.

※ Final Degrees for Cyber University Students

※ Annual Statistics for Cyber Universities

- **No. of Schools**
  - 9 Schools in 2001
  - 21 Schools in 2013

- **No. of New Students**
  - 6,100 in 2001
  - 23,550 in 2007
  - 34,340 in 2013
4. Open University

- There are 22 departments at 4 colleges (humanities, social sciences, natural sciences, and education). Master’s degree courses are provided by 19 departments.

- As part of the plan to promote lifelong learning, Prime College for adult learners is provided so as to help individuals become more independent and give back to society.

- Age of Bachelor’s Degree Students Registered at Korea National Open University

<table>
<thead>
<tr>
<th>Age of Current Students</th>
<th>Number (Ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 or Younger</td>
<td>16,143 (10.4%)</td>
</tr>
<tr>
<td>26 – 30</td>
<td>21,483 (13.8%)</td>
</tr>
<tr>
<td>31 – 35</td>
<td>25,592 (16.4%)</td>
</tr>
<tr>
<td>36 – 40</td>
<td>27,150 (17.4%)</td>
</tr>
<tr>
<td>41 – 45</td>
<td>29,702 (19.1%)</td>
</tr>
<tr>
<td>46 – 50</td>
<td>15,961 (10.3%)</td>
</tr>
<tr>
<td>51 – 55</td>
<td>10,785 (6.9%)</td>
</tr>
<tr>
<td>56 – 60</td>
<td>5,656 (3.6%)</td>
</tr>
<tr>
<td>61 – 65</td>
<td>2,070 (1.3%)</td>
</tr>
<tr>
<td>66 or Older</td>
<td>1,078 (0.7%)</td>
</tr>
</tbody>
</table>

- Regional Universities: 32 Learning Centers Nationwide
Examples of Flipped Learning

- **Flipped Learning**: A type of instruction and learning that reverses the traditional process by allowing the students to watch lecture videos provided by the instructor in advance and to engage in debates and problem-solving in class.

1. KAIST Education 3.0

- Education 3.0 is comprised of online lecture videos (made by the professors) and offline activities (e.g., debates, collaborative assignments, experiments).
- As of 2015, Education 3.0 has been applied to 54 lectures.

- To apply Education 3.0, the professor submits a request and the school consults with the professor to design the perfect learning model for that class. The budget is then allocated, and a lecture room is assigned for the purpose of the class.
2. Ulsan National Institute of Science and Technology (UNIST)

- UNIST adopted the concept of flipped learning in early 2009 and expanded it to cover 32 subjects in 2013. By 2014, 35 subjects (20% of all subjects) were covered by flipped learning.

Online Learning
- Students learn via materials (video, PowerPoint, etc.)
- Students share after solving problems

In-class Learning
- Lecture summary, problem solving
- Interaction between students
- Individual advice if necessary

※ What UNIST Students Say about the Strengths & Weaknesses of Flipped Learning

- Strength: Self-directed learning / debates / customized to individual levels / repeated learning available if necessary / better understanding of class / higher focus due to preparation
- Weakness: Too much studying required for both on/offline learning / expert knowledge too difficult to study on their own
Student Survey on Flipped Learning

- Do you prefer flipped learning to lectures?
  - YES 39%
  - NO 15%
  - 46%

- Did you interact more with the professor in class?
  - YES 41%
  - NO 17%
  - 42%

- Did you interact more with classmates?
  - YES 83%
  - NO 7%
  - 39%

- Were you able to pace your learning?
  - YES 71%
  - NO 5%
  - 56%

- Did it help you with your critical thinking?
  - YES 58%
  - NO 10%
  - 32%

(Source: Business Dept., UNIST/Professor Im Jin-hyeok, Learning Assistance Center)
IV. Operation and Benefits of K-MOOC
# World Education Forum 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>19-22 May 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venue</td>
<td>Songdo Convensia, Incheon, Republic of Korea</td>
</tr>
<tr>
<td>Theme</td>
<td>Equitable and inclusive quality education and lifelong learning for all by 2030</td>
</tr>
</tbody>
</table>

## Goals

Comprehensive Evaluation on the achievements of “Dakar Framework for Action” and EFA Action Plan for Establishing and Implementing Post-2015 Education Agenda which will be shared worldwide for the next 15 years.

## Contents

- Main Topics of World Education Forum 2015:
  - Equal Educational Right, Acceptance, Quality Education, Lifelong Learning
  - Accomplishment
    - Adoption of Incheon Declaration: Resolution of Global Effort Towards EFA by 2030
    - Discussion on Post-2015 Implementation Plan

## Importance and Meaning

- Adoption of Post-2015 Agenda: Determining Direction for Education Worldwide by Year 2030
- Reflected in Education Part of Future Development Agenda that will follow MDGs
- Participation of World Leaders including UN Secretary General Ban Ki-moon, over 200 Ministers of Education, Vice-ministers of Education and 1,500 Educational Specialists from 195 UNESCO Member Nations
- The First Forum to Reflect Concept and Philosophy of “Lifelong Learning” in EFA
Park Geun-hye
President of the Republic of Korea

“Education is the basis for individual growth and national development... Korea is called the miracle on the Han River... This power of Korea comes from education.”

Ban Ki-moon
UN Secretary General

“Everything I am today I owe to education... Education secures human rights, including health and employment... education is also essential to fighting security threats.”

Irina Bokova
UNESCO Director-General

“We have the collective duty to empower every child and youth with the right foundations – knowledge, values and skills – to shape the future as responsible global citizens... we must commit to giving adults the opportunity to keep learning throughout life to adapt to rapid change and foster social inclusion.”

Jim Yong Kim
President of the World Bank Group

“With nearly a billion people remaining trapped in extreme poverty today, sustained efforts to improve learning for children will unlock huge amounts of human potential for years to come. Better results in classrooms will help end extreme poverty.”

Kailash Satyarthi
2014 Nobel Peace Prize Laureate

“When we meet again in 15 years time, it is vital that we celebrate victory over illiteracy.”
"Lifelong Learning for All through Massive Open Online Courses"

Youngwha KEE (President, National Institute for Lifelong Education)

"Changing the higher education system and its structure using MOOC will be the best chance to offer a better ecosystem to the stakeholders including students, professors, colleges, and governments."

"With the growth of MOOC, the focus of education is not on the financial success, social status, nor competition.

Of paramount importance is the fact that technologies have given us the means to provide high quality education to all learners."

Kyle PECK (Professor/Co-Director, Center for Online Innovation in Learning at Penn State University)

"Universities that are not opening online courses should feel threatened for their survival... Best lecturers are enthusiastic about joining MOOCs, and it is up to us to make the best use of them or not."

Yoshimi FUKUHARA (Secretary General, Japan Open Online Courses Council)

“For successful operation of MOOCs, a sustainable operation model needs to be established. Like Europe, Asia-Pacific needs to have a regional cooperative organization.”

Kelvin Wenbo LIU (President, MOOC-CN Information Technology Co. Ltd, Xuetang X)

“In China, where rapid growth has led to unequal distribution of quality education, and disparities between universities are huge, MOOC Platform is playing a very important role.”

Ichiro MIYAZAWA (Program Specialist, UNESCO Bangkok)

“We can effectively and efficiently deliver MOOC contents to underprivileged people in developing countries.”
NILE International Forum: Outcomes and Implications

• Participation of 200 experts and policymakers in the fields of MOOCs and lifelong learning, including Hilda C. Heine, Minister of Education of Marshall Islands and Jorge Sequeira, Director of UNESCO Office in San Tiago

• Sharing pioneering experiences and various national case studies regarding MOOCs among global experts and working groups in the fields

• Exploring the vision and direction of K-MOOC by inviting government leaders and representatives of academic institutions throughout the world

• Establishing measures to construct the K-MOOC distinguishable from the already-existing MOOCs, which can guarantee the provision of the services for realization of lifelong learning for all
“Global HR Forum 2014
How to Advance K-MOOC”

Discussion of future direction and strategy to develop Korea’s own K-MOOC, which includes lifelong and higher education, by observing changes in the global trend.
K-MOOC: Goals & Strategies

**Vision**
- Innovation in College Education through Open Higher Education System

**Policy Goals**
- Innovation in College Education through Access to Best Quality Lectures
- Offering Higher Education Opportunities
- Forming a Foundation for Lifelong Learning in Higher Education

**Strategies**
- Annual Expansion of Participating Institutions/Organizations after Developing it as a Competent Leading Brand
- Respecting University’s Autonomy and Diversity
- Considering the Offering of Additional Services by Stage After Forming a Firm Foundation through Governmental Support
- Domestic Service into Gradual Globalization
K-MOOC Benefits

- Development and Supply of Quality Teaching Method
- Construction of Open/Shared Higher Education Ecosystem
- Obtaining MOOC’s Global Competitiveness through its International Supply
- Generalized Access to Higher Education (Functional Literacy, forming a Foundation for Lifelong Learning)
K-MOOC: Long-term Cooperation

- Academic Credit Bank System
- BDES
- Lifelong Learning Account System

- Certified/Private Qualification System
- Volunteer Certification System
- Tomorrow Learning Card System

- Link and integrate systems

- Share content

- Institutional Participation

- System Operation

- One-stop Service
- Mobile Service
- Advanced Search
- Elective Classes

- Learning History
- Learning Diagnostics
- Learning Design
- Certificate Issue

Universities (Nationwide)
Distance learning, cyber universities
Private learning institutions
2015 K-MOOC System & Stakeholders

Citizen

Provider

Universities Selected by Public Participation Invitation

KOCW Selected University

A University, B University, ......

Promoting Institutions

KOCW Conversion Development, Linking RISS

Institute in Charge

Keris

Construction and Operation of Shared Platform, Content Quality Management

K-MOOC Planning Committee

The Ministry of Education, Related Institutes, Experts Related to Participating Universities

KERIS

Networking between Universities

EBS

Support Development of Content, Shared Educational Materials

NILE

The Ministry of Education : Project Plan and Overall Control

National Institute for Lifelong Education : Conducting and Enforcement upon Request

Consumer

KOCW

Conversion Development, Linking RISS

Institute in Charge

Keris

Construction and Operation of Shared Platform, Content Quality Management

K-MOOC Planning Committee

The Ministry of Education, Related Institutes, Experts Related to Participating Universities

KERIS

Networking between Universities

EBS

Support Development of Content, Shared Educational Materials

NILE

The Ministry of Education : Project Plan and Overall Control

National Institute for Lifelong Education : Conducting and Enforcement upon Request
2015 K-MOOC Courses

- Discourses of Confucius (Sungkyunkwan Univ.)
- Introduction to Economics (Seoul National Univ.)
- Principia of Life (Pusan National Univ.)
- Quantum Mechanics for IT/NT/BT (Korea Univ.)
- The World We Inhabit (Homo Ethicus) (Kyunghlee Univ.)
- Architectural Space (Hanyang Univ.)
- Kinetics (KAIST)
- Introduction to Mechanical Engineering (POSTEC)
- Understanding Film Storytelling (Ewha Womans Univ.)
- Understanding the Space (Yonsei Univ.)
## 2015 Representatives K-MOOC Information

<table>
<thead>
<tr>
<th>Introduction to Economics</th>
<th>Understanding Film Storytelling</th>
<th>Space in Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seoul National University</strong>&lt;br&gt;Prof. LEE, Joon-koo</td>
<td><strong>Ewha Womans University</strong>&lt;br&gt;Prof. RYU, Chul-kyun</td>
<td><strong>Hanyang University</strong>&lt;br&gt;Prof. SEO, Hyun</td>
</tr>
<tr>
<td>· Microeconomics Expert&lt;br&gt;· President of the Korean society for the Economics and Finance of Education</td>
<td>· Recognition as a Writer, ‘Yi In-wha,’&lt;br&gt;· Description of Digital Contents&lt;br&gt;· 24th LeeSang Literary award&lt;br&gt;· ‘92 Literary award of writer’s world&lt;br&gt;· President of the Digital Storytelling Society</td>
<td>· Well-known to the public due to high media exposure through newspaper columns and others&lt;br&gt;· Master Planner of Nodeul Island&lt;br&gt;· Planned many others including Haeshimheon in Jeju Island</td>
</tr>
<tr>
<td>· Easy-to-understand economics lecture for non-economics major students and the general public</td>
<td>· Liberal Arts General Education&lt;br&gt;· Expectations in Storytelling&lt;br&gt;· Attractiveness of Film Genres</td>
<td>· Architecture and Liberal Arts&lt;br&gt;· Architecture for general interest</td>
</tr>
</tbody>
</table>
Case: Seoul National University

SNUx

Free online courses from Seoul National University

Seoul National University, Korea's first national university and the indisputable leader of higher education in Korea, wants to share creative knowledge and experiences. SNU has produced fruitful achievements in various fields, ranging from business, politics, natural science, technology, and the arts. The mission of SNU is to create a vibrant intellectual community where students and scholars join together in building the future.

Seoul National University MOOCs
Browse free online courses in a variety of subjects. Seoul National University courses found below can be audited free or students can choose to receive a verified certificate for a small fee. Select a course to learn more.

- **SNUx SNU034.005.1x**
  - Introductory Physics — Part 1: Mechanics and Waves
  - Archived
  - January 12, 2015

- **SNUx SNU2168.226.1x**
  - International Politics in the Korean Peninsula, Part 1
  - Archived
  - November 12, 2014

- **SNUx SNU446.345.2x**
  - Robot Mechanics and Control, Part II
  - Archived
  - June 9, 2014

Source: www.edx.org
Case: Seoul National University

Source: www.edx.org
Case: KAIST

Korea Advanced Institute of Science and Technology

The Korea Advanced Institute of Science and Technology (KAIST) was established in 1971 by the Korean government as the nation’s first research-intensive graduate school for science, engineering, and technology. It has now grown into one of the world’s best universities, delivering top-notch education and research programs for undergraduate and graduate students. KAIST encourages interdisciplinary and convergent research across a wide spectrum of disciplines, as well as strong collaborations with industry and global institutions.

Source: www.coursera.org
Case: KAIST

Supply Chain Management: A Learning Perspective

Learn about how to create maximum value through effective supply chain management, in particular, from a dynamic perspective.

About the Course

As a human being, we all consume products and services all the time. This morning, you got up and ate your breakfast, e.g., eggs, milk, bread, fresh fruit, and the like. After the breakfast, you drove your car to work or school. All your office, you used your computer, perhaps equipped with a 27" LCD monitor. During your break, you drank a cup of coffee and played with your iPhone. So on and so forth. You probably take it for granted that you can enjoy all these products. But if you take a closer look at how each of these products can be made and eventually delivered to you, you will realize that each one of these is no short of miracle. For example, which do you think consists of fresh strawberries? In order for the strawberries to be on your breakfast table, there must be numerous farmers, activities, transactions, and people involved in planting, cultivating, delivering, and consuming strawberries. Moreover, all of these functions, activities, transactions, and people are connected as an integral chain, through which physical products like strawberries themselves and shipment elements such as information and communication flow in both forward and backward directions. By grouping related functions or activities, we have a supply chain, composed of two primary functions such as supplier, manufacturer, distributor, and finally, consumer. A supply chain is essentially, a value chain.

About the Course

This course deals with various topics in light, color, and life, and teaches students certain expertise in the physical properties of light, the accommodation of light in biological phenomena and medical applications, and the dynamic ways that light is experienced through color in everyday life. Through the convergence of diverse knowledge, creative research topics will be explored and interdisciplinary inquiries that show most potential and profundity will be further studied.

Course Syllabus

Week 1: 1-5 by Prof. Youngsuk Park
Week 2: 1-5: Application of light
Weeks 3-4 by Prof. Chulhoo Choi
Week 4: 1-5: Light in life sciences
Week 5: Color perception
Week 6: 1-5: Color practice

Sessions

Future Sessions

Course at a Glance

- 3-4 hours/week
- English

Instructors

Yongseok Park
Korea Advanced Institute of Science and Technology

Chulhoo Choi
Korea Advanced Institute of Science and Technology

Source: www.coursera.org
Yonsei University was established in 1885 and is the oldest private university in Korea. Based on this distinguished history, Yonsei seeks to further contribute to not only to Korea but to the broader International society.

Yonsei's main campus is situated minutes away from the economic, political, and cultural centers of Seoul's metropolitan downtown. Yonsei has 9,500 eminent faculty members who are conducting cutting-edge research across all academic disciplines. There are 18 graduate schools, 22 colleges and 133 subsidiary institutions hosting a selective pool of students from around the world.
Case: Yonsei University

FREE COURSES

LIPS AND TEETH: KOREA AND CHINA IN MODERN TIMES
YONSEI UNIVERSITY
Explore the historical evolution of China and the Korean Peninsula and discover the implications

MODERN KOREAN AMBITIONS
YONSEI UNIVERSITY
Explore the unique 1945 to the present

Modern Korean History: Liberation, War and Nuclear Ambitions
Explore the unique and untold history of North and South Korea - from 1945 to the present - with this free online course.

WATCH THE TRAILER

Download video: standard or HD

Source: www.futurelearn.com
K-MOOC Platform

Open edX-based K-MOOC Platform

Korean Massive Open Online Course (K-MOOC) Platform

- Learning Management Service (LMS)
  - Join
  - Take the Class

- Content Management Service (CMS)
  - Lifelong Learning Account
  - Certificate Issued
  - Open Course
  - Auto Marking
  - Exam
  - Send email

System Introduction (H/W, S/W)

- H/W
  - CMS Platform

- S/W
  - DBMS (User)
  - DBMS (Contents)
  - Plagiarism check

K-MOOC Expandability

- Open edX in Korean
- Develop open API for mobile application
- Plagiarism check
- Link with Lifelong Learning Account System for auto upload
K-MOOC Platform

Expandable Features for K-MOOC (Example)

Poll

What is your favorite subject?

- Science! 45%
- Math 31%
- Art 25%

Results gathered from 65 respondents.

3D Player

Office Mix

Google Drive/Calendar
K-MOOC Project Outline

1. Development of Global Leading Content
   - New Development of Domestic Leading Content
   - Development of Conversion Tools for Quality KOCW Lectures
   - Linking High Quality MOOC Contents Abroad

2. Shared Platform Development/Operation
   - Reinforcement of User Convenience, Stability, Security
   - Improvement in International Compatibility
   - Supporting Various Customized Teaching/Learning Methods

3. Management of Content and Quality of Service
   - Development of Content and Guidelines for Quality Management
   - Incentives for Quality Lectures
   - Formation and Operation of Content Quality Management Committee

4. Promoting the Activation of MOOC
   - Improvement in Operating Personnel Expertise and Learner Convenience
   - Sharing and Spreading of Outstanding Operation Models
   - Supporting the Activation of Related Research and Expert Training
# K-MOOC Blueprint

## Introduction and Settlement

- **Year 2015**
  - Platform Construction and Test Operation (Development of Korean Style Operation Model)

- **Year 2016**
  - Brand Construction · Spreading Awareness
  - Development of Service Standard

- **Year 2017**
  - Settlement of Korean Style Model

- **Year 2018 ~**
  - Spread of Korean Style Model

## Globalization and Creation of Added Value

- **Year 2018~2020**
  - Activation of Service

## Construction of an Open Higher Education System

- **From Year 2021 on**
  - Globalization (Open, Voluntary Participation)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Year 2015</th>
<th>Year 2016</th>
<th>Year 2017</th>
<th>Year 2018 ~</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>Platform Construction and Test Operation</td>
<td>Development of Service Standard</td>
<td>Settlement of Korean Style Model</td>
<td>Spread of Korean Style Model</td>
</tr>
<tr>
<td>Promotion Direction</td>
<td>Brand Construction</td>
<td>Development of Service Standard</td>
<td>Activation of Service</td>
<td>Globalization (Open, Voluntary Participation)</td>
</tr>
<tr>
<td>Number of Courses</td>
<td>37</td>
<td>100</td>
<td>200</td>
<td>500</td>
</tr>
<tr>
<td>Content Development</td>
<td>Content Diversification</td>
<td>Content Standardization</td>
<td>Content Internationalization</td>
<td></td>
</tr>
<tr>
<td>Creation of Additional Services</td>
<td>Policy Research</td>
<td>Test Operation for Additional Services</td>
<td>Application of Additional Service Model</td>
<td></td>
</tr>
</tbody>
</table>

- Policy Research
- Additional Service Model Development
- Promotion of Collaboration between Related Ministries
- Test Operation for Additional Services (public institution, Education ODA, etc.)
Challenges of K-MOOC

Innovation of College Education
- Blended Learning
- Flipped Learning
- Teaching Improvement via Learning Activities (Big Data)
  - Analysis

Various Activities Taken Inside and Outside of Class
  - Overcoming Student Level Differences
  - Overhand, Improvement in Readiness
  - Offering Learning Opportunities for Subjects Not Open
  - College Courses (AP) offered to High School Students for Prior Advanced Learning

Lifelong Learning Support
  - Individual Learner’s Self-Development
  - Professional Development Career Training
    - Education for Referred Students via Links between Schools and Industries
    - Career Training, Customized Training Suited for Business

Global Education
  - Education for Korean Nationals/Residents Abroad
  - International Students Completing Courses Beforehand
  - Meeting Korea’s Higher Education Demands, Education DA
  - Exchange of High Quality Contents Abroad

K-MOOC
K-MOOC Stakeholders

- Individual Learners
- Corporate
- High School Student
- Global

Learning for Koreans living and/or studying overseas, response to the demand for higher education in South Korea, education ODA
Success secrets of K-MOOC

- Established Accreditation System: Credit Bank System
- Managed Individual Learning Experience: Learning Account
- Integrated National Support for Quality Assurance: MOE and NILE
- Mobile ICT Environment: Best ICT and E-Learning Practices

Sharing Educational Opportunities for All
Thank You