

How can e-Learning best be used to training basic statistics for official statisticians?



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Outline

- Motivation & Background
- KOSTAT e-Learning
- ICT adaptation in Teaching Statistics
- U-Learning at KOSTAT
- OER for Statistical Education
- Remarks



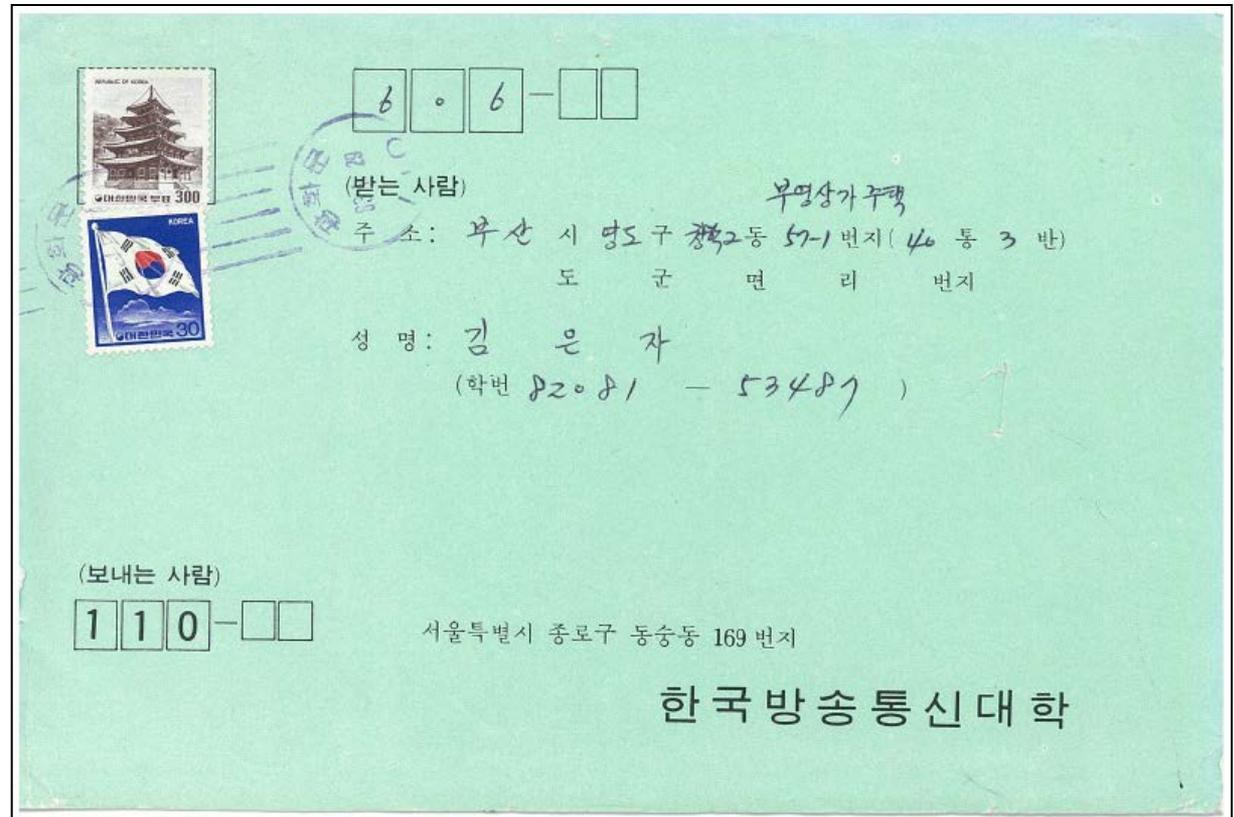
Motivation

- Variety of official statisticians' educational demand for Basic Statistics
- Change of Paradigm in Distance Education
- Increase of Access to W.W.W.
- Enlargement of Educational Space
- Explore Various Levels in a Teaching–Learning System
- Standardization of e-contents for Statistics Education

KOSTAT e-Learning



Correspondence by Post mail at KNOU



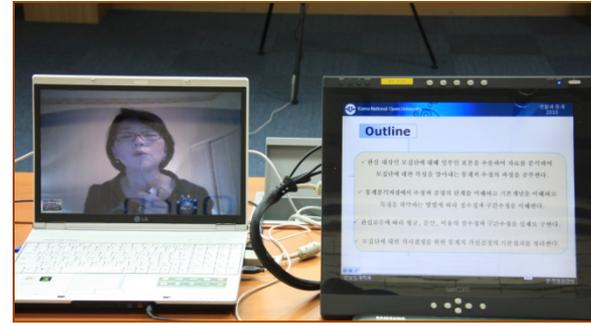
From Firenze – to Seoul - 8city at Korea

KNOU
Tele-conferencing
class
configuration



Firenze,
Italy

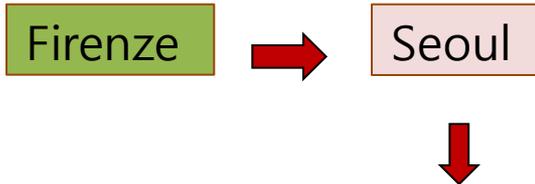
Seoul



10 cities at Korea

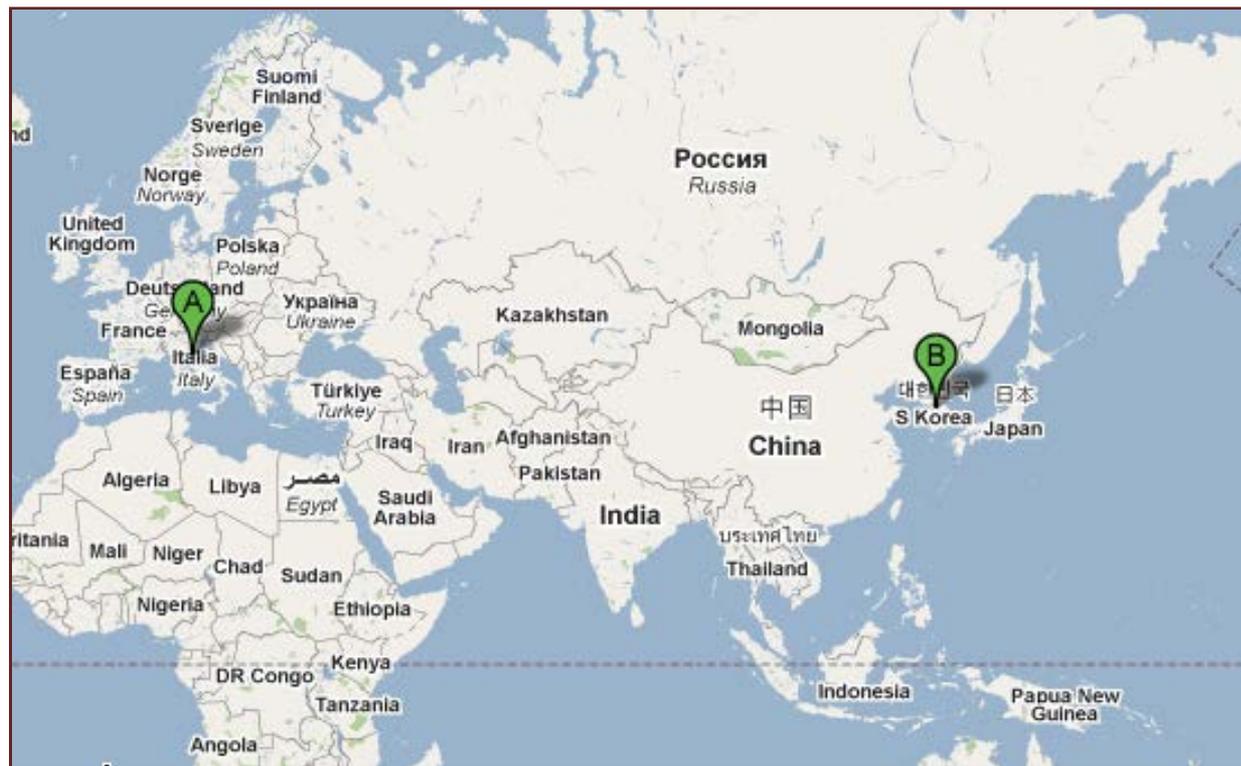
From Firenze – to Seoul - 10city at Korea

KNOU
Tele-conferencing
class
configuration



KNOU
Tele-conferencing
class
configuration

From Firenze – to Seoul- 10 city at Korea



KNOU
Tele conferencing
class configuration



KNOU

Tele conferencing class configuration



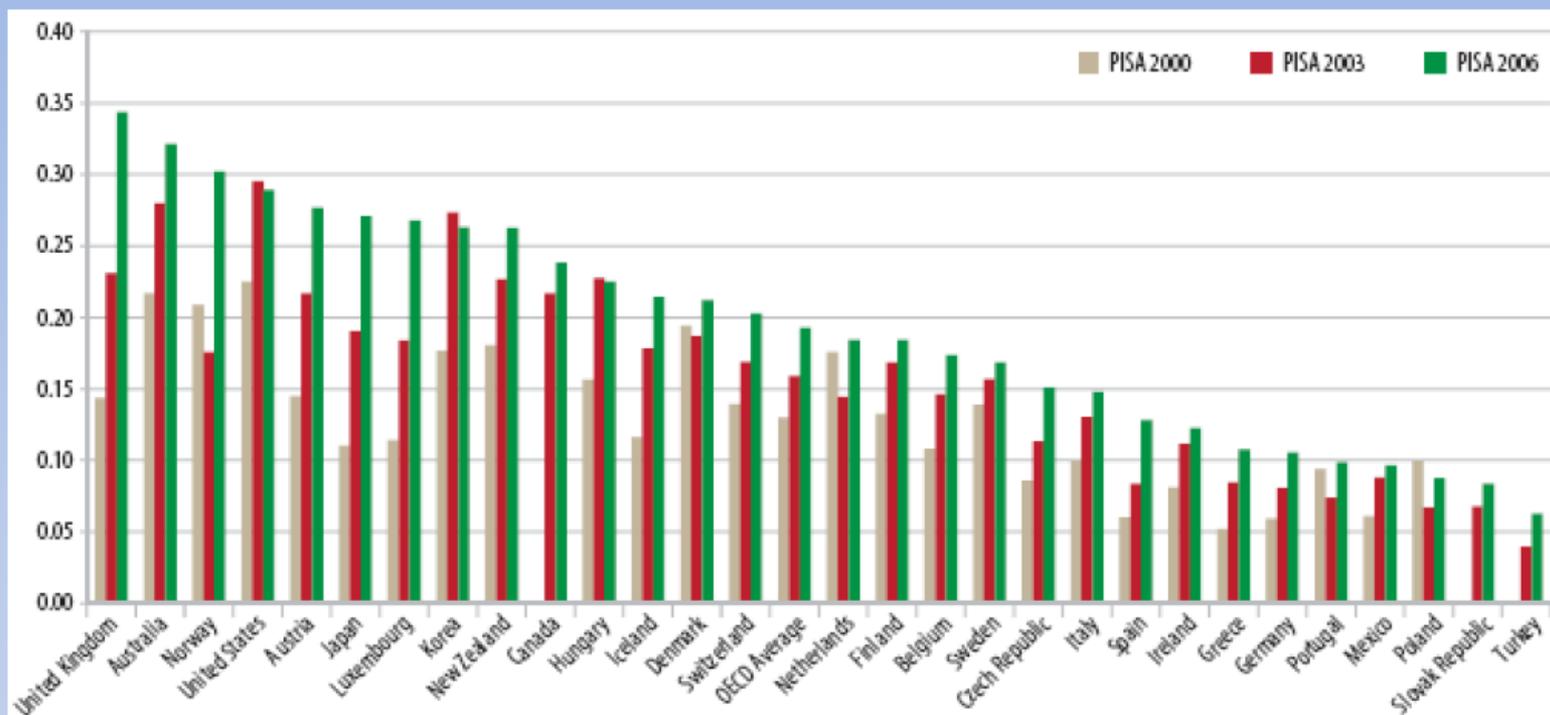
인천

SAMSUNG



Increasing Availability of Computer at **School**

Number of computer per student as reported by schools,
in PISA 2000, 2003 and 2006



Source: OECD (2000,2003 and 2006), Programme for International Student Assessment (database).

U-Learning strategy

- Provide training environment for anyone, anywhere at anytime + **using any device (U-Learning)**
- Offer increased training opportunities
- With the goal of being equally efficient as group training

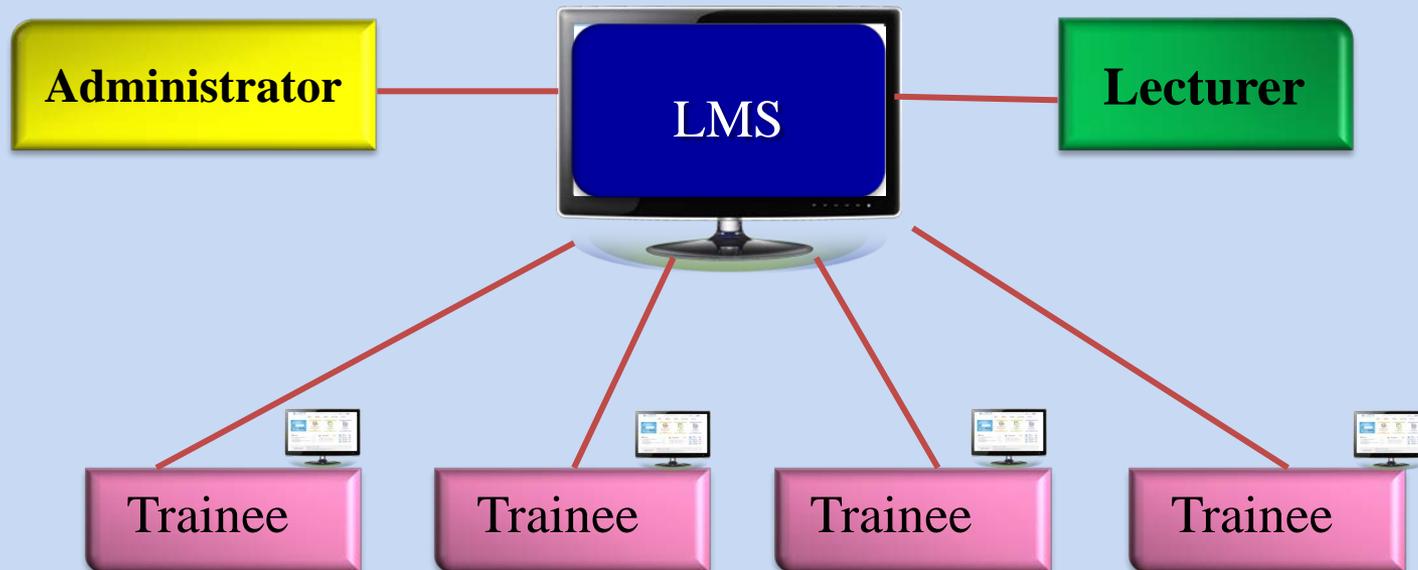
Requirements

- **H/W** : Server, O/S
- **Network** : Internet, WiFi, LTE, 3G
- **S/W**
 - Learning Management System, also known as “**LMS**”
 - Content Making Tool(Camera, relational S/W)
- **Contents** : Developed, purchased, leased
- **Human** : The most critical requirement

LMS

LMS(Learning Management System)

: An electronic system for transmitting of contents, evaluation and management



Target Training audience

■ KOSTAT

- Head Office
- Regional Statistics Office
- Civil servants in charge of surveys,
- Non-civil servants

Professional
Statistical Training
(Group, Cyber)

Survey Guidelines
(Group, Cyber)

■ Statistics Producing Agencies

- Central government employees
- Local government employees
- Staff of private organizations

General Statistical
Training
(Group, Cyber)

■ General Public

- College and grad students and
- General public

Statistical Awareness Building
Professional Statistical Training
(Primarily Group)

Training Contents

- **Web-based Training**
 - Content making: Animation(FLASH)
 - Videos + PPT
 - Screen Capture (program description)
- **Regular Curriculum:**
 - e-Learning(33 courses), U-Learning(11 courses)
- **Open Study: 34 animation, 40 videos+ PPT**
- **Supplementary Training Materials :**
 - Course Materials (Text data, EXCEL, PPT)
 - e-books (including pdf)

A/V equipped Classrooms



Video Recording of classroom lectures



Flash and Video

Animation using Flash

1차시. 축산물생산비조사의 이해

축산물생산비조사

학습내용

- 축산물생산비조사의 필요성
- 축산물생산비조사의 정의
- 축산물생산비조사의 조사요령 및 조사항목

학습목표

- 목적의 역사와 왜 축산물생산비조사가 필요한지 설명할 수 있다.
- 축산물생산비조사의 조사대상 및 정의는 무엇이며 비목분류는 어떠한지 설명할 수 있다.
- 축산물생산비조사의 조사요령 및 공표, 조사항목은 어떠한지 설명할 수 있다.

04:47 / 04:50

Authoring Tools

애니메이션을 위한 우리 지역 우리 환경

00:00:00 / 00:00:30

Video Clips + PPT

유의수준과 유의확률

05 사례

- 어떤 자동차 회사에서 연비가 16km라고 주장하고, 소비자 단체에서는 16km가 되지 않는다고 주장
 - 귀무가설: 연비평균 = 16km
 - 대립가설: 연비평균 < 16km
- 소비자 단체에서 자동차 30대를 임의로 추출하여 평균 주행거리를 계산하였을 15.8km 가 나왔음

문제는 '이 값은 회사측에서 볼 때 보통 수준의 값이라고 할 수 있는가? 이상하게 낮은 결과인가?'

- 회사의 입장에서, 즉 귀무가설이 사실일 때, 즉 연비평균은 16이고 모집단의 표준편차가 1.5라고 한 30대의 평균연비가 15.8보다 작게 될 확률을 구하면 0.2296 이것이 바로 유의확률(P-value)

이 값은 무엇을 의미할까요?

- * Autonomous and active self-driven academic programs
- * Transfer of latest information and technologies
- * Lifetime learning regardless of time and location

Open Classes



- Regular curriculum courses available to take regardless of scheduled course offerings (excludes some contents)

Lectures



- Online service of video clips from offline training courses and special lectures

Video Clips for Public Access



- Support for general public to become familiar with using statistics in everyday lives

e-book



- Training materials and publications available in e-book

e-Learning Courses

❖ # of E-Learning courses offered: 33 total (392 sessions)

Regular Curriculum (33 courses)
- Course Credit issued

Professional Statistics
- 10 courses
(186 sessions)
※ i.e. Regression
Analysis

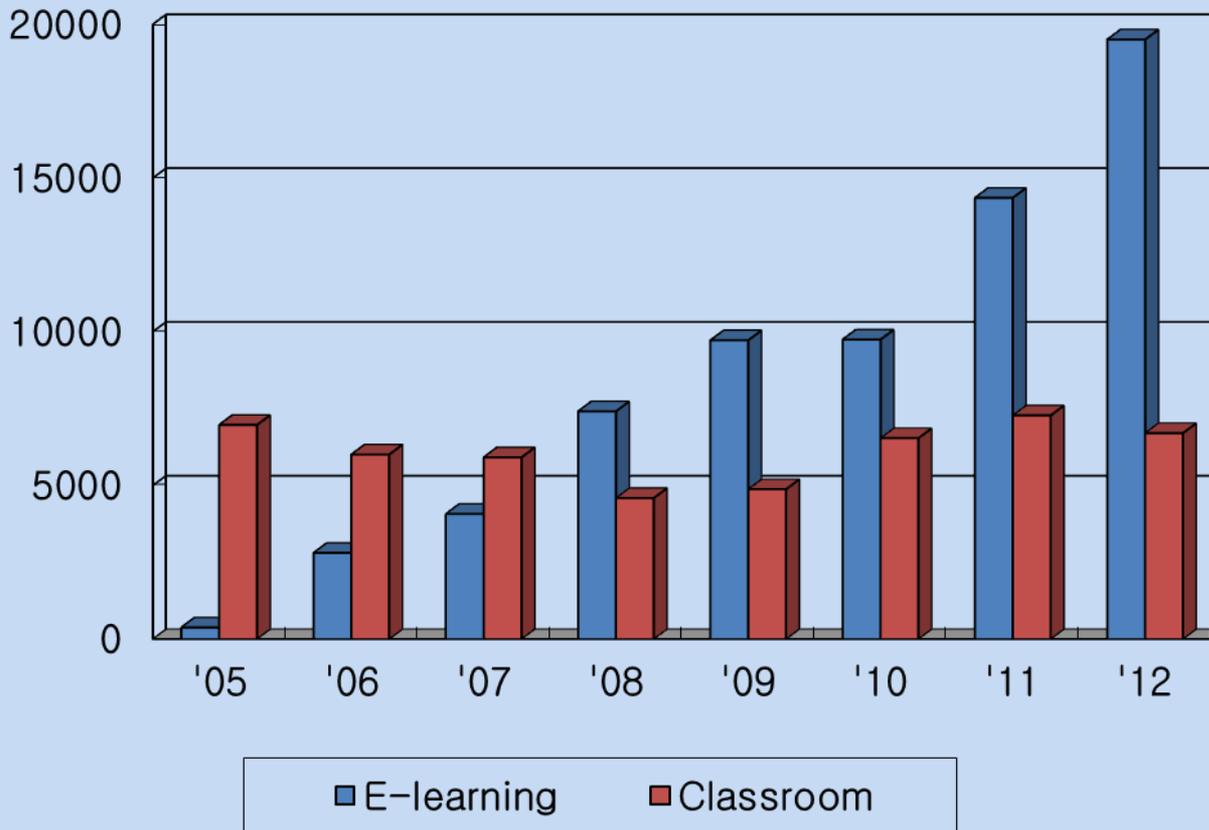
General Statistics
- 2 courses
(26 sessions)
※ i.e. Statistical Way
to Thinking

Surveys
- 19 courses
(161 sessions)
※ i.e. Economically
Active Population
Survey

Basic Knowledge
- 2 courses
(19 sessions)
※ i.e. Statistics Act

e-Learning Expansion

Unit: Persons



e-Learning in the Future



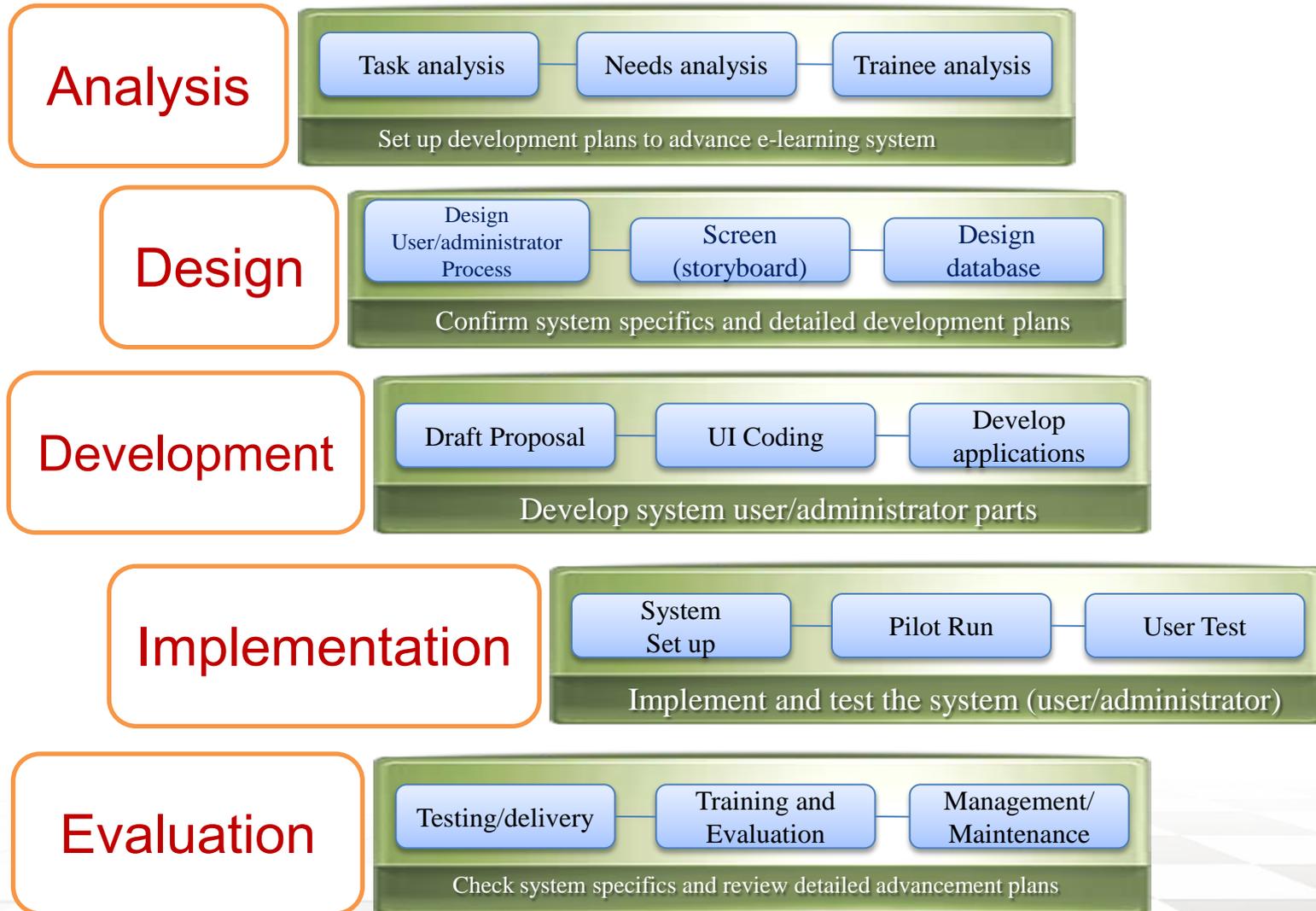
Mobile
Technology
Advancement



Ubiquitous
Technology
Advancement



U-Learning System Development Process



U-Learning System Development

Offer just-in-time learning opportunities by developing learning environment in mobile setting /
Achieve high quality training service with high quality statistical production and capacity strengthening



Develop more sophisticated training service by
strengthening U-learning inter-linkages

**Integration of STI
IT infrastructure**

- Integrate existing IMSE with e-learning system infrastructure
- Integrate administrator functions
- Integrate databases and link to high volume network storage
- Develop linkage to streaming of mobile and e-learning service

**Strengthen
integrated training
administration**

- Enhance the integrated system through efficient linkages among STI / e-learning center / English website / mobile / U-learning
- Develop advanced features for analysis of integrated statistical analysis reporting, control design by module and learning promotion system

**Enhance smart device
compatibility and
communication**

- Enhance use of various devices (iPhone, iPad, Android, etc) by building compatibility, forward-looking platform, and expandability
- Strengthen communication over SNS to encourage learning and maintain communication with clients

Design



Technologie

Mobile Contents Conversion Strategy



iOS



MP4 conversion, support HTML5



Expand smartphone compatibility
among public agencies

Growing need for Smart Mobile Learning

Just-in-time e-Learning

What are the First Things ?

N-screen features

- Smart Device

Home → Office → Out → Business



What are the First Things ?

N-screen feature

- PC Browsers



explorer



chrome



firefox



safari



What are the First Things ?

Mobile PUSH feature

- SMS Costs Down
- Real Time Message



android



I phone

What are the First Things ?

Hybrid Mobile APP

- Low Cost Maintenance
- Rapid Rebuild Service

Native Apps

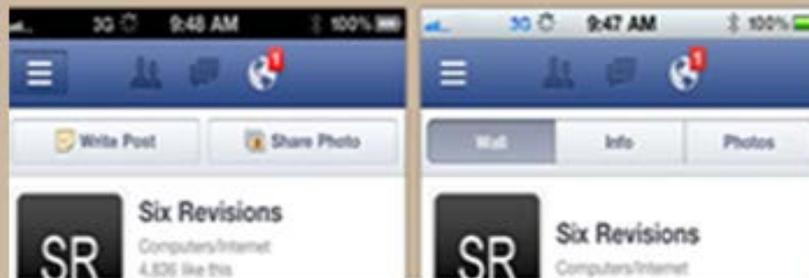
- Single platform affinity
- Written with Platform SDKs
- Must be written for each platform
- Access to all native APIs
- AppStore distribution

Hybrid Appst

- Cross-platform affinity
- Written with web-technologies (HTML5,CSS3 and JavaScript)
- Runs locally on the device, supports offline
- AppStore distribution

Native App (IOS)

Mobile Web App (Viewed in Safari)



Mobile WebApps

- Cross, platform affinity
- Written with web technologies (HTML5, CSS3, Javascript, or Server-side(PHP,ASP,NET,etc))
- Runs on web server, viewable on multiple devices
- Centralized updates



Conclusion

- **One Source Multi-Platform & Browsers**
- **N-Screen**
- **Mobile Push – checking Progress for Users**
- **Hybrid App Service**



Accomplish the STI Goal of the U-Learning Service

And our very first goal is the integrated U-Learning systems

U-Learning Training System

- ❖ **Training Courses offered : 22 courses in total (267 sessions);**
- ❖ 2013.01.07. under full operation

Regular Curriculum (11 courses)
 - Course credit issued

<p>Planning Survey - 2 courses(61sessions) ※ i.e. Intro to survey methods</p>	<p>Statistical Learning -1 course (29 sessions) ※ Intro to statistical studies</p>	<p>Statistical Packages -1 course(30sessions) ※ i.e. Statistical analysis using SPSS</p>	<p>Related Knowledge -7courses (107 sessions) ※ i.e. Psychology of persuasion</p>
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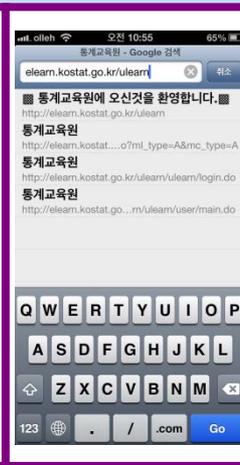
Accessing U-Learning

1. Select safari from the home screen -> 2. Enter `elearn.kostat.go.kr/ulearn` or search STI from portal -> 3. Select 'move' button at the bottom center -> 4. Select 'add to home screen' -> 5. Enter icon name and select 'add' -> 6. Directly Access U-learning by selecting the icon from the home screen (* iPhone OS manual)

①



②



③



④



⑤



⑥



①②③④⑤⑥

Taking U-Learning course

1. Access login section of Statistics U-learning Center -> 2. Enter ID/PW (※ new registration only possible on PCs for security reasons ※ existing users can use the same ID/PW) -> 3. Select 'Training Courses' and then select a desired training course -> 4. Begin learning by selecting 'Take course' -> 5. Select course in progress from 'My Learning' -> 6. Select the session to run; status will change to 'Y' once completed



2013 Agenda

■ Contents

- Total 180 sessions (each session 10 or less)
- 7 new courses (including 5 mobile courses)
 - i.e. Understanding official statistics, household finance, welfare survey
- 13 modified courses
 - i.e. Analysis and practice of time series data, Statistics Act
- Load video clips developed exclusively for e-Learning
- How to develop new contents?

■ Server

- UNIX server implementation, planned for early September

e-Learning History at KNOU



1998	<ul style="list-style-type: none"> - Starting e-Learning operating program - Starting Korea Virtual Campus(KVC)
2001	<ul style="list-style-type: none"> - Establishment of e-Learning center - Start of Graduate School - Program(4 Departments)
2002	<ul style="list-style-type: none"> - Building of e-Learning hub site 'E-Campus' - Chairman Univ. of KVC
2008	<ul style="list-style-type: none"> - Building of m-Learning hub site 'U-Campus' 17 departments of online graduate school
2011	<ul style="list-style-type: none"> - OER for ODL Prime college for 40-50 age group

KNOU e-Campus

KNOU e-Campus Home | Sitemap | Contact us | English

Knowledge Networking & Learning Opportunity for Upgrading

Best e-Learning: e-캠퍼스에서 추천하는 최고의 강의를 미리 체험해 보실 수 있습니다.

이러닝 강좌
 학부과정: e-Class, 한국가상캠퍼스, 정보통신사이버대학
 대학원과정: 평생교육과정

인터넷방송강의

이러닝 강좌 가이드
 학생 (학습) | 교수 (운영)

Notice
 • 시스템 정기점검 안내 | 2004.6.16
 • 시스템 정기점검 안내 | 2004.5.21
 • 제2차 이러닝 워.. | 2004.5.7
 • 시스템 정기점검 안내 | 2004.4.30

News
 • EBS특별기획에 본교 .. | 2004.7.13
 • 17개 사이버대 '맞출..' | 2004.7.5
 • 해외 유명 대학들, 이.. | 2004.7.5
 • 석사 학위도 사이버대학.. | 2004.7.5

e-Campus Life
 학생 LEARNER | 교수 FACULTY
 튜터 TUTOR | 스태프 STAFF

Help Desk
 학생 Learner | 교수 Faculty

웹기반 영어학습콘텐츠

제 2차 e-Learning Workshop 이러닝 강좌, 운영이 열쇠다!

평생대학원 2004년 콘텐츠 개발

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 (우) 110-791 서울시 중로구 동승동 169번지 한국방송통신대학교



e-Campus Operation

e-Campus



• Graduate School Program



• Undergraduate School Program



• Continuous Education Program



• Prime College Education Program



• International e-content



• OER

KNOU e-Learning International Campus

e-LIC



Korean History



• Click Korean!



• Korean Culture



• History of Economy



• Korean Economic Development



• Statistics



• Water Quality

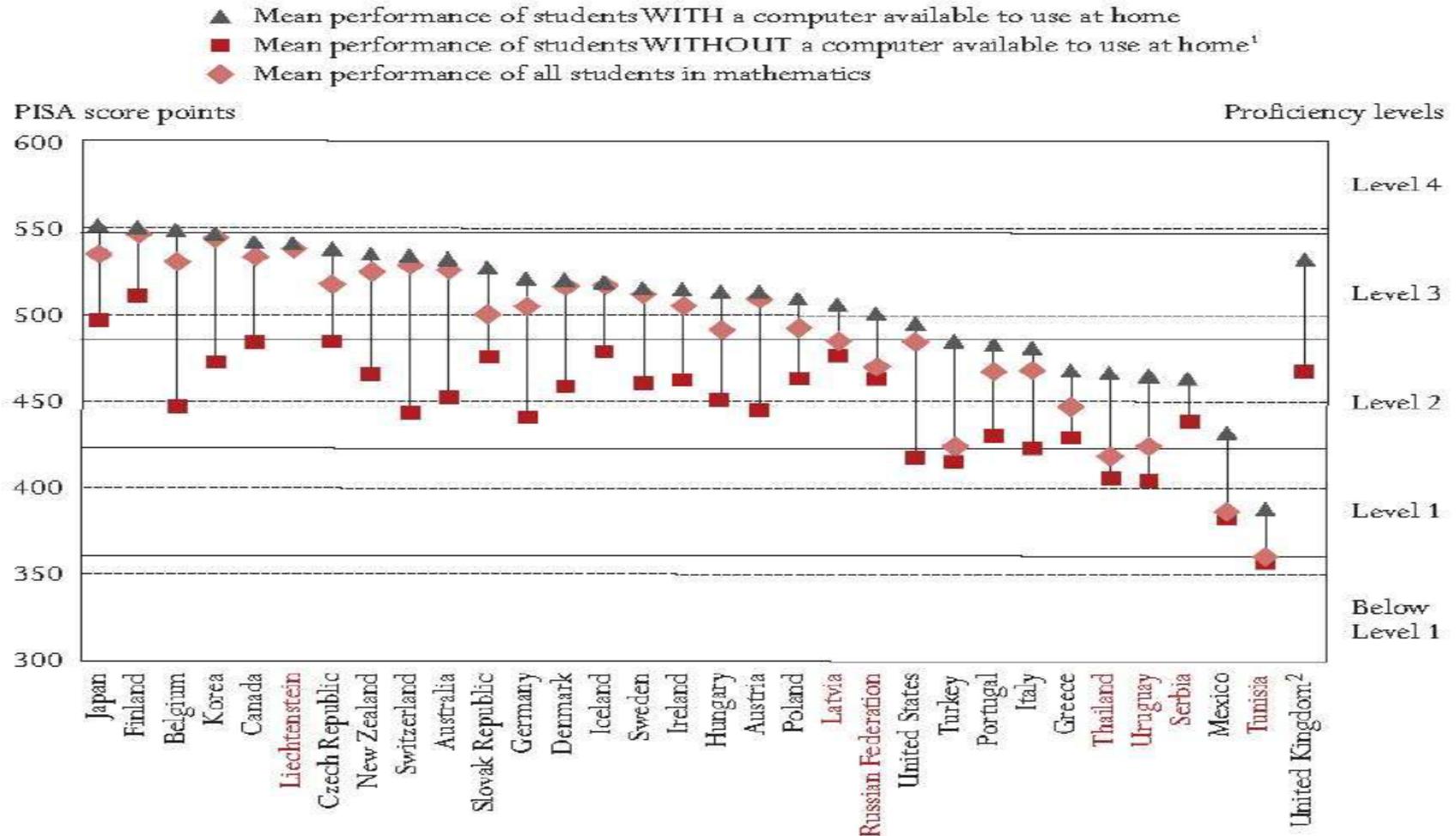


• Introductory Computer

ICT adaptation in Teaching Statistics



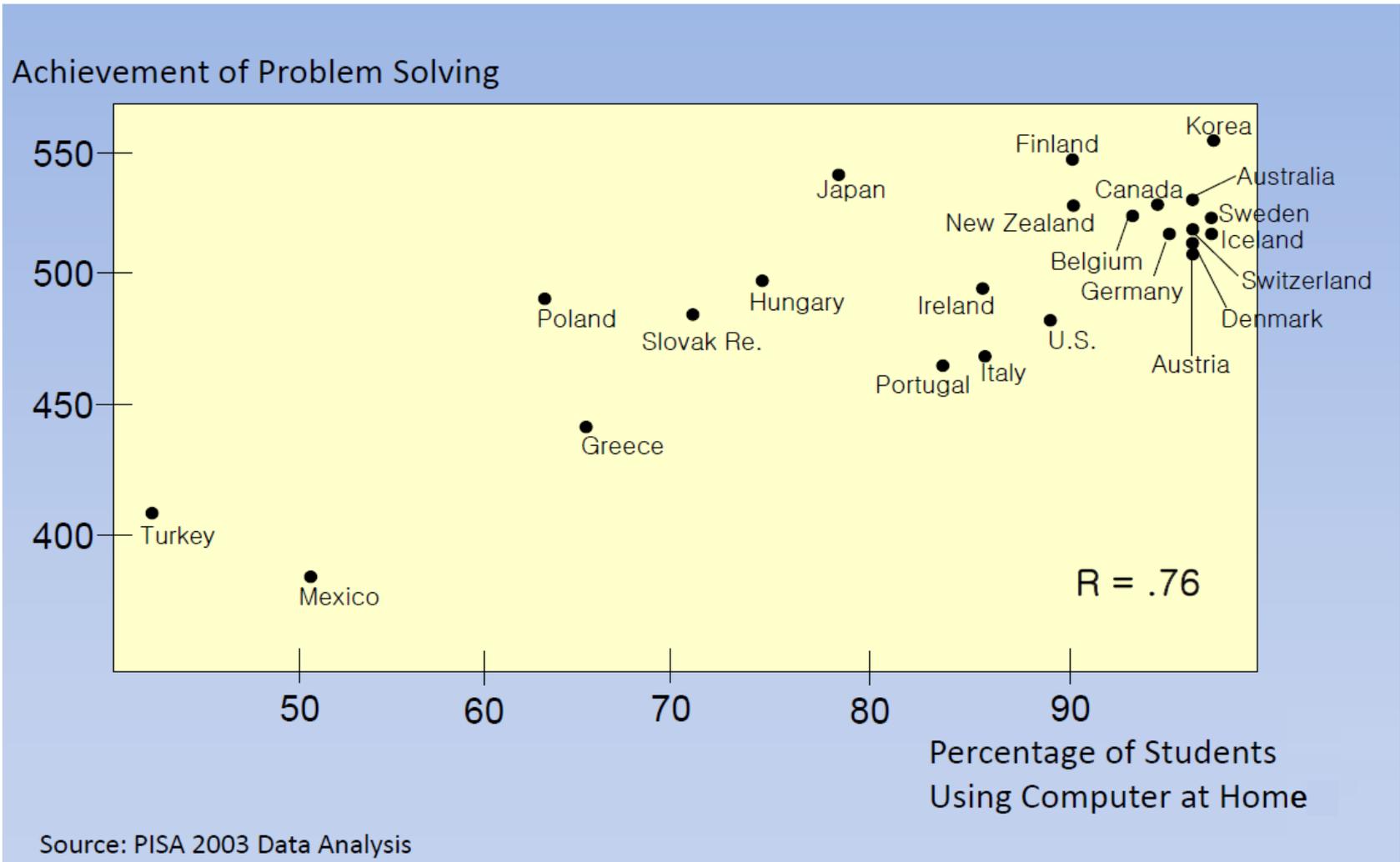
Availability/use of computer and student achievement in math



Source: OECD(2006), Are Students Ready for a Technology-Rich World? What PISA Studies tell us

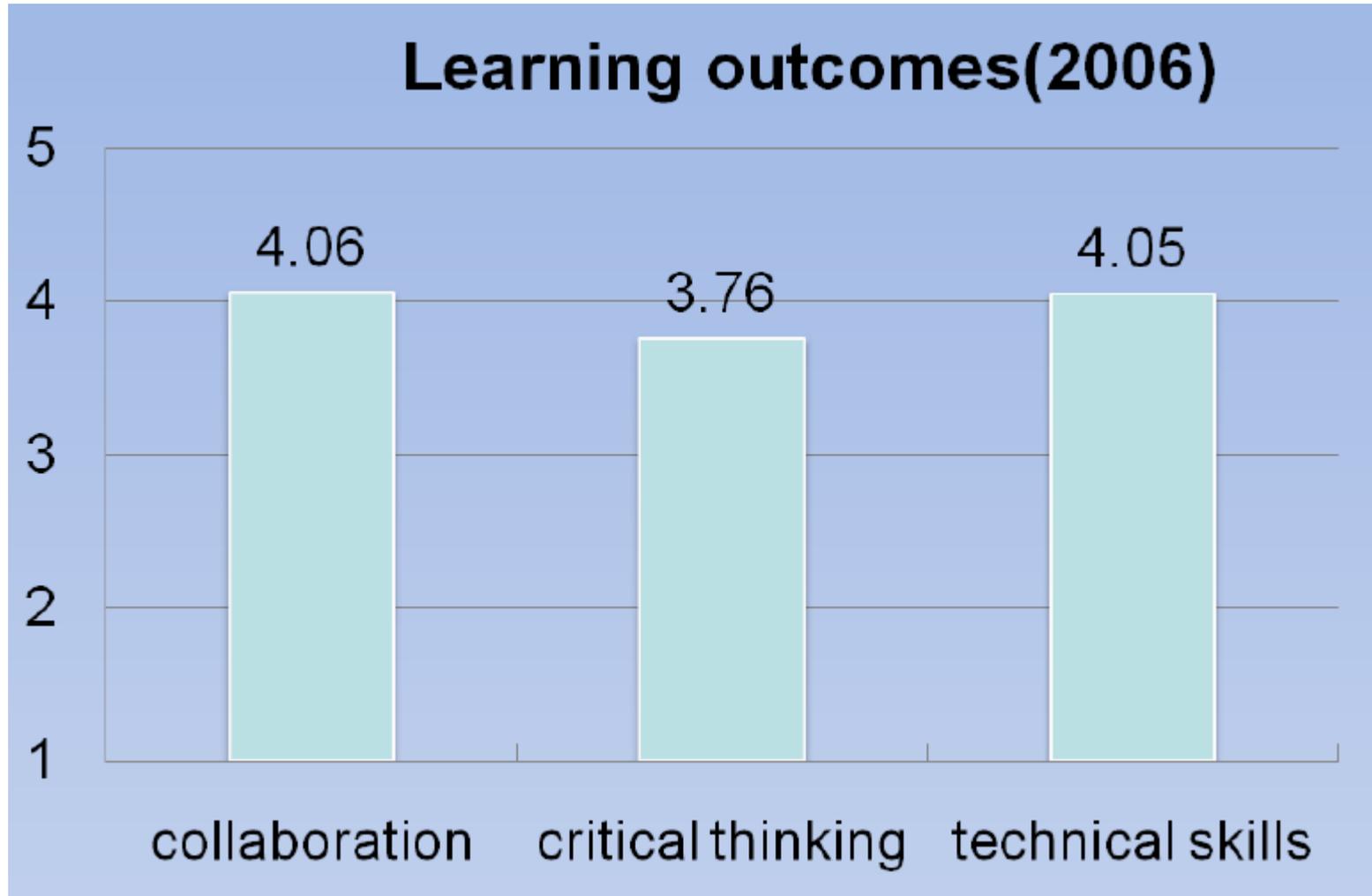
Does ICT promote student learning?

Access to ICT and Student Achievement

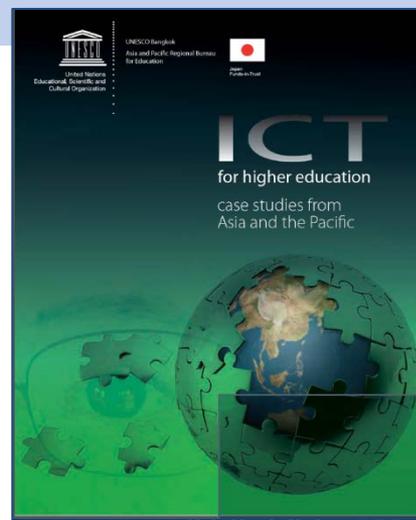
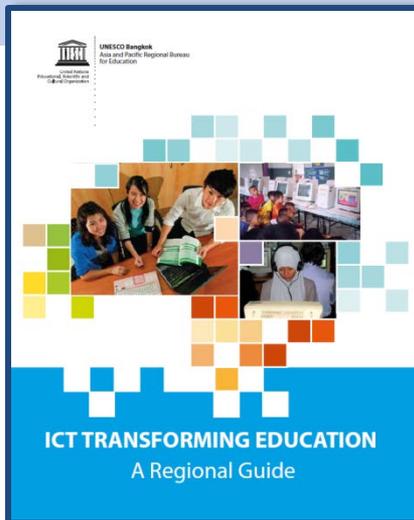
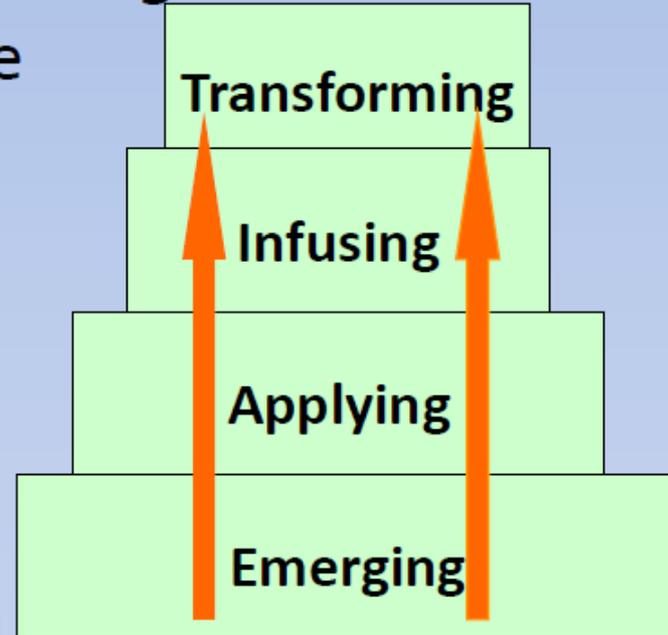


Does ICT promote student learning?

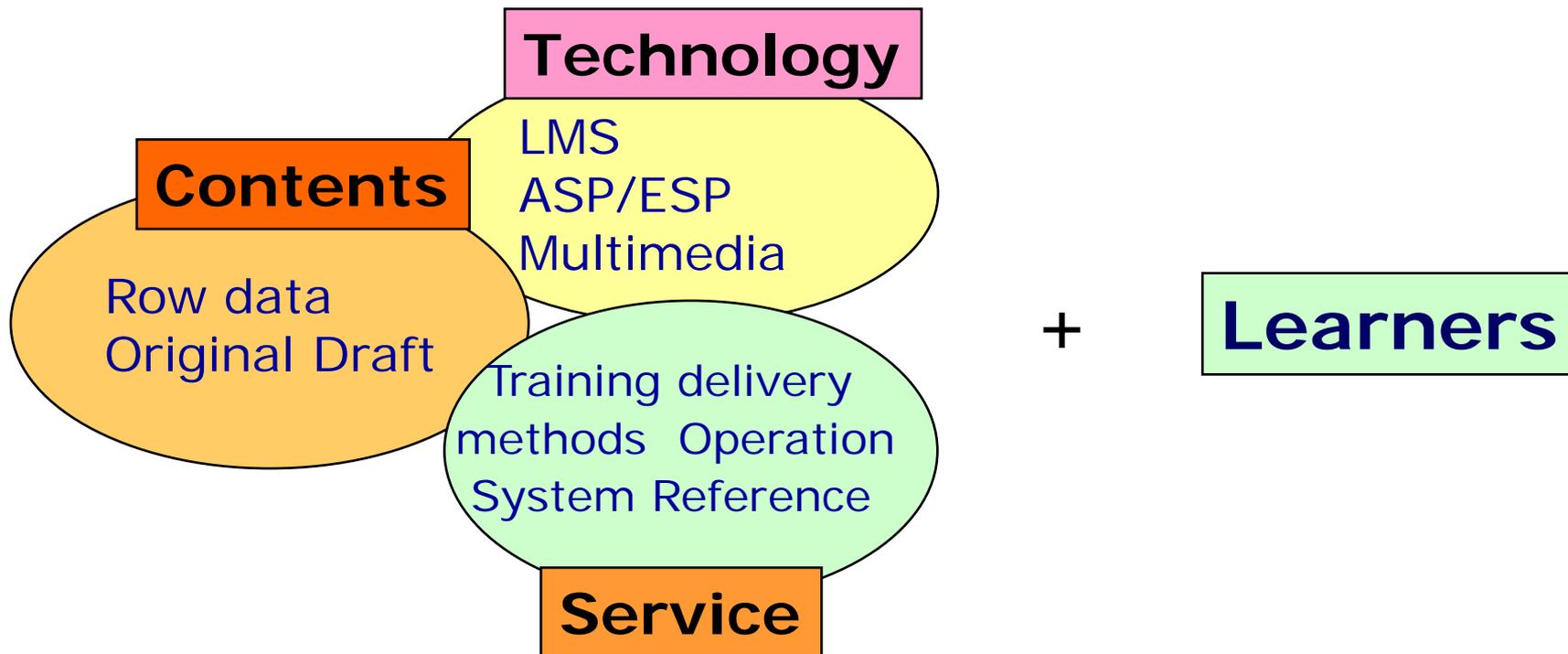
Results of Intel “Learn Programme”



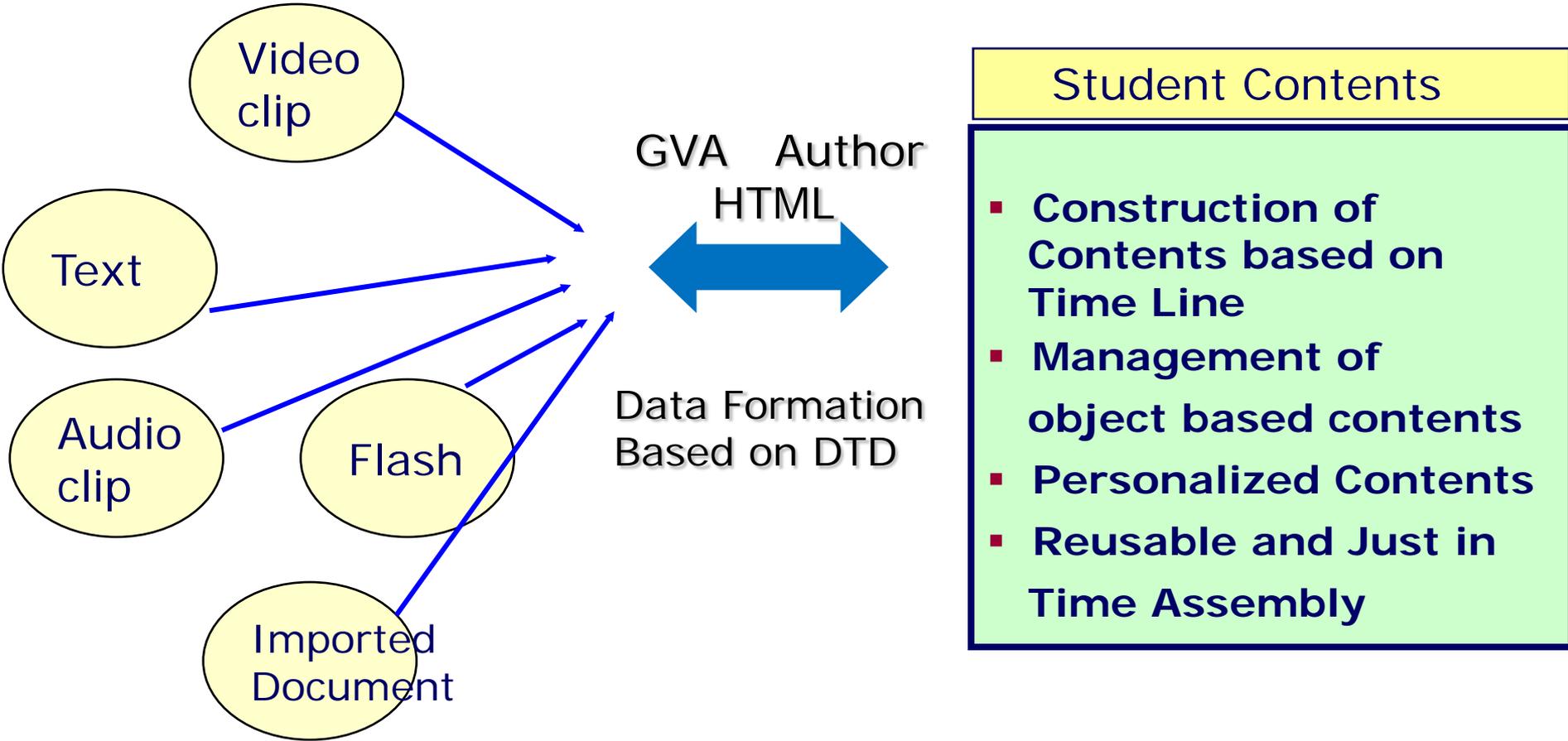
- ICT Transforming Education: A Regional Guide***
 to guide the teachers to move upwards the four-stages of ICT-Pedagogy Integration

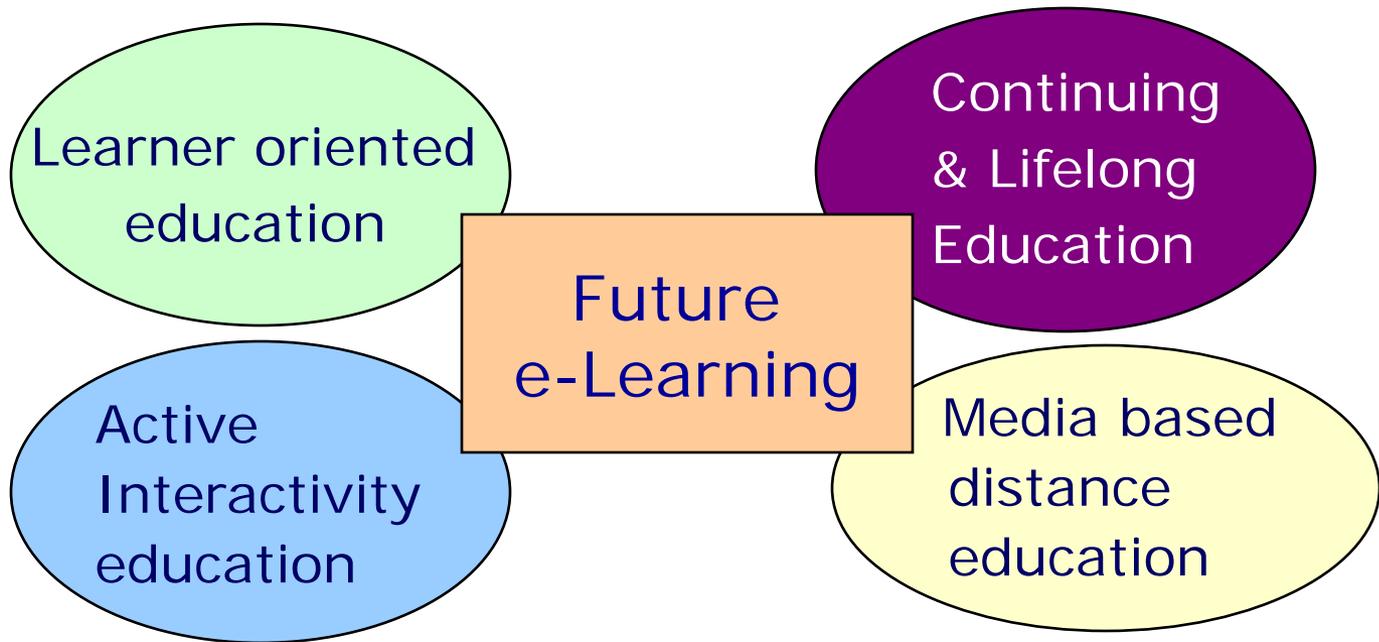


Components of e-Learning



Construction of e-Learning





⇒ **Just in Time**

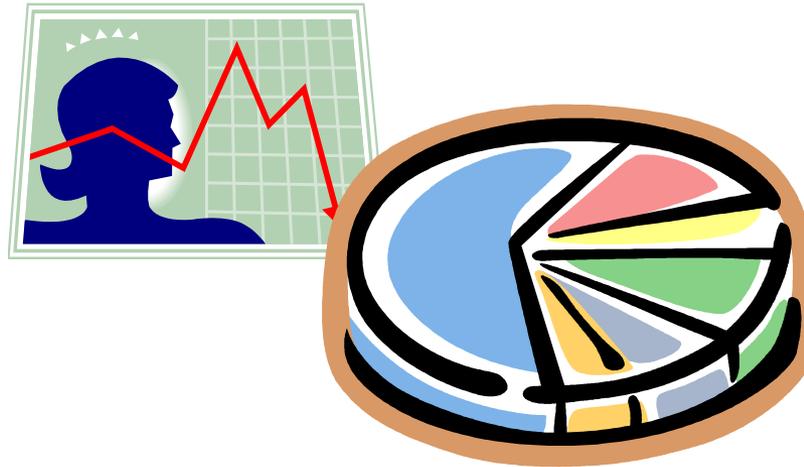
⇒ **Just For Me**

CAI- Contents 1986



e-Contents

Introductory Statistics



Syllabus



Target Learner

- Introductory Course for the students majoring in statistics
- Non-statistician who needs to learn the basic concept of Introductory Statistics



Objectives

- To understanding for Basic Concept of Statistics
- To analyze of the real data in our daily life
- To learn how to use a statistical package



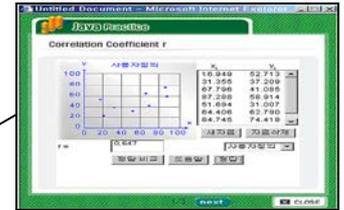
Contents

- 10 Chapters accordance with the textbook
- 20 frames for each chapter
(excluding video files, Java applets and episodes of statistics)

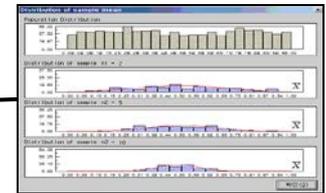
Composition of Contents



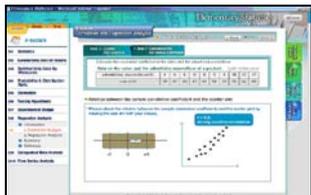
Video Lecture.



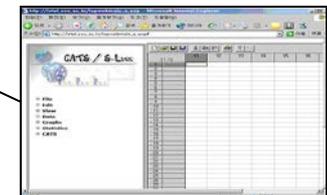
JAVA Practice.



CATS.



Dynamic Flash.



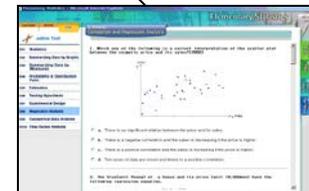
S-Link.



Story of Statistics.



e-Book.
KOSTAT

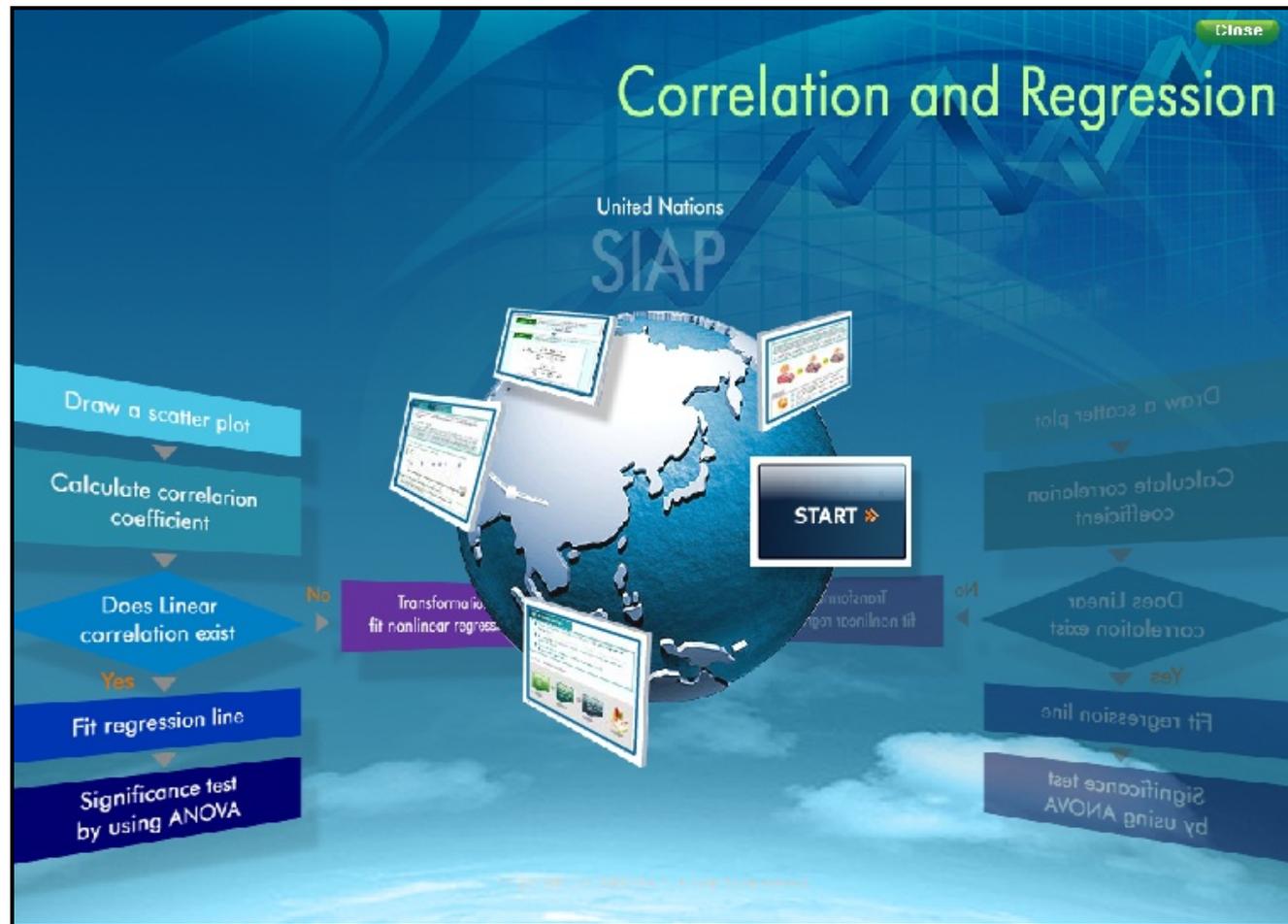


Online Test.

UNSIAP e-Library



UNSIAP



ISBN 978-89-20-92968-7

Main Window of Statistics Contents

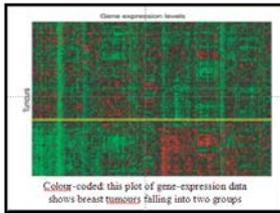
The screenshot shows a web browser window titled 'Elementary Statistics - Microsoft Internet Explorer'. The page content includes:

- Navigation:** 'Lecture', 'Book', 'Test' tabs and an 'e-Lecture' icon.
- Table of Contents:**
 - CH1 Statistics
 - CH2 Summarizing Data by Graphs
 - CH3 Summarizing Data by Measures
 - CH4 Probability & Distribution Func.
 - CH5 Estimation
 - CH6 Testing Hypothesis
 - CH7 Experimental Design
 - CH8 Regression Analysis
 - 1. Correlation Analysis
 - 2. Regression Analysis
 - Summary
 - Reference
 - CH9 Categorical Data Analysis
 - CH10 Time Series Analysis
- Current Page:** '8 Weeks. Correlation and Regression Analysis' with 'Introduction' selected. Navigation buttons for 'Back', '1 / 2', and 'Next' are present.
- Video Player:** A video player showing a female instructor. The video title is '[통계학개론]' and the instructor's name is '이리남 교수' (Lee Rina, Professor). The video is from '방송대 정보통계학과' (Broadcasting and Information Statistics Department of KNOU). The player shows a progress bar at 10:00 / 12:00.
- Flowchart:** A decision flowchart for regression analysis:
 - Step 1: Draw a scatter plot
 - Step 2: Calculate and test the correlation coefficient
 - Decision: Does linear correlation exist?
 - If **Yes**: Fit regression equation
 - If **No**: If there is a nonlinear relation, apply the nonlinear regression
 - Step 3: Significance test by using the analysis of variance
- Chapter Objectives:**
 - Able to draw a scatter plot and understand its meaning
 - Able to calculate and interpret the correlation coefficient
 - Able to find the simple linear regression equation
 - Able to test significance of the regression model
- Key Words:**
 - Scatter plot
 - sample correlation coefficient
 - simple linear regression
 - dependent variable
 - independent variable
 - regression coefficient
 - least square method
 - analysis of variance
 - multiple linear regression
 - coefficient of determination
 - residual analysis

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- <http://203.232.176.90/trlee/introstat2/week01/index.htm>
- <http://203.232.176.90/trlee/introstat1/week01/index.htm>

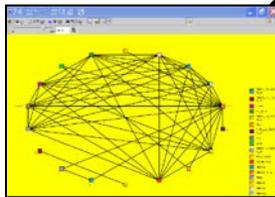
Bioinformatics online Graduate School



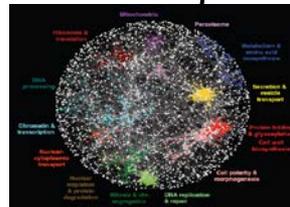
Microarray Data Analysis



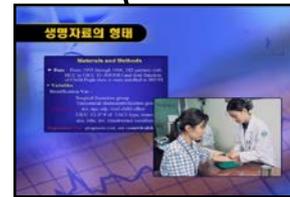
Public Health Informatics



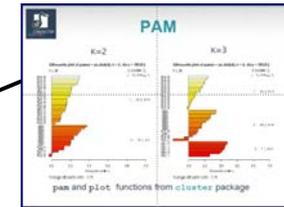
Bioconductor



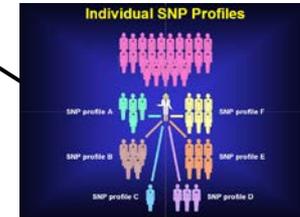
Datamining
KOSTAT



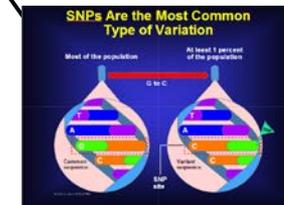
Clinical Trials &
Forensic



Bioinformatics



Population Genomics

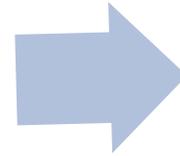


SNP Data Analysis



Smart Learning

Smart Technology with ICT



Smart
Learning

A conducive & effective IT-based, learner oriented learning for learner's different learning style & abilities with mobile devices

S : Social, Self-directed, Speed

M : Module, Mobility, Micro-learning

A : Autonomy, Active, Assessment

R : Relationship, Reflection, Remix

T : Transfer, Time-saving, Trendy

Smart Learning Characteristics

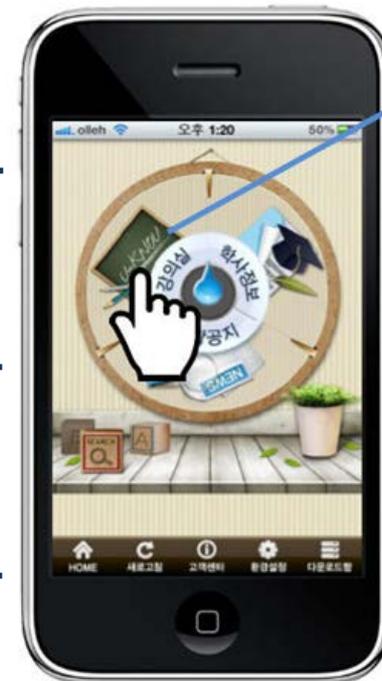
- Smart technology, smart device based learning

- Intellectual, adaptive, customized learning

- Social interaction & cooperative learning

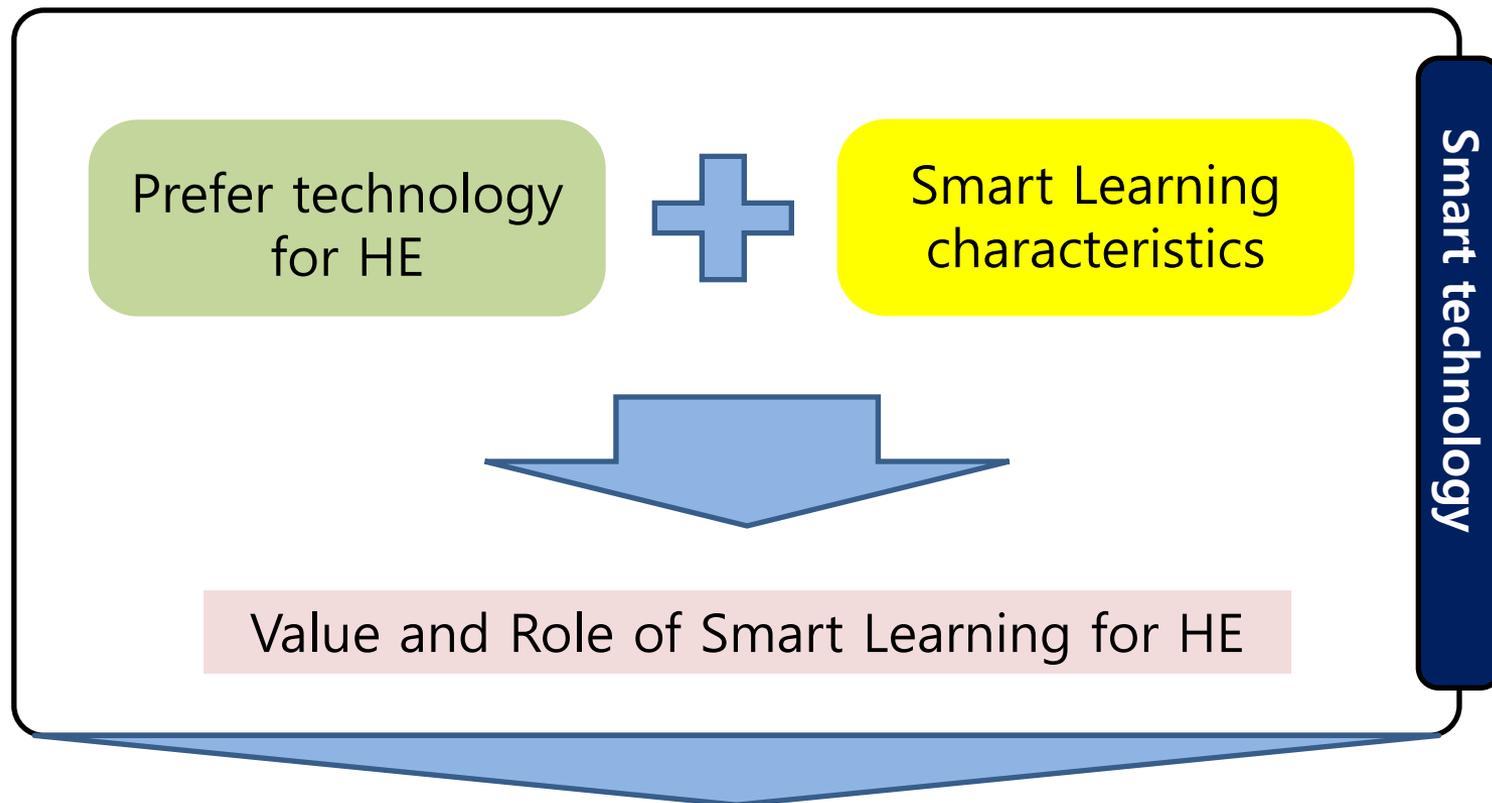
- Formal/non formal blended learning

- Learning for ability to thinking & solving problem



m-Learning Class

Smart Learning model for HE



Smart Learning model for HE

Agenda for Smart learning for HE

Role of Smart Learning for HE

- Support for Need of HE

- Humane communication & Learning network

- Easy accessible system
- Customized contents

- Adaptation for individual and social change

Agenda for Smart learning

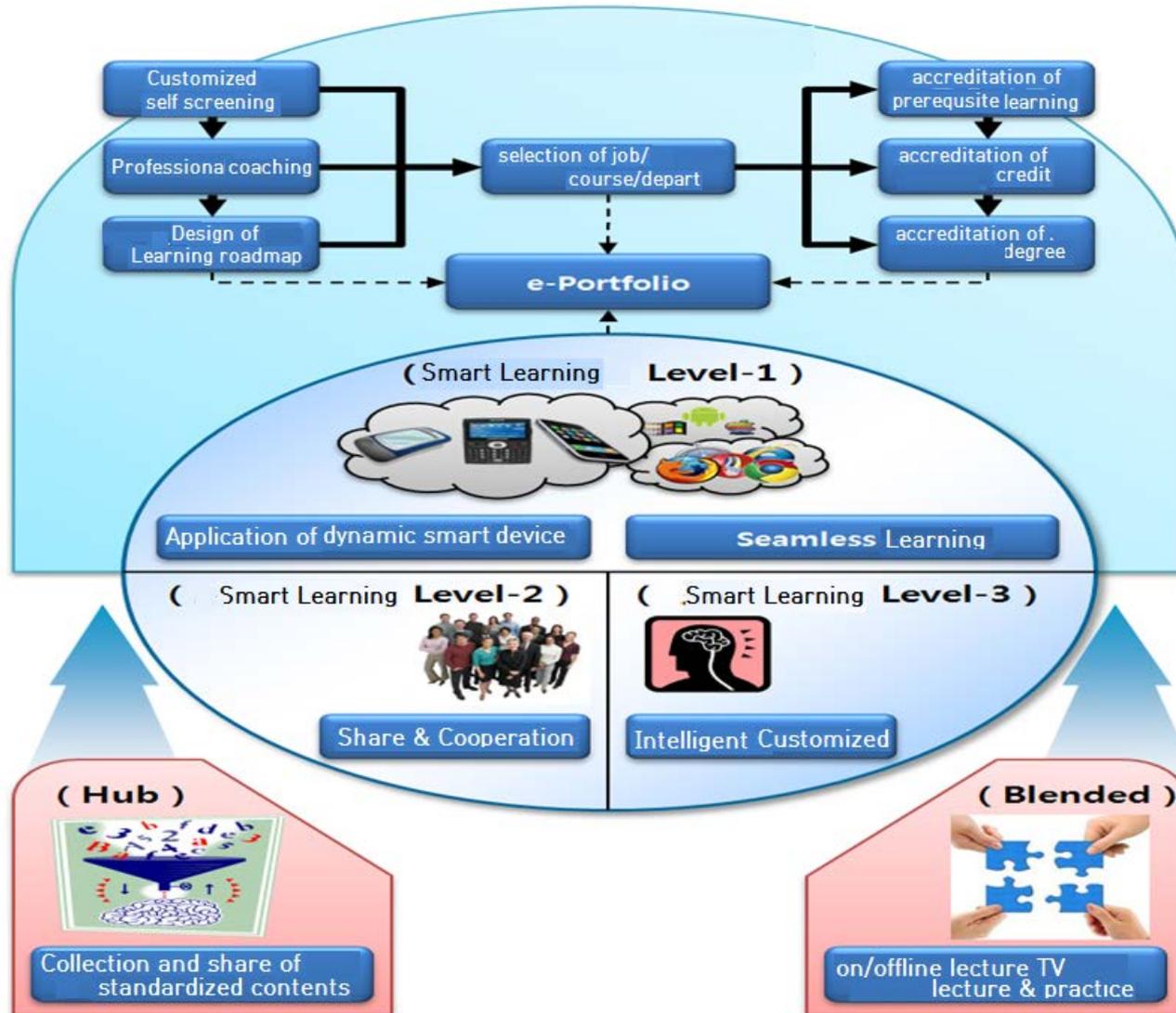
Extend smart learning with dynamic ICT devices and join with learning network

Support for learning system and provide dynamic communication channel

Construction of portfolio for save the learners performance
Accreditation for credit

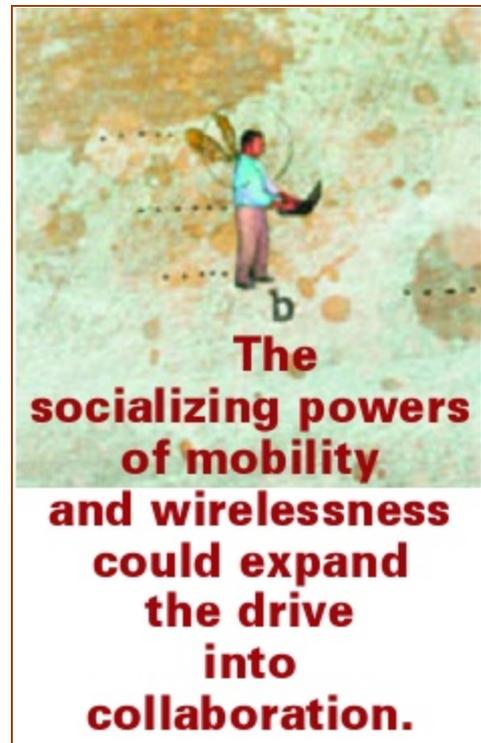
Guideline and road map for learner and dynamic channel for communication

Layout for Smart Learning System for HE

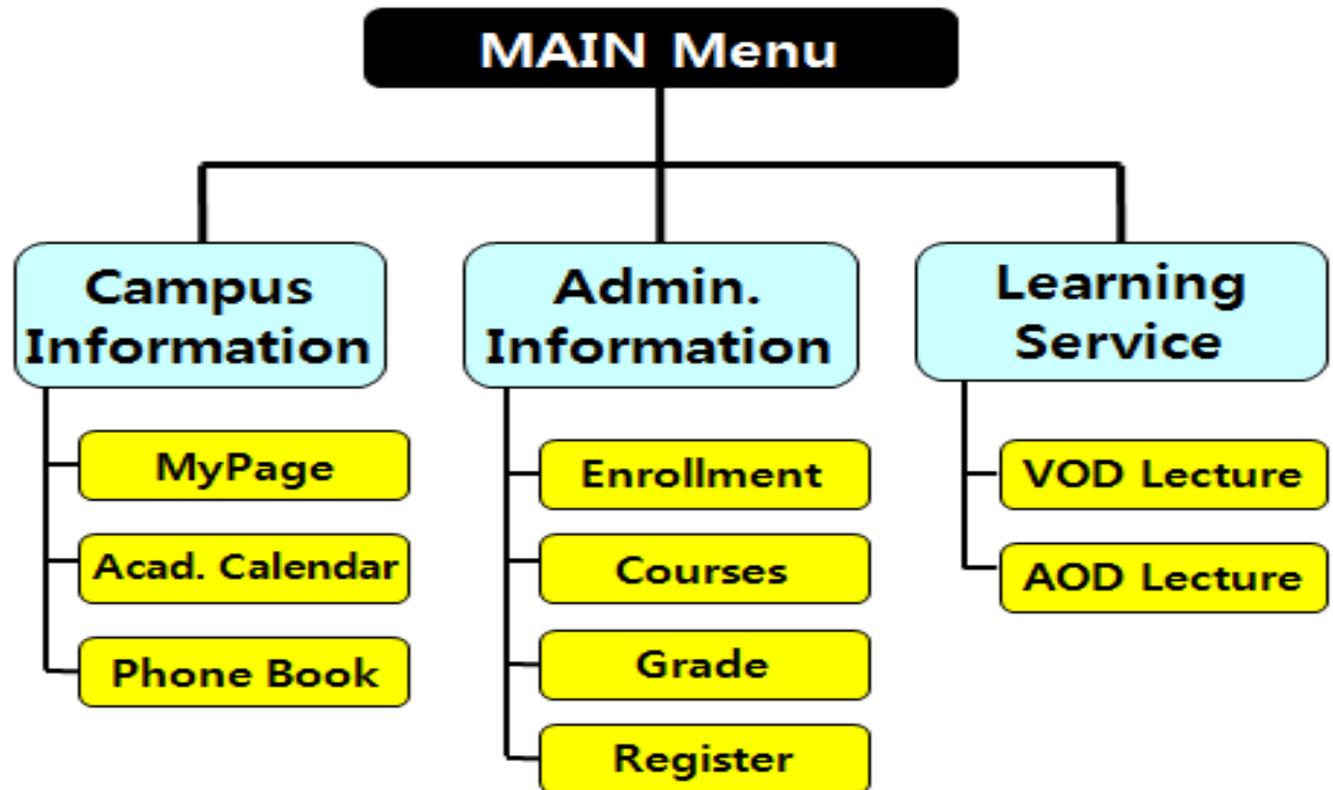




m-Learning at KNOU



m-Learning
at KNOU



m-Learning
at KNOU



m-Learning
Class

Admin.
Info.

Academic
Info.

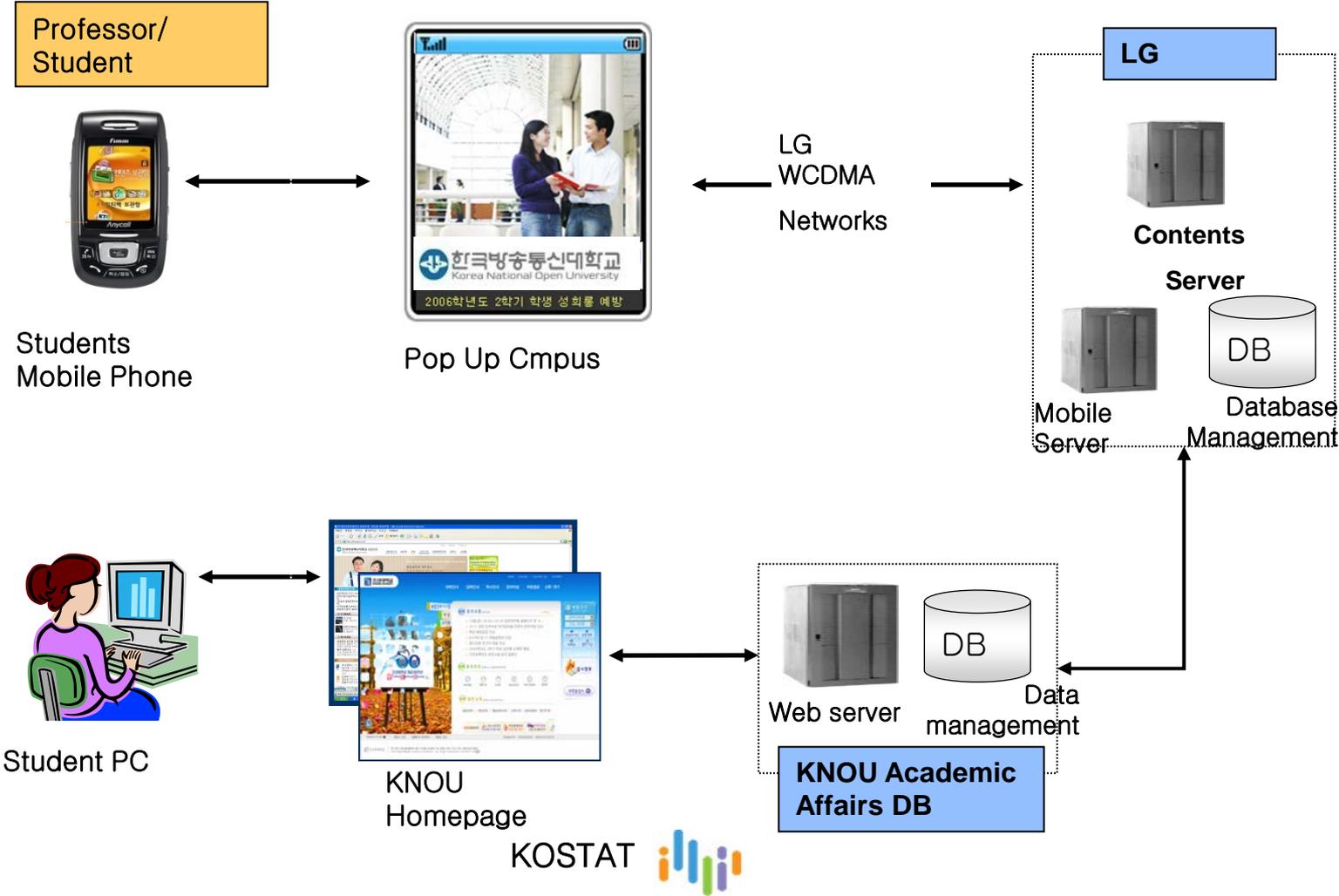
(a) Main menu

(b) My courses

(c) Video lecture

System Configuration for Mobile Learning

Provide Composite Solution of On and Off line Direct Connection between the LMS for KNOU U-Campus and KT Mobile Solution



Support for the student's Mobile Learning for degree

LMS

- Provide the useful academic information for compensate the limit of off line campus activity by Mobile phone

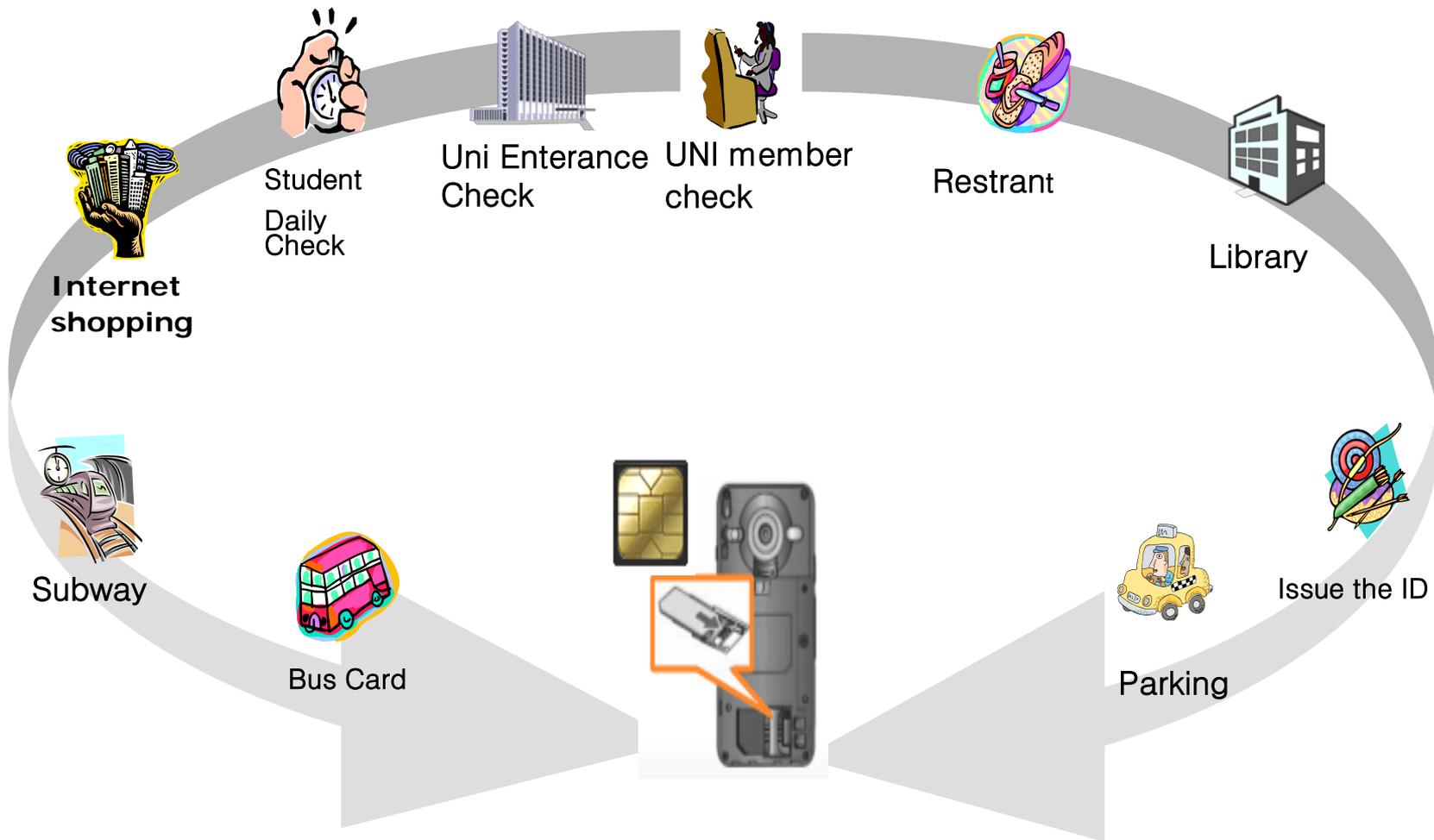
CMS

- Mobile Lecture : Provide the Web courses and Multimedia lecture by wireless Mobile phone and connect to the on line courses as individual learning speed.
- Provide learning community for the real time sharing of the learning resources for credit

Mobile KNOU

Mobile Student ID	Campus News	My Page	Study tutor	Mobile learning	Library
User Guide	My Email	Grades	On-Line Class Schedule	Mobile Lecture I	Library Guide
Manage Student ID	Academic Calendar	Course Registration	Tutor System	TV	Book Search
Student IDDL	Event Announcement	Classes/Exams	Dept. Tutor	Radio	Book Request
	Academic Affairs	Student Records	Internet Tutor	AudioTape	My Library
	Directory	Seasonal Class	Regional Tutor	Internet Lecture	Checkout List
	Student/Alumni	Theses	Students' Board	My Mobile Lecture	Checkout/Extension /Reservation
		Personal Information	Student Association		
		Certificates	Clubs		
		Class Schedule	Study Clubs		
		Class Study Room			

USIM Based Campus solution



Academic ID, transport Card, Cash Card,

Demonstration





OER

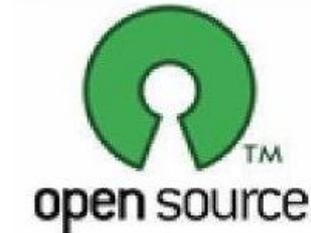
- Can strong resources improve the teaching of Statistics? What are the challenges in providing teachers with resources?
- **OER**(Open Educational Resources) is hot issue in the field of Open and Distance Learning
- Providing teachers with high quality resources with open licencing
- **Smart Center** is good title with these days ICT adaptation in Statistics Education

OPEN EDUCATIONAL RESOURCES (OER)

educational materials that may be
freely accessed, reused, modified and
shared.

The Trend towards openness

- **Open Source Software**



- **Open Access to Research**



- **Open Educational Resources**



OER University



OpenLearn

Making educational resources freely available

Open Education Resource Foundation

OER is a sustainable and renewable resource



MIT Open Courseware

MOOCs

A **massive open online course (MOOC)** is an online [course](#) aiming at large-scale participation and open access via the [web](#). MOOCs are a recent development in [distance education](#) which sometimes use [open educational resources](#)



The screenshot shows the MIT OpenCourseWare website interface. At the top, it says "MIT OPEN COURSEWARE MASSACHUSETTS INSTITUTE OF TECHNOLOGY". The navigation bar includes "Home", "Courses", "Donate", and "About OCW".

Home

- > **Get Started with OCW**
- > VIEW ALL 2100 COURSES
- > Most Visited Courses
- > OCW Scholar
- > Editor's Picks
- > Audio/Video Courses
- > Translated Courses
- > New Courses

Find Courses

- Architecture and Planning
- Engineering
- Health Sciences and Technology
- Humanities, Arts, and Social Sciences
- Management
- Science
- Other Programs
- Cross-Disciplinary Courses
- Special Collections
- Supplemental Resources
- View All Departments

Unlocking Knowledge Empowering Minds.

Free lecture notes, exams, and videos from MIT. No registration required.

> Learn more

FEATURED COURSE

Minds and Machines

Can computers think? Is the mind an immaterial thing, or is the mind the brain? Explore these questions and more in [24.09 Minds and Machines](#).

> [Previous features](#).

edX ENROLLMENT

edX now accepting enrollment for 7 courses from MIT, Harvard, and Berkeley.

> [Read more](#).

SUPPORT OCW

Your contribution helps us share MIT's course materials with the world. [Learn more about giving to OCW](#).

audience is just wonderful."

Gilbert Strang
MIT Mathematics professor
United States

> [Read more](#)

HOME PAGE TODAY'S PAPER VIDEO MOST POPULAR U.S. Edition

The New York Times **Education**

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION

POLITICS EDUCAT





Harvard and M.I.T. Team Up to Offer Free Online Courses

By TAMAR LEWIN
Published: May 2, 2012

In what is shaping up as an academic Battle of the Titans — one that offers vast new learning opportunities for students around the world — [Harvard](#) and the [Massachusetts Institute of Technology](#) on Wednesday announced a new nonprofit partnership, known as edX, to offer free online courses from both universities.

Schoo!Book

News, data and conversation about education in New York.

- Join us on Facebook »
- Follow us on Twitter »

Harvard's involvement follows M.I.T.'s announcement in December that it was starting an open online learning project, MITx. Its first course, Circuits and Electronics, began in March, enrolling about 120,000 students, some 10,000 of whom made it through the recent

- FACEBOOK
- TWITTER
- GOOGLE+
- E-MAIL
- SHARE
- PRINT
- REPRINTS

BASED ON THE TRIUMPHANT TRUE STORY

midterm exam. Those who complete the course will get a certificate of mastery and a grade, but no official credit. Similarly, edX courses will offer a certificate but not credit.

But Harvard and M.I.T. have a rival — they are not the only elite universities planning to offer free massively open online courses, or MOOCs, as they are known. This month, Stanford, Princeton, the [University of Pennsylvania](#) and the [University of Michigan](#) announced their partnership with a new commercial company, [Coursera](#), with \$16 million in venture capital.

edX



edX
FIND COURSES
ABOUT
BLOG
JOB
LOG IN
SIGN UP



The Future of Online Education

for anyone, anywhere, anytime

EXPLORE FREE COURSES FROM edX UNIVERSITIES



MIT
Massachusetts
Institute of
Technology

MITx



HARVARD
UNIVERSITY

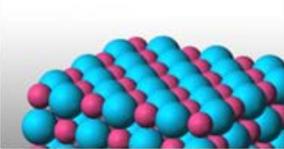
HarvardX



Berkeley
UNIVERSITY OF CALIFORNIA

BerkeleyX

3.091x Introduction to Solid State Chemistry →



3.091x explains chemical principles by examination of the properties of materials.

MITx | Oct 15, 2012

CS50x Introduction to Computer Science I →



CS50x is an introduction to the intellectual enterprises of computer science and the art of programming.

HarvardX | Oct 15, 2012

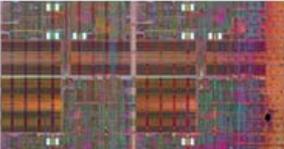
CS169.1x Software as a Service →



CS169.1x teaches the fundamentals for engineering long-lived software using Agile techniques to develop Software as a Service (SaaS) using Ruby on Rails.

BerkeleyX | Sep 24, 2012

6.002x Circuits and Electronics →



6.002x teaches the fundamentals of circuit and electronic analysis.

MITx | Sep 05, 2012

PH207x Health in Numbers: Quantitative Methods in Clinical & Public Health Research →



PH207x is the online adaptation of material from the Harvard School of Public Health's classes in epidemiology and biostatistics.

HarvardX | Oct 15, 2012

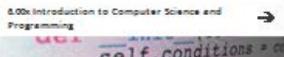
CS188.1x Artificial Intelligence →



CS188.1x is an online adaptation of the first half of UC Berkeley's upper division course CS188: Introduction to Artificial Intelligence.

BerkeleyX | Sep 24, 2012

6.00x Introduction to Computer Science and Programming →



edX

COURSERA

Courses Universities About ▾ Login

Take the World's Best Courses, Online, For Free.

Higher education that overcomes the boundaries of geography, time and money!
- Gerald Dizen



Learn with videos, quizzes, and assignments



Interact with thousands of other students



Advance your knowledge and career

ANNOUNCEMENTS



Five courses receive college credit recommendations

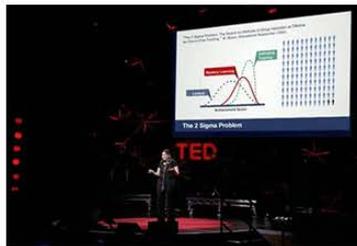


Coursera Wins "Best New Startup"

In 2013, I want to learn...

	A Beginner's Guide to Irrational i Mar 25th
	Fundamentals of Human Nutritio TBA
	Learn to Program: Crafting Gu

Share your 2013 learning goals



What we're learning from online education

The OER university concept



Asia Pacific OER Regional Meeting



Policy and Practices in Open Educational Resources

Bangkok (Thailand), April 2012



World OER Congress Paris UNESCO Meeting 2012

UNSIAP



Online version of
this document:



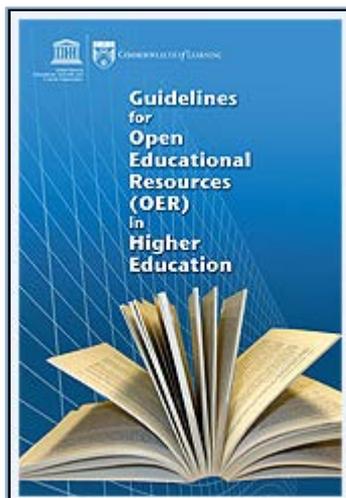
PROGRAMME



2012 World
Open Educational Resources
Congress Paris
20-22 June
UNESCO Headquarters
Paris, France



2012 World Open Educational Resources Congress







2012 World Open Educational Resources Congress

Wednesday 20 – Friday 22 June, 2012
Room II, UNESCO HQ, Paris, France

Introduction

Open educational resources (OER) are any type of educational materials in the public domain, or released with an open license, that allows users to legally and freely use, copy, adapt, and re-share. OERs present a strategic opportunity to improve the quality of education as well as facilitate policy dialogue, knowledge sharing and capacity building.

The global challenge

Despite the great success of OER initiatives such as the OpenCourseware (OCW) Consortium, African Virtual University OER Portal, Teacher Education in Sub-Saharan Africa (TESSA), Khan Academy, and countless examples at secondary school level, OERs are not mainstreamed in education planning. Moreover awareness of the costs and benefits of OER is still very limited.

Objectives of the Congress

Through the generous support of the William and Flora Hewlett Foundation and in full partnership with the Commonwealth of Learning (COL), UNESCO proposes to organize a World OER Congress to:

1. Showcase the world's best practices in OER policies, initiatives, and experts; and
2. Release a 2012 Paris OER Declaration calling on Governments to support the development and use of OERs
3. Celebrate the 10th anniversary of the 2002 UNESCO Forum that created the term OER;

Target Audience

The Congress will bring together Ministers of Education/Human Resource Development, senior policy makers, expert practitioners, researchers and relevant stakeholders to discuss what works and what won't work, and to agree on a Declaration with a set of targets for a 2015 World Conference.

Lead-up Policy Forums and the International Advisory Liaison Group

UNESCO and COL will be organizing lead-up Policy Forums in Africa, Arab States, Latin America, the Caribbean, and Asia-Pacific regions. An International Advisory Liaison Group of Government, IGO, and NGO representatives will be formed to advise on the Congress and the Declaration.

For more information

www.unesco.org/webworld/en/oer
Twitter: #worldoer
Contact:
Mr. Abel Caine a.caine@unesco.org; Ms. Zeynep Varoglu z.varoglu@unesco.org
ICT in Education, Science and Culture Section
Knowledge Societies Division
Communication and Information (CI) Sector



World Congress on Open Educational Resources Paris – June 20-22 – 2012



Declaration

THE AIM

“to encourage governments to promote OER and the use of open licences...”

(because)

...governments will be major beneficiaries thanks to the potential of OER to improve the cost-effectiveness of their large investments in education.”

Open Educational Resources: Conversations in Cyberspace

[http://oerwiki.iiep-](http://oerwiki.iiep-unesco.org/index.php?title=Open_Educational_Resources:_Conversations_in_Cyberspace)

[unesco.org/index.php?title=Open Educational Resources: Conversations in Cyberspace](http://oerwiki.iiep-unesco.org/index.php?title=Open_Educational_Resources:_Conversations_in_Cyberspace)

UNESCO releases new publication on open educational resources

[http://portal.unesco.org/ci/en/ev.php-](http://portal.unesco.org/ci/en/ev.php-URL_ID=28899&URL_DO=DO_TOPIC&URL_SECTION=201.html)

[URL ID=28899&URL DO=DO TOPIC&URL SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=28899&URL_DO=DO_TOPIC&URL_SECTION=201.html)

OER
Save to My OER | My Items
Rating: ☆☆☆☆☆
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RELATED MATERIAL

Collections using this module

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- [Collaborative Statistics \(with](#)

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Collaborative Statistics: Solution Sheets: Hypothesis Testing: Single Mean and Single Proportion

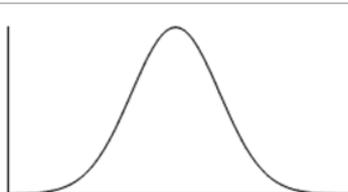
Module by: [Susan Dean](#), [Barbara Ilowsky, Ph.D.](#) [✉ E-mail the authors](#)

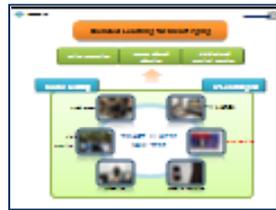
Summary: This module provides a solution sheet for the Hypothesis Testing: Single Mean and Single Proportion chapter of the Collaborative

Class Time:

Name:

- a. H_o :
- b. H_a :
- c. In words, **CLEARLY** state what your random variable \bar{X} or P represents.
- d. State the distribution to use for the test.
- e. What is the test statistic?
- f. What is the p -value? In 1 – 2 complete sentences, explain what the p -value means for this problem.
- g. Use the previous information to sketch a picture of this situation. **CLEARLY**, label and scale the horizontal axis and shade the region(s)





• i-KNOU OER

• Support OER



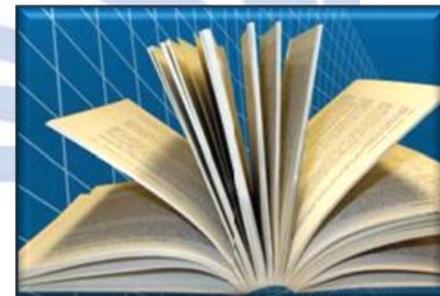
• Success factor & Challenges



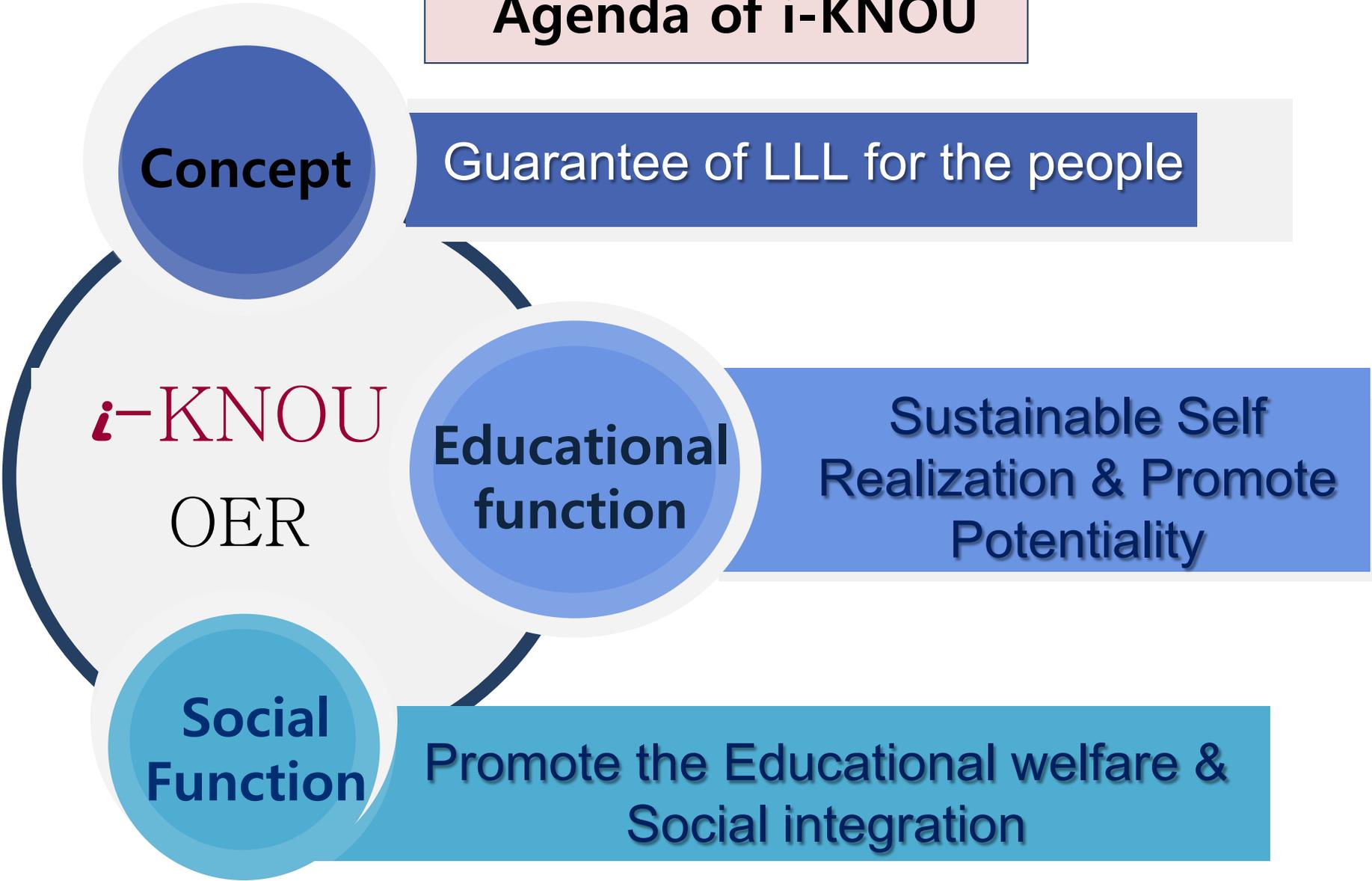
• Support from Government



• Future Agenda



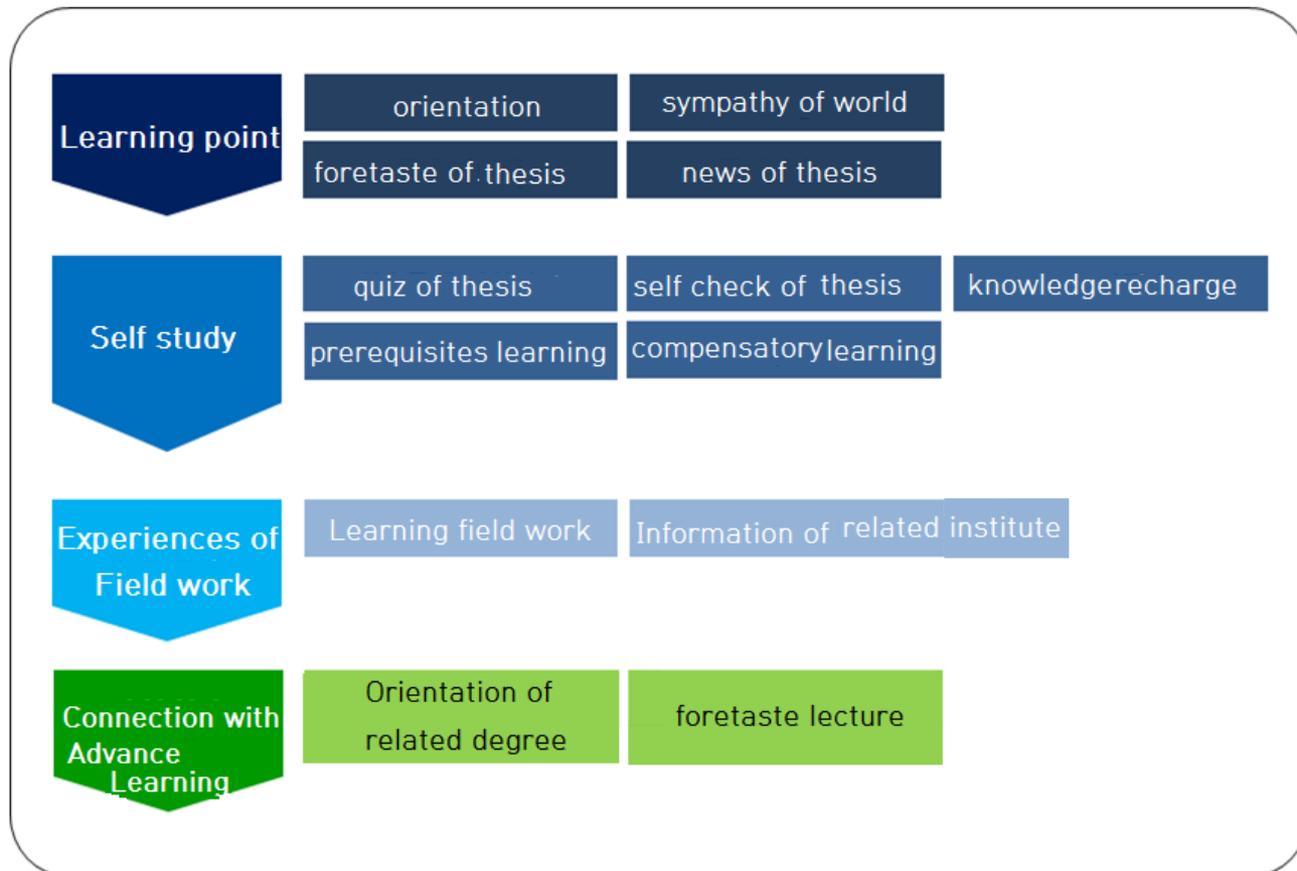
Agenda of i-KNOU



OER Contents model

- Design of OER Learning process based on contents model and components

OER Learning process



OER Contents model

1) Learning point

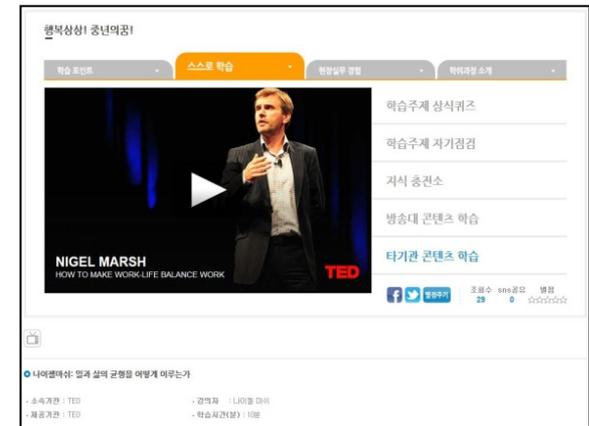
stage	Sub-stage	concept
Learning point	Chapter OT	Course guideline video
	Peer OT	Learner's mentoring video
	Foretaste of thesis	Animation and cartoon for thesis of course
	News for thesis	Various kinds of news



OER Contents model

2) Self study

stage	Sub stage	concept
Self study	Quiz	Simple o/x for basic knowledge check
	Self check	Self check with deeper quiz
	Knowledge recharge	Recommendation of references and textbook
	Prerequisites learning	Support prerequisites with KNOU contents
	Compensatory learning	Supplementary contents with external institute



OER Contents model

3) Field work practice

stage	Sub stage	concept
Field work practice	Field work learning	Video by professionals lecture of fieldwork
	Information related institute	Link with information of related institute of field work



4) Introduction of degree course

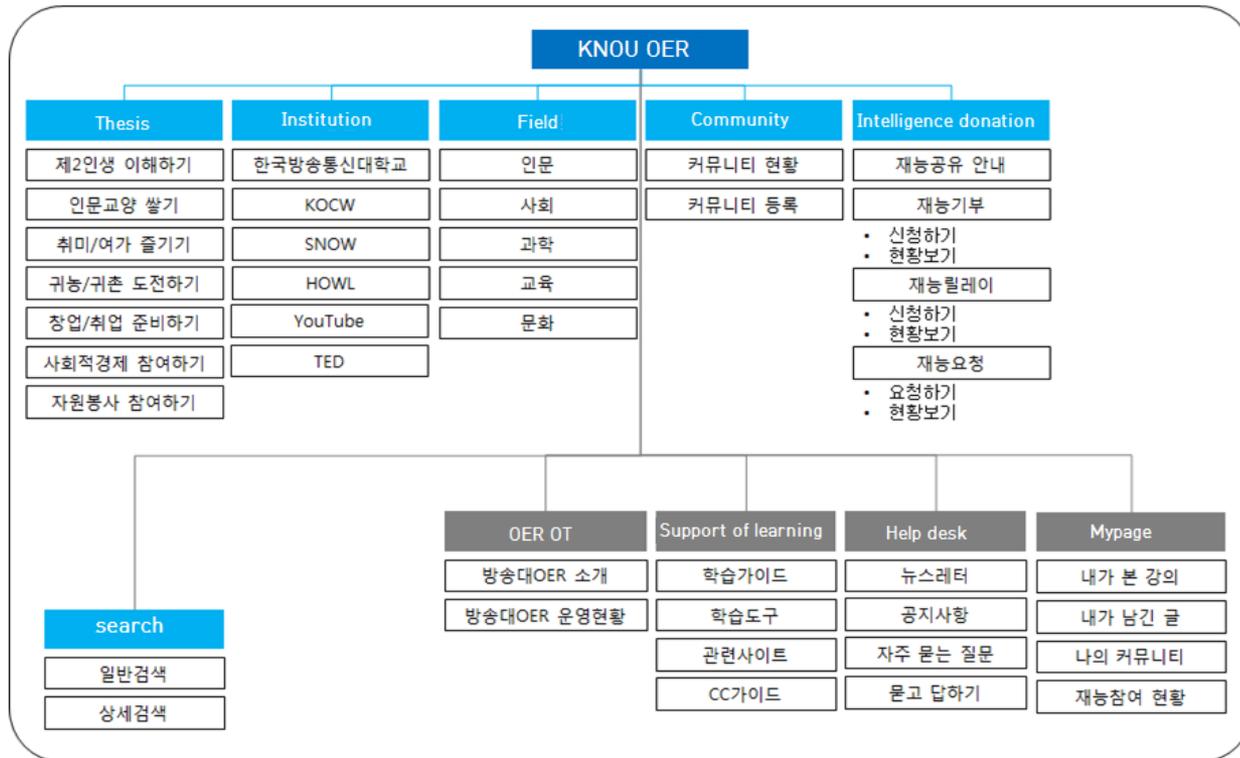
stage	Sub stage	concept
Degree related OT	Prime college	Prime college guide
	foretaste	Support foretaste lecture of prime college
	Direct connect	Prime college course



OER Service model

1) Layout of homepage

- Construction of community intelligence donation, searching, support of learning, help desk, my page



OER Service model

2) Configuration of Homepage

The screenshot shows the main OER homepage. At the top, there is a navigation bar with '주제별' (by topic), '기안별' (by proposal), '분야별' (by field), and '커뮤니티' (community). A search bar is prominently displayed with the text '나는 [] 에 도전한다.' (I challenge []). Below the navigation, there are several featured video thumbnails and a '주제별 OER Tour' section. A sidebar on the right contains social media links for OER Twitter and a '프리임 칼리지' (Free College) logo.

This section is titled '제2인생 이해하기' (Understanding the 2nd Life). It includes a sub-section '학습내용' (Learning Content) with two columns: '기대효과' (Expected Effect) and '학습내용' (Learning Content). Below this is a table listing various OER courses with their respective content and ratings.

번호	과목명	내용	전달방법	학수료
1	NO 스토레스! GOOD! 좋은	스트레스 없는 건강한 중년을 위한 방법	전달방법가	60
2	튼튼한 중년을 위한 재정 설계	중회살개 채워/자산관리 전략	전달방법가	60
3	중년 이후 인생관리	급격하게 변화하는 세태와 노후에 대한 적응은 어떻게?	전달방법가	60
4	중년 삶의 성찰과 미한	지난 삶에 대한 성찰을 통한 중년기의 재발견	전달방법가	60
5	평생교육을 통한 즐거운 인생	평생교육에 대한 이해와 활용	전달방법가	60

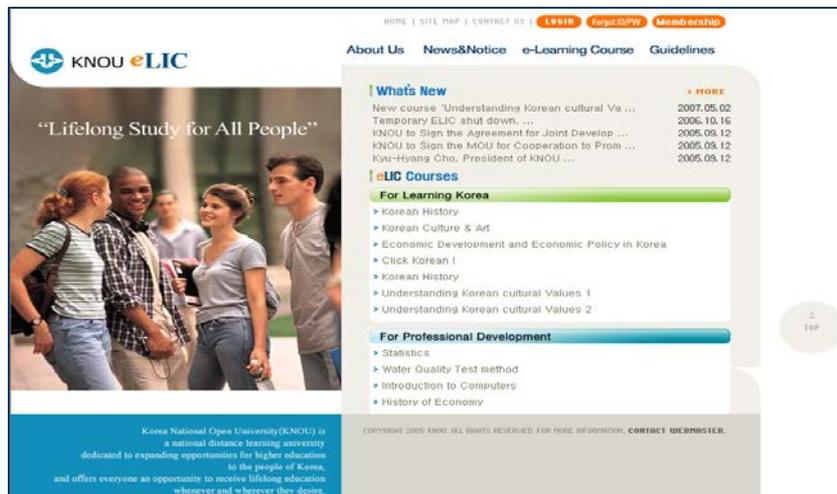
This section is titled '인문' (Humanities). It features a grid of video thumbnails for various courses. Below the grid, there is a '코화수' (Course) section with a list of items: '동학수', '별칭수', and '발행수'. The thumbnails include titles like '평복상사! 중년의꿈! 전한전에서 후한전으로' and '중년 이후 인생관리 내 인생의 목표를 정하라'.

This section is titled '커뮤니티 현황' (Community Status). It shows a search bar for '커뮤니티 검색' and a list of community members. Each member profile includes a photo, name, and a 'blog' link. The members listed include '손리 블로그' and '안태니'.

KNOU OER

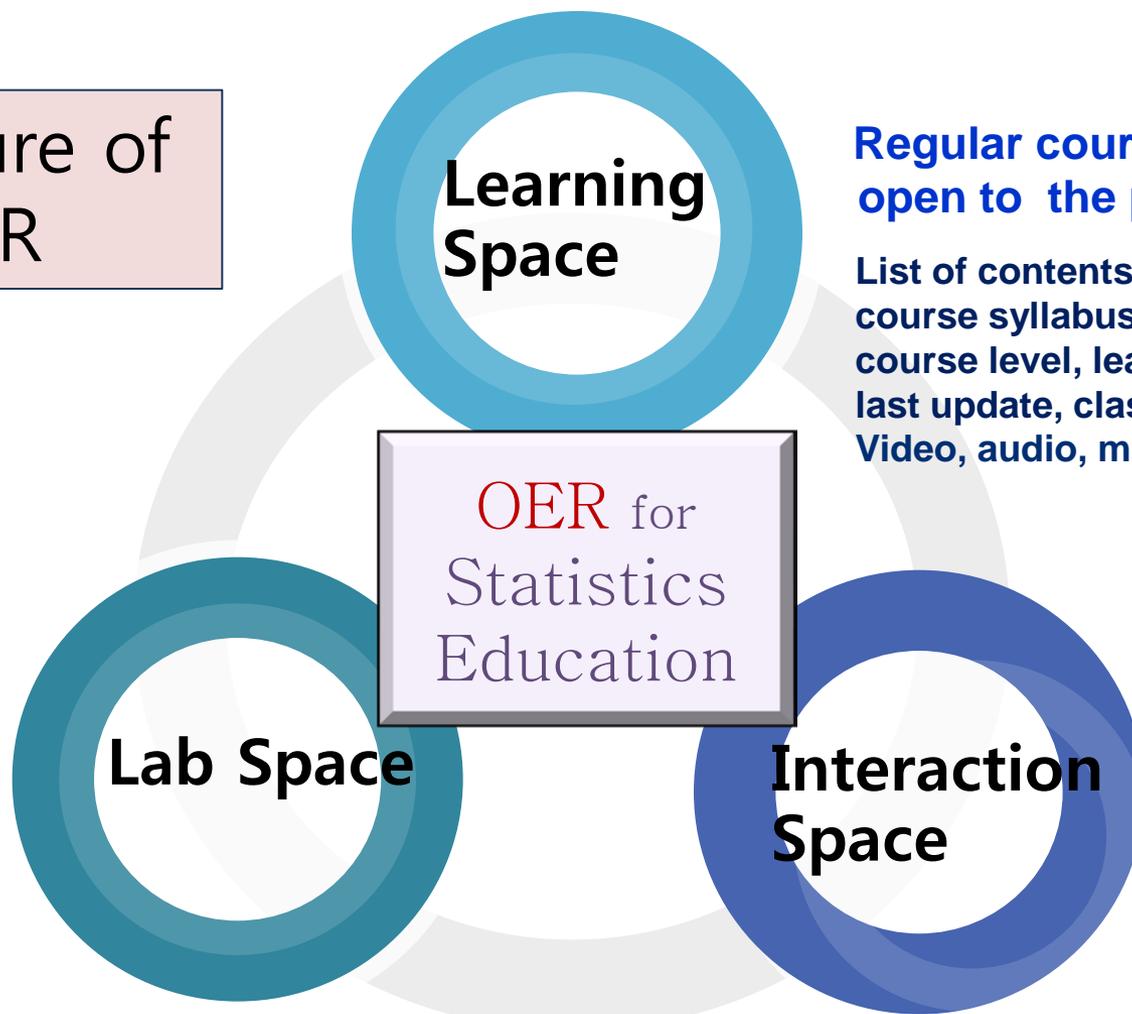
- TV Lecture through OUN
- Open t the contents o the public through Homepage
- Construction of m-Learning System
- Free International version Contents

	Course	Language
1	Korean Culture & Art	English
2	Korean Culture & Art	중국어
3	Korean Culture & Art	일본어
4	Korean History	English
5	Korean History	중국어
6	Economic Development and Economic Policy in Korea	English
7	Click Korean !	English
8	Understanding Korean cultural Values 1	English
9	Understanding Korean cultural Values 2	English
10	Korea modern history	English
11	Introduction to Computers	English
12	Statistics	English
13	Water Quality Test method	English
14	History of Economy	English
15	TV Koreanology	English





Structure of OER



Learning Space

Regular courses open to the public

List of contents :
course syllabus,
course level, learning time,
last update, classified thesis
Video, audio, multimedia

OER for
Statistics
Education

Lab Space

Interaction Space

Professionals Community

Volunteer and group
and interactivity
Focus on Group Intelligence

Promote Interactivity

Flash Meeting
Flash Blog
Compendium Knowledge Map

Remarks

- Enhance basic statistics skills by offering training to anyone, anytime, and anywhere
- Maximize just-in-time learning effects by providing basis for developing training curriculum that is best for U-learning
- Increase statistical awareness by expanding training opportunities to the general public
- Carry out the leadership role as the KOSTAT statistical training institute



Remarks

Construction of OER network for Training Official Statisticians

IASE Network

To overcome the license of resources of teaching statistics

To promote the initiate the movement of OER for Statistics

How we could do...

Collection of online contents

Collection of mobile contents



IASE-IAOS 2013 Satellite Meeting



- Date : 22 - 24 August 2013
- Venue : **Macao**
- Theme : **Statistics Education for Progress**
- Sub-theme joint with **IAOS/IASE**

"Statistics Education for Progress" youth and official statistics

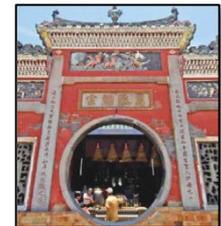
- **ISI Meeting at Hong Kong : 25-31 August**

The joint day will focus on the following:

- Official statistics resources for school or tertiary education.
- Disseminating official statistics into the real world of youth.
- Training young statisticians.
- Educational uses of youth statistics

Chair : Taerim Lee

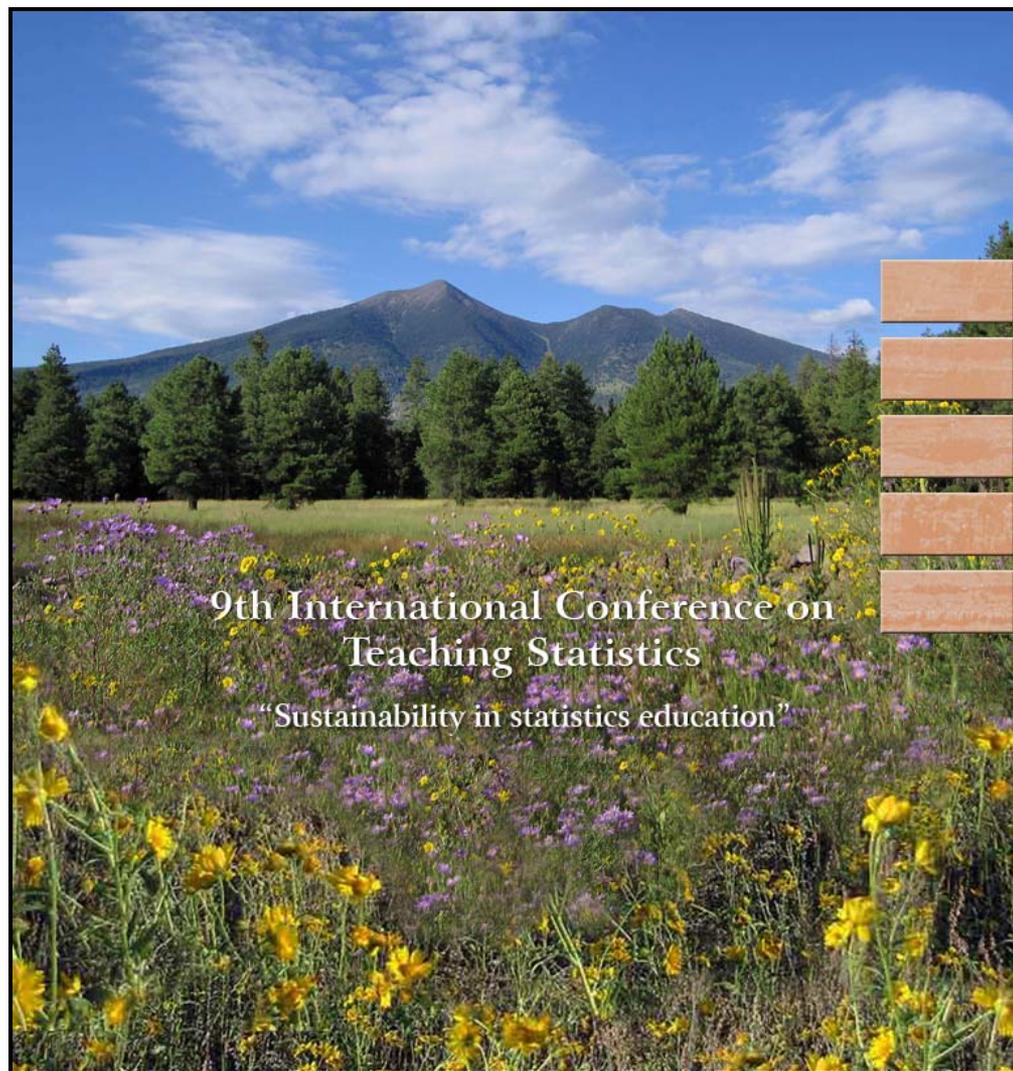
- Program Committee: Sharleen Forbes, Brian Phillips, Shigeru Kawasaki, Michiko Watanabe, Will Probert, Hyan Sik Whang, Penny Bidgood, Shrikant Bangdiwala
- Local Organizing Committee : Ms Vanessa Kong(Director of DSEC Macao) IAOS, Professor Shing On LEUNG(Uni. of Macau)





ICOTS9

Flagstaff, Arizona, USA
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Q & A



