

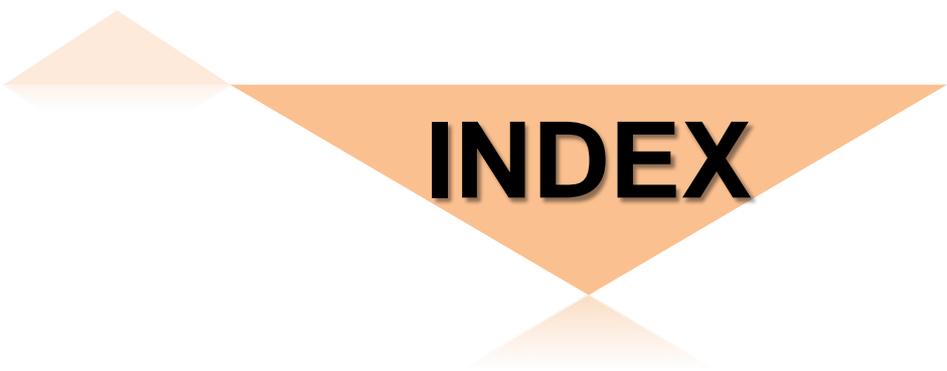
# **Utilization of education and labor market data for improvement of university education results**

**December 12, 2017**

**Chu Huijung**

Korea Research Institute for Vocational Education and Training



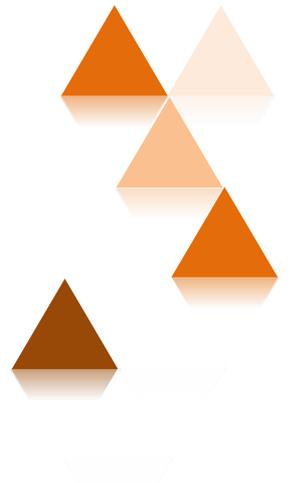


# **INDEX**

- I. Survey on the shift of higher education graduates into the labor market**
- II. Background and purpose of the Graduates Occupational Mobility Survey (GOMS)**
- III. Survey design and target of GOMS**
- IV. Survey method of GOMS**
- V. Utilization of GOMS**



# **I. Survey on the shift of higher education graduates into the labor market**



# I. Survey on the shift of higher education graduates into the labor market

## 1. Higher education in South Korea – Type of surveys on the shift into the labor market (1)

Survey name	Survey purpose	Survey target	Sample size	Sampling	Survey method	Survey item
The Korean Education and Employment Panel Survey	To grasp matters such as educational experience, continuation of study, career path, shift to working life of young people, etc. and provide useful information on education by grasping the educational experience	Ninth graders, 12 <sup>th</sup> graders	6,000 people	Select 100 schools by school type, extract four classes primarily, and then extract five students per class	Panel survey, conducted every year	About 100 items including school life, academic achievement, view of profession, career path, family background, and student evaluation
Employment Statistics	To analyze various statistical materials where education and labor markets are combined, and provide necessary and useful basic information for education policy formation, education related study, and career guidance for students	University graduates, every year	About 500,000 people	Complete count survey	Conducted every year, Each university conducts a survey on the status of graduates	Employment finding category, conformation to specialty, hiring channel, occupation, etc.

# I. Survey on the shift of higher education graduates into the labor market

## 1. Higher education in South Korea – Type of surveys on the shift into the labor market (2)

Survey name	Survey purpose	Survey target	Sample size	Sampling	Survey method	Survey item
Survey on Graduates with a Master's or Doctor's Degree	To conduct a survey on the actual situation of education and the shift of new domestic graduates with Master's and Doctor's degrees every year, and collect and provide basic materials for the formation of sophisticated human resource policies at graduate schools	New graduates with a Master's or Doctor's degree	About 100,000 people	Complete count survey	Cross-section survey (twice a year), questionnaire survey and online survey at each university	Matters regarding Master's or Doctor's course, plan and employment situation after graduation, Doctor's degree, post-doctoral, and part-time teacher, etc.
Survey on Activity of Doctoral Human Resources	By generating basic indexes and statistics of matters such as the composition of Doctor-level professional human resources, education, jobs, international mobility, etc., and utilizing it as evidence for scientific policy formation	Doctor's degree graduates living in South Korea	About 5,000 people	Conduct a survey on households with Doctor's degree graduates	Cross-section survey (every three years) Interview	Doctoral education, employment status, international mobility, research job history, temporary research job, etc.

# I. Survey on the shift of higher education graduates into the labor market

## 2. Outline of Graduates Occupational Mobility Survey

◆ **Survey name:** Graduates Occupational Mobility Survey

◆ **Legal basis**

- Promotes projects based on Article 17 of the Basic Employment Policy Act
- Conducts statistics based on approval by General Statistics No. 327004 according to Article 8 of the Statistics Act

◆ **Survey method**

- Individual interview where investigators directly visit respondents and record the answers

◆ **Created by:** Labor Market Analysis Division of the Ministry of Labor and Employment Panel Survey and Analysis Team of the Korea Employment Information Service

◆ **Survey and release cycle:** One year/one year

# I. Survey on the shift of higher education graduates into the labor market

## 3. Survey team

### Korea Employment Information Service

#### Employment Service Strategy Division

Strategic Marketing Team  
Employment Service Enhancement Team  
Lifelong Career Development Team  
Occupational Research Team  
Work-Net Team  
Employment & Welfare Team  
Youth Employment Support Team  
Employment Service Competency Building Team

#### IT Division

IT Strategic & Planning Team  
IT Infrastructure Team  
Information Security Team  
Employment Insurance Team  
Human Resources Development Team  
Foreign Workforce Team  
Data Management Team  
Benefit Fraud Monitoring Team

#### Employment Information Research Division

Research Planning & Coordination Team  
Labor Market Analysis Team  
Employment Forecasting Team  
Employment Policy Monitoring Team  
**Employment Panel Survey and Analysis Team**

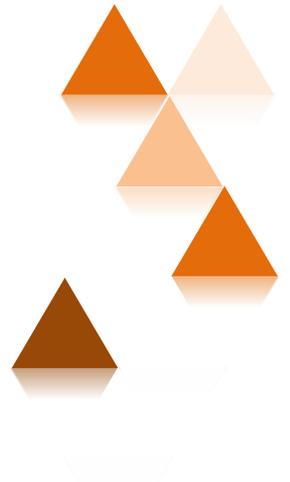
One team leader  
Two associate researchers  
Six senior researchers  
One manager  
Five researchers

#### Planning & Coordination Office

Planning & Budget Team  
Human Resources & Training Team  
Management Support Team  
External Affairs Team



## **II. Background and purpose of GOMS**



# II. Background and purpose of GOMS

## 1. Social background

The worsening of the employment situation for university graduates among the young generation (15-29 years old) is one of the most serious social problems. The situation is that national level socioeconomic loss and economic and mental burdens on graduates and their parents have been aggravated.

Therefore, a survey is conducted on career development and occupational mobility of university graduates to build and analyze the database. The survey is carried out aiming to provide reliable information regarding the relationship between education and the labor market, and to be utilized as a basic material to form policies to overcome the problem of unemployment among highly-educated young people.



As the unemployment problem of highly-educated young people worsens, multilateral policies in response are promoted for supporting a rational and smooth shift into the labor market through analysis of the current situation of the shift into the labor market after graduating from university

# II. Background and purpose of GOMS

## 2. Policy background

**2004: Presented and discussed as a task to improve the human resource supply and demand structure at the Human Resources Development Research Development Planning Group of Office for Government Policy Coordination in November, 2004**



**2005: Adopted as part of the Basic Plan for National Human Resource Development (2005) and the Human Resource Supply and Demand Infrastructure Construction project of the Office for Government Policy Coordination. In October, the promotion of GOMS was reported in the Prime Minister report on the Proposed Improvement Plan for Infrastructure of Human Resource Supply and Demand Outlook**



**2006: Completion of GOMS**

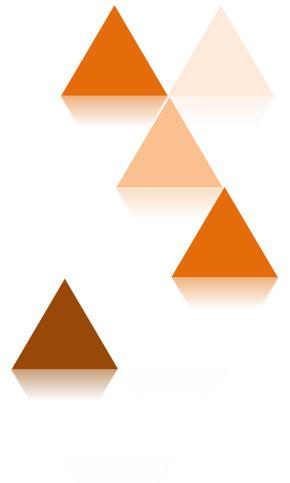
## II. Background and purpose of GOMS

### 3. Survey purpose

- ◆ By conducting a survey on career development and occupational mobility and constructing a database, we attempt to provide basic materials regarding entrance and mobility between education and the labor market, and alleviate the mismatch of human resource supply and demand
- ◆ With the sudden decrease in number of university graduates of the young generation, university restructuring, and policies on higher education such as implementation of the education information public notice system are visualized, the survey provides empirical materials on university graduates' entrance into the labor market and the stabilization process to respond to changes in the university education service market
- ◆ To grasp the relationship between education and the labor market, investigate the factors that affect entrance into and mobility in the labor market, and provide basic materials to form labor policies and human resource supply and demand policies



## **III. Survey design and target of GOMS**



# III. Survey design and target of GOMS

## 1. Survey design (1)

- ◆ **2005 GOMS was constructed in 2006, which was the first year of this project. It conducted a primary survey of 25,000 people, which accounted for about 5% of university graduates in August 2004 and February 2005**
- ◆ **Constructed samples of 26,544 in total for the primary survey, the second survey was completed in 2007, and the third in 2008**
- ◆ **Starting from the Graduates Occupational Mobility Survey in 2007 (2007GOMS), the survey design was changed to a short-term panel survey, where the primary survey and one follow-up survey two years later are conducted**

# III. Survey design and target of GOMS

## 1. Survey design (2)

- Panel survey
- Primary survey
- ◎ Follow-up survey

Graduation year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Class of 2005	●	●	●							
Class of 2006										
Class of 2007			■		◎					
Class of 2008				■		◎				
Class of 2009					■		◎			
Class of 2010						■		◎		
Class of 2011							■			
Class of 2012								■		
Class of 2013									■	
Class of 2014										■

# III. Survey design and target of GOMS

## 2. Population

### ◆ Definition of the target population

- Statistics name: Employment Statistics on Graduates from Institutions of Higher Education
  - Receive lists of graduates that cover about 30% of graduates from universities
- Created by: Korean Education Development Institute (KEDI)
- Year of creation: Every year (the material used most recently was created in 2014)
- Reason for selection as the frame of sample extraction:

Employment Statistics on Graduates from Institutions of Higher Education have been conducted since 2004. From 2006, a database of 560,000 graduates, including those from general graduate schools, have been maintained. These materials provide information that matches the most closely with the target population

# III. Survey design and target of GOMS

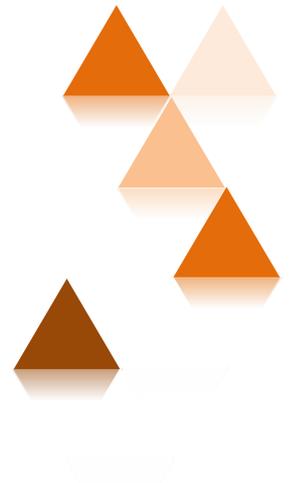
## 3. Sample design

### ◆ Method and process of sample design

- Basically allocation of samples with school department as the stratified variable. Uses the method of sampling with probability proportional to size, so the school location, type of school and gender are considered when extracted
- Allocation method for sample size by department
  - After proportionally allocating the target based on the number of graduates by department (small classification) and allocating the square root, they are compromised
  - After allocating the target with consideration of the coefficient of variation (CV) of employment rate by department using the survey result from the previous year, they are compromised with the allocation result
  - If there are less than 30 people per department in the sample frame, a complete count survey is conducted. If there are less than 30 people as a result of allocation, oversampling is carried out so 30 people are allocated



## **IV. Survey method of GOMS**



# IV. Survey method of GOMS

## 1. Survey method

### Preparatory survey

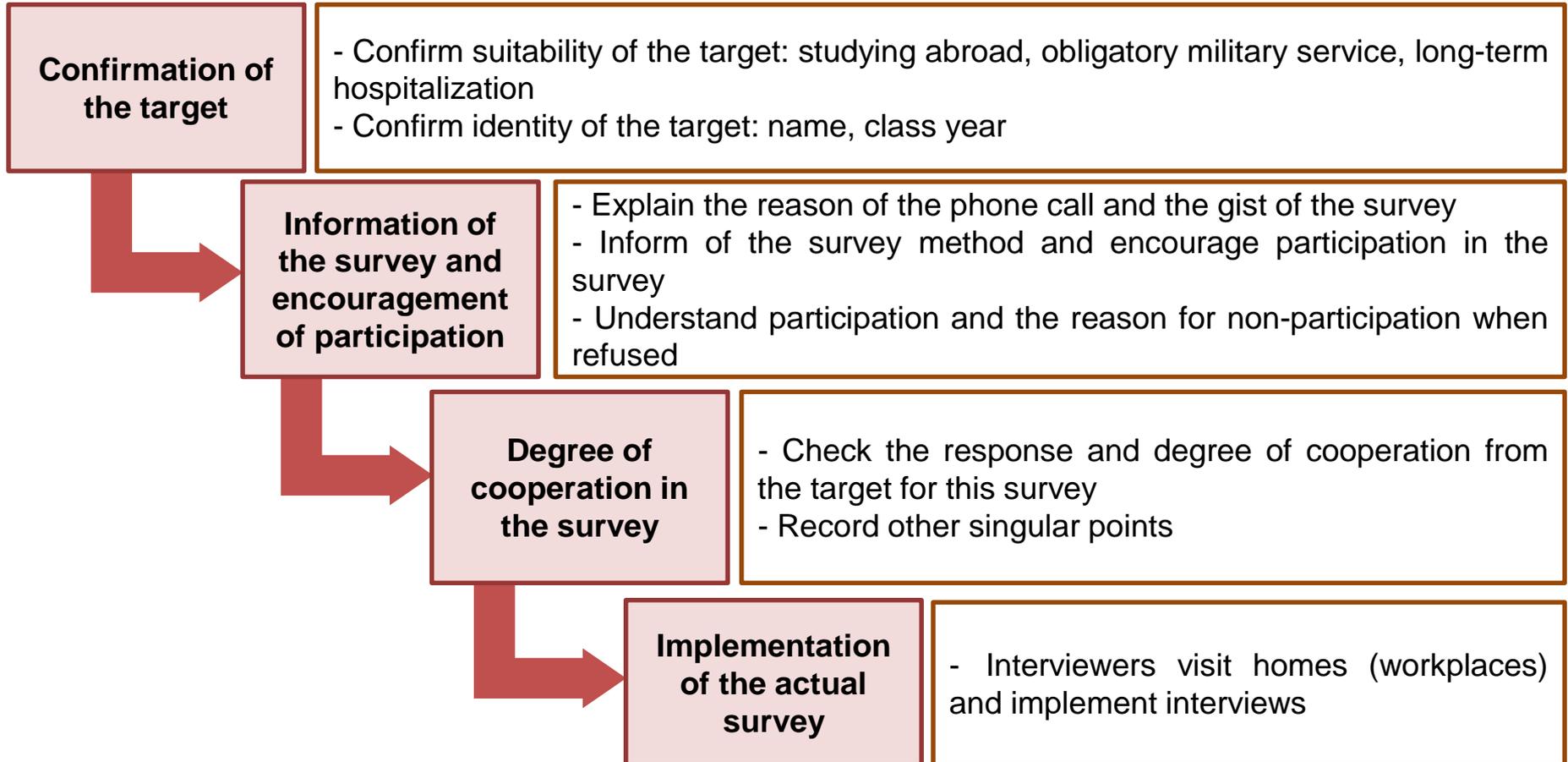
- Survey through CATI (Computer Aided Telephone Interview)
- Implement a primary CATI in order to confirm participation in the survey and accuracy of the sample list extracted by Korean Education Development Institute

### Main survey

- Survey through TAPI (Tablet Aided Personal Interview)
- Implement an interview where the respondent responds to the investigator face-to-face using a tablet PC after an interviewer visits the home (or workplace) of the person intending to participate in the survey

# IV. Survey method of GOMS

## 2. Flow chart of the survey



# IV. Survey method of GOMS

## 3. Survey item (1)

### ◆ Number of survey items: about 420

Survey item	Survey purpose
SQ. Determine the status of economic activities	Calculate employment related indexes such as hiring rate, adoption rate, and unemployment rate
A. Current job	Analysis of the actual condition through grasping the qualitative and quantitative current situation regarding the current job
B. Job hunting	Investigation of the current situation of unemployed people and the jobs they would like in the future
C. Non-economic activities	Analysis regarding latent unemployment
D. First job	Analyze the actual situation regarding the shift into one's first job
E. Job experience	Implement analysis regarding employment mobility through job experience excluding that of first and current jobs
F. School life	Analyze the impact of school life on employment
G. Continuation of study after graduation	Grasp the actual situation of additional study
H. Job experience while in university	Grasp the actual situation of part-time jobs while in university, such as the purpose

# IV. Survey method of GOMS

## 3. Survey item (2)

Survey item	Survey purpose
I. Experience of language training and foreign language exams	Analyze the impact of foreign language skill on employment
J. Goals regarding employment before graduation	Analyze desired jobs and reservation wage while in university
K. Preparation for employment and other matters	Analyze various factors that affect employment
L. Education and training for business skill improvement	Grasp the actual situation of education and training for business skill improvement
M. Acquired qualifications	Analyze the impact of qualification acquisition on employment
N. Preparation for exams	Grasp the current situation of preparation for civil service exams and professional qualification exams
O. Measures for employment of young people	Analyze result of measures for the employment of young people
P. Personal information	Grasp demographic characteristics of this survey

# IV. Survey method of GOMS

## 4. Public Relations (PR) of the Survey

### Online PR



- Korea Employment Information Service website



- Job search websites



- Management of GOMS website

### Publication in newspapers



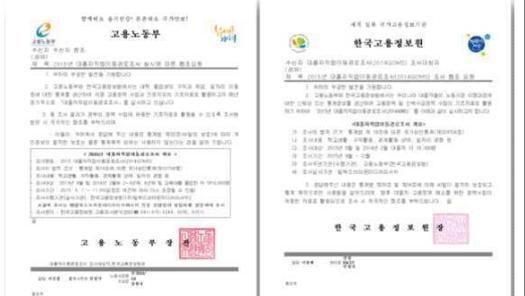
- Distribution of information materials: (August 24, 2015, The Dong-a Ilbo)

### PR at universities



- Putting up posters on bulletin boards at each major university

### Documents on survey implementation



- Distribution of written requests for cooperation in the survey by the Korea Employment Information Service, Ministry of Employment and Labor

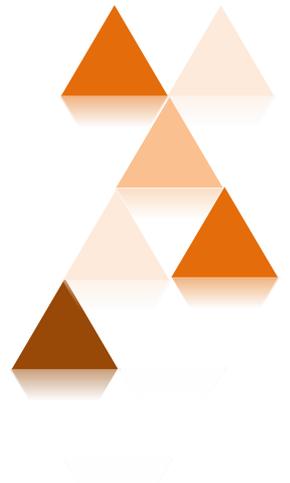
# IV. Survey method of GOMS

## 5. Current status of respondents by year

Graduation year		2006	2007	2008	2009	2010	2011	2012	2013	2014
Respondents (%)	New survey	26,544 (100%)		18,050 (100%)	18,066 (100%)	18,011 (100%)	18,078 (100%)	18,299 (100%)	18,250 (100%)	18,160 (100%)
	Follow-up survey		23,941 (90.5%)	22,584 (85.1%)		14,732 (81.6%)	15,367 (85.0%)	14,799 (82.2%)	15,604 (86.3%)	
Gender	Male	14,218		10,251	10,527	9,647	9,581	9,736	9,323	9,528
	Female	12,326		7,799	7,539	8,364	8,497	8,563	8,927	8,632
Type of school	Two-three years	9,981		5,354	5,239	6,281	5,630	5,460	5,542	5,395
	Four years	15,910		12,611	12,416	11,397	12,169	12,483	12,272	12,325
	University of education	653		85	411	333	279	356	436	440
Sphere	Seoul area	5,901		3,865	3,516	3,885	3,843	3,693	3,809	4,075
	Gyeonggi and Gangwon area	6,746		4,775	4,827	5,263	4,562	5,180	4,699	4,711
	Chungcheong area	3,733		2,533	2,744	2,546	2,734	2,510	2,842	2,904
	Gyeongsang area	6,600		4,397	4,527	3,649	4,539	4,441	4,693	4,299
	Jeolla and Jeju area	3,564		2,480	2,452	2,668	2,400	2,475	2,207	2,171



## **V. Utilization of GOMS**



# V. Utilization of GOMS

## 1. Main utilization field

- ◆ Utilize as a basic material for human resource supply and demand outlook
- ◆ Utilize as a basic material for forming policies on unemployment problems of young and highly-educated people
- ◆ Utilize as objective materials for academic and career counselling
- ◆ Utilize as a basic material for studies regarding inconsistency between area of study and occupation
- ◆ Utilize as a basic material for studies regarding the shift from school to the labor market and stabilization

# V. Utilization of GOMS

## 2. Main users and purpose

- ◆ Government departments such as the Ministry of Labor and Ministry of Strategy and Finance: utilize as a basic material for forming policies related to young people and university graduates
- ◆ Employment Information Service: utilize as a basic material for human resource supply and demand outlook
- ◆ Local government and their affiliated research institutions: utilize for studies relating to local employment and policy formation
- ◆ Various research institutions: utilize as an analysis material for research projects implemented by each institution
- ◆ Graduate students: utilize as an analysis material for writing a thesis for a degree
- ◆ Junior and senior high schools and job placement agencies: utilize as objective statistics for academic and career counselling (recruitment information for university graduates)
- ◆ Nation: Provide an analysis material regarding major problems relating to employment (such as Employment Issues and Employment Panel Briefing)

# V. Utilization of GOMS

## 3. Protection of secrets and security

### ◆ Collection, processing, and custody of materials

- (Material collection phase) Protect secrets according to Article 33 of the Statistics Act (Protection of Secrets)
- (Material input phase) Protect secrets upon receiving a security agreement from the person in charge of material input
- (Material processing phase) Protect secrets according to Article 7 (Management, Supervision, etc. regarding the Outsourcee) of the Personal Information Processing Outsourcing Agreement
- (Material storage phase) Store materials according to the statistics management rule of the Korea Employment Information Service

### ◆ Material to be delivered

- Delete personally identifiable survey items (such as university names, addresses, email addresses, phone numbers, and business entity names (company names))

### ◆ Prevention of loss, outflow, and damage in the collection, processing, and custody stage of materials

- Give an ID and password to each respondent: a measure to prevent access by other people in the survey program when the tablet PC is connected to the said program
- Immediate transfer of survey results: maintain survey results in the case of loss, damage, etc. of the tablet PC by immediately sending results to the computer at the headquarters after completing the survey
- Authorize material processing: a measure to prevent loss, outflow, and damage of the materials by giving authority to the relevant persons on material processing and storage

# V. Utilization of GOMS

## 4. Application examples in policies (1)

**Supportive policies for employment of university graduates**

- **Have been working on industry-university cooperation in a focused manner from 2002 in order to improve the employment rate of university graduates**
  - Leaders in INdustry-university (college) Cooperation (LINC)
- **Supportive functions for employment and business start ups for university students are strengthened, and some good results have been achieved. Most of the companies are satisfied with the LINC project**
- **However, the problem that employment support policies like this focusing on job creation and qualitative increase and supplier- and science-and-technology-student-centered becomes actualized**

**Job shortage for students of humanities and aggravated inconsistency between their area of study and occupation after employment**

- **As job shortage for the young generation worsens, job shortages and inconsistencies between employment and area of study for students of humanities and social sciences are posed as a problem**
- **As a result of confirmation through GOMS, there is a low rate of consistency between the employment rate and area of study for students of humanities and social sciences (Oh, et al., 2014)**
- **Due to the low employment rate of students of humanities and social sciences, avoidance of studying humanities and social sciences caused by that, and apprehension that the situation for those studies would get worse, there is demand to strengthen employment support for students who study humanities and social sciences**

## 4. Application examples in policies (2)

**Policies for employment support for students of humanities and consistency between employment and area of study**

- **Direction of improvement in employment support policies**
  - Improvements to be made with a focus on “employment quality improvement such as the elimination of inconsistency with the area of study, student-centered, and support for students struggling with job shortages” with the policies “focusing on job creation, company-centered, and science-and-technology-centered)”
- **Improvement in management of Employment Academy for Young People**
  - Employment support program operating cooperatively with participating companies to develop human resources that can be well adapted to the work site by providing curriculum (theory and on-the-job training) that is needed in the industrial world
  - Improve the current management style that focuses on science and technology students, and operate a model that specializes in humanities and social sciences, entitles graduates of humanities to enter into programs mainly for current students, curriculums where humanities and science and technology are fused and compounded, and long-term program targeting students of humanities
- **Improve operation of the job-study parallel system in four-year universities**
  - Long-term on-the-job training system operating cooperatively with companies, where university terms (first and second semesters) and systematic on-the-job training are done in parallel (Industry Professional Practice, IPP)
  - Increase the number of target universities from 13 in 2015 to 25 in 2016 and 60 in 2017, and expand from current operation centering on science and technology to include humanities and social sciences



# References

National Statistical Office (2016). *The Graduates Occupational Mobility Survey Statistics Report*. National Statistical Office.

Oh, et al. (2014). *Study on Proposed Policies for Youth Employment Promotion*. Korea Research Institute for Vocational Education and Training.

Korea Employment Information Service (2017). <http://survey.keis.or.kr/goms/goms01.jsp>. Access on October 13, 2017.

Korea Employment Information Service (2017).

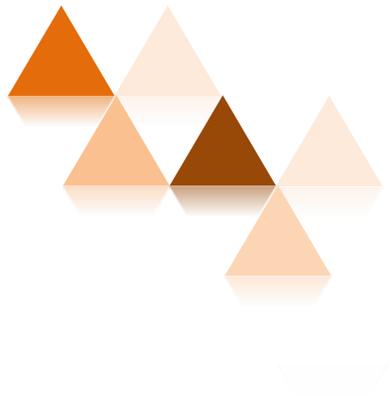
[https://www.keis.or.kr/user/staff/main/staff/1670/NR\\_OrganList.do](https://www.keis.or.kr/user/staff/main/staff/1670/NR_OrganList.do). Access on October 13, 2017.

Korea Research Institute for Vocational Education and Training (2017). <http://krivet.re.kr/ku/ha/kuCAADs.jsp>. Access on October 13, 2017.

Korean Education Development Institute (2017). <http://swiss.kedi.re.kr>. Access on October 13, 2017.

Korean Ministry of Education and Korea Research Institute for Vocational Education and Training (2016). *Survey on New Graduates with a Doctoral Degree in the First Half of 2017: Implementation Plan*.

Korea Institute of Science and Technology (2017). <http://kcdh.stepi.re.kr/portal/intro.do>. Access on October 13, 2017.



# Thank You

[gloriachu@krivet.re.kr](mailto:gloriachu@krivet.re.kr)

