Global Competency and K-CESA (Korea Collegiate Essential Skills Assessment)

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I. Quality Issues of Higher Education and Core Competence
1. Criticism on Quality of Higher Education in Korea

- Strong criticism by industry on competence of graduates of colleges and universities

- Lower ranks in the international evaluation of Korean universities
2. Change of Policy of Higher Education(1)

- Needs to transform the higher education paradigm from selection to education
- From quantity to quality
- Quality, Educability, Value-added change

Recent Policy: Enhancement of University Education Capacity Program
ACE(Advancement of College Education Project)
3. Why core competence for quality of higher education?

- Developing core competence of students is one of main functions of higher education
  - Core competence: knowledge, skills, attitude, motivation, self-concept, and experience which are required commonly by diverse jobs at various workplace
  - High core competence of graduates of higher education is strongly needed by workplace

- Strong need for quantitative evidence on learning outcome (educational performance) of higher education institutions
  - No systematic tools to evaluate educational performance of colleges and universities
  - Weak signal of GPA of colleges resulting from grade inflation (More than 60% of students get A)
  - Evaluation of core competence of students/graduates can be utilized as one of important indicators for educational performance
II. K-CESA: Composition and Development
1. Background of K-CESA

- **K-CESA**: Korea Collegiate Essential Skills assessment

- **Goals of K-CESA**
  - **For higher educational institutions**
    - to improve quality of education by strengthening curriculum/program to develop core competence in universities
  - **For Individual**
    - to help college students examine their core competence levels and to improve their job readiness and chances for employability
2. Development of K-CESA

- Process (2006-)
  - '06: Study on the validity of assessment of core competence
  - '07: Definition and Selection of core competence
  - '08-'09: Development of assessment tools, development of web based assessment system, pilot study (1,200 students from 10 colleges)
  - '10 -: Utilizing K-CESA (100,000 students from 90 universities and colleges)

- Organization: Korea Research Institute for Vocational Education (2007-)
3. Definition and Selection of competences(1): Criteria of selection

- Can be developed from university education (learning outcomes)
- Common competence, not biased depending on major fields
- Strong demand from industry and work place
- Can be assessed
- Based on previous studies and Delphi survey on the definition and selection
3. Definition and Selection of competences(2)
6 Competences of K-CESA

- Communication
- Interpersonal & Cooperative skills
- Resources-Information-Technology Processing & Application
- Global competency
- Higher-Order Thinking Skills
- Self-Management
4. Constructs of Core Competences(1)

<table>
<thead>
<tr>
<th>Core Competence</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>• Listening &amp; understanding</td>
</tr>
<tr>
<td></td>
<td>• Communication &amp; presentation</td>
</tr>
<tr>
<td></td>
<td>• Discussion and moderation</td>
</tr>
<tr>
<td>Resources-Information-Technology</td>
<td>• Resources processing and application</td>
</tr>
<tr>
<td>Processing &amp; Application</td>
<td>• Information processing and application</td>
</tr>
<tr>
<td></td>
<td>• Technology processing and application</td>
</tr>
<tr>
<td>Higher-order Thinking</td>
<td>• Critical thinking</td>
</tr>
<tr>
<td></td>
<td>• Analytical thinking</td>
</tr>
<tr>
<td></td>
<td>• Evaluative thinking</td>
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<tr>
<td></td>
<td>• Alternative thinking</td>
</tr>
</tbody>
</table>
### Constructs of Core Competences (2)

<table>
<thead>
<tr>
<th>Core Competence</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal &amp; Cooperative Skills</td>
<td>• Work with diversity, teamwork</td>
</tr>
<tr>
<td></td>
<td>• Leadership</td>
</tr>
<tr>
<td></td>
<td>• System thinking</td>
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<tr>
<td>Self-management</td>
<td>• Self-directed learning</td>
</tr>
<tr>
<td></td>
<td>• Goal-oriented planning and organization</td>
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<tr>
<td></td>
<td>• Personal, social, civic responsibility</td>
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<tr>
<td></td>
<td>• Emotional self-control</td>
</tr>
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<td></td>
<td>• Occupational ethics</td>
</tr>
</tbody>
</table>
## 4. Constructs of Core Competences (3)

<table>
<thead>
<tr>
<th>Core Competence</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global Competency</strong></td>
<td>• Flexible Attitude for difference and diversity</td>
</tr>
<tr>
<td></td>
<td>• Knowledge of the different culture and society</td>
</tr>
<tr>
<td></td>
<td>• Knowledge of global economy and globalization</td>
</tr>
</tbody>
</table>
### 5. Web-based System (1): Assessment Methodology of 6 Competences

<table>
<thead>
<tr>
<th>Areas of core competency</th>
<th>No of questions</th>
<th>Test format</th>
<th>time (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening and understanding</td>
<td>10</td>
<td>Multiple choice</td>
<td>15</td>
</tr>
<tr>
<td>Discussion and moderation</td>
<td>10</td>
<td>Multiple choice</td>
<td>20</td>
</tr>
<tr>
<td>Reading</td>
<td>10</td>
<td>Multiple choice</td>
<td>15</td>
</tr>
<tr>
<td>Writing</td>
<td>1</td>
<td>Perform. Testing</td>
<td>20</td>
</tr>
<tr>
<td>Speaking</td>
<td>1</td>
<td>Perform testing</td>
<td>8</td>
</tr>
<tr>
<td><strong>Resour-Infor.-Techno Process&amp; Applic.</strong></td>
<td>30</td>
<td>Multiple choice</td>
<td>45</td>
</tr>
<tr>
<td><strong>Higher-order thinking</strong></td>
<td>8</td>
<td>Essay</td>
<td>90</td>
</tr>
<tr>
<td><strong>Global Competency</strong></td>
<td>58</td>
<td>Multiple choice</td>
<td>50</td>
</tr>
<tr>
<td>Interpersonal &amp; Cooperative Skills</td>
<td>59</td>
<td>5-point scale</td>
<td>10</td>
</tr>
<tr>
<td>Self-management</td>
<td>60</td>
<td>5-point scale</td>
<td>15</td>
</tr>
</tbody>
</table>

A computer-assisted test in order to increase the accessibility of the system and efficiency of scoring.
5. Web-based System(3): The result of K-CESA

The results of the assessment: an example for individual students

Result: Excellent(4), Good(3), Medium(2), Weak(1)
III. Core Competence Level of Korea College Students through K-CESA
1. Overview: Findings from K-CESA data

- Data of 100,000 students from 90 institutions since 2009
- Clear difference among colleges in Seoul metropolitan area and those in other areas
- Notable difference between grades
- Significant difference between major fields
2. Difference of core competence level by grades: Clear tendency to increase by grade level

Freshman Sophomore Junior Senior
52.22 51.92 51.36 51.49 51.60 51.86
51.40 50.92 50.70 50.29 50.57 50.76
49.37 49.49 49.57 49.67 49.67 49.87
47.01 47.64 48.36 48.55 48.17 47.51

Self-Management Interpersonal Resource-Information-Technology Global Communication High-ordered Thinking
2. Characteristics of Global Competency

- Data of 2012-2013 from 28,000 students of 75 institutions

- Clear difference between groups (regions, grades, study fields, genders)
  - students of universities/colleges in Seoul metropolitan area than other local ones areas
  - 4th grade > 3rd grade > 2nd grade > 1st grade
  - humanistic/Social > Engineering
  - Students with more global experience > those with less
  - Smaller difference in flexibility attitude than in knowledge aspects
Global Experience and Global Competency

- Flexibility
- Culture Knowledge
- Global Experience
- Global Competency

Legend:
- Low
- Medium
- High
- Very High
IV. Utilization of K-CESA Results
IV. Utilization of K-CESA

Results(1): Curriculum Improvement Based on K-CESA

- Competence-based curriculum development
  - Jeju National University reformed the liberal arts courses based on 6 core competences
  - develop textbooks and set requisite elective courses for freshmen

- Pre-test and Post-tests comparison for evaluation of courses or programs
V. Issues and Challenge
V. Issues and Challenge: Lessons from K-CESA(1)

- **Enhance validity of K-CESA**
  - Need more items
  - More data needed
  - Need supplementary diagnosis tools (such as assessment -center test)
  - Refine assessment tools
  - Examine of predictability of K-CESA

- **International comparison**
  - Need to compare students in other countries
  - Comparison of global assessment such as A-HELO
V. Issues and Challenge: Lessons from K-CESA(2)

- Active utilization of K-CESA results for improving educational practice
  - Strong interest in current competence level in comparison to other university but low interest in feeding the results into educational activities
  - Need to develop competence based curriculum and educate professors on competence development

- Web-based test: limit and possibility
  - High accessibility
  - but low participation and high probability of faking
  - Balance between risks and stakes
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<Research>
-Life-long Career Development
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Thank You!