Higher Education Assessment and Quality Assurance

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What Works Conference on
Quality of Teaching in Higher Education
OECD-IMHE 12-13 October 2009   Istanbul Technical University
Why is Quality the Issue?

Globalization
Knowledge Economy

Universalization of Higher Education

Changes in the Motivation among Youth

Require needs for skills in labor force

Increase in social costs

Waning readiness of students

Qualitative restructuring of higher education

Relevance
Assurance, Evaluation, Accountability
Effective Teaching/Learning

Increase in social costs
Waning readiness of students

Effective Teaching/Learning

Assurance, Evaluation, Accountability

Relevance

Qualitative restructuring of higher education
Quality Assurance and Improvement

- **What to “assure” ?**
  - Minimum level outcome
    - Feasible?
  - Minimum level of value added
    - Feasible?

- **What can be assured**
  - University tries best to improve education
  - The effort is based on evidence
    - Clear Objective
    - Instruments to assess the effectiveness
Elements of Assurance/improvement

- **Shift in Perspective**
  - Teaching → Learning
  - Idea/Efforts → Results
  - Autonomy → Systematic Control/Accountability

- **Means of Quality Enhancement**
  - Assessment
  - Control / Management

- **Regimes of Assessment and Control**
  - Assessment - Object
    - Input, Process, Outcome
  - Control - Agent
    - HE institution, Government, Intermediary Bodies
  - Combination of the two axis
Contents

1. Mechanisms for Quality Assurance/Enhancement
2. Problems in Undergraduate Education
3. Teaching Practices and Their Effectiveness
Models of Quality Assurance

- **Feedback**
  - Assessment
  - Control

- **Assessment**
  - Input — Process — Outcome

- **Control**
  - Macro — Government, Market
  - Mezo - HE Institution, Associations
  - Schools, Curriculum, Teaching Practices
Classical Model

A. Institution

B. Consortium

C. Government

Governmental Exam

Accreditation

Institutional Autonomy

Teaching

Learning

Assessment

Input
Classical Model to Outcome Assessment

- Criticism against classical model
  - Tends to protect HE institutions
  - Lack of concern on learning

- Rising Interest on Outcome Assessment
  - Concern about results
    - 1990s - Development of standardized tests
    - 2008 - OECD Assessment of Higher Education Learning Outcomes (AHELO)プロジェクト
  - Outcome assessment by fields
    - College Basic Academic Subjects Examination (College BASE)
  - Test of General Skill and Competence
    - Collegiate Learning Assessment (CLA),
    - College Assessment of Learning Proficiency (CALP),
    - Measure of Academic Proficiency and Progress (MAPP)
Outcome Assessment Model

A. University

Classroom Practices

Teaching

Learning

Assessment

1 Input

3 Outcome
Problemes of Outcome Assessment

- **Measurement**
  - **Academic-Subject Test**
    - Consensus among experts?
    - Can professional competence measurable?
  - **Competence Test**
    - Arbitrariness
    - Can not be separated from innate ability

- **Feasibility of measurement**
  - Lack of incentive to work on problems

- Difficult to feed back on classroom teaching
Process evaluation

A. University

B. Associations

C. Government

1A 2A 3A

1B 2B 3B

1C 2C 3C
Process Monitoring

- Monitoring of learning process
  - Monitoring
    - Learning experiences,
  - US
    - National Survey on Student Engagement (NSSE), California Consortium
  - Japan
    - U. Tokyo (CRUMP) survey
    - 120 institutions, 48 thousand students
- As evidence to support primary and secondary education
  - Comparison across institutions can be very useful
Contents

1. Mechanisms for Quality Assurance/Enhancement
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Pedagogies of Undergraduate Education

- Humboldtian
  - Student as an independent researcher
  - Freedom of Learning
  - Spontaneous Exploration

- American
  - Students should be taught
  - Explicit goals of teaching
  - Mastery of the contents

Assumption
- students know what they want
- highly motivated

Becoming less realistic
Strategies for Consolidation

- Shift in Perspective
  - Teaching → Learning
  - Idea/Efforts → Results
  - Autonomy → Systematic Control/Accountability

- Means of Quality Enhancement
  - Assessment
  - Control / Management

- Regimes of Assessment and Control
  - Assessment - Object
    - Input, Process, Outcome
  - Control - Agent
    - HE institution, Government, Intermediary Bodies
  - Combination of the two axis
Classical Models

- Humboldtian Idea
  - Academic Freedom - Lehrfreiheit
  - Freedom of Learning – Lernfreiheit
  - No explicit assessment or control

Modern University

Institutional Autonomy
  - Assessment and control through academic governance

- Government Control
  - Control through Budget Allocation, Inspection

- Accreditation
  - Assessment and Control through Intermediary Bodies
Classical Models

A. HE Institution
- Faculty

B. Intermediary Bodies

C. Governments

Government Control

Accreditation

Academic Autonomy

Teaching → Assessment

1 Inputs

Learning
Outcome Assessment

- Criticisms against Classical Models
  - Lack of information on outcomes
  - Insufficient information and incentive for change
  - Can not achieve efficiency

Alternative – Outcome Assessment and Control

- Assessment of Outcomes
  - Standardized instruments for measurement
  - Academic Disciplines, Generic Skills

- Control
  - Government through budget allocation
  - Intermediary organization
  - Institution
Outcome Assessment and Control

A. HE Institution
   Faculty

B. Intermediary Bodies

C. Governments

1A  2A  3A
1B  2B  3B
1C  2C  3C

Assessment
1 Input  2 Process  3 Outcome

Teaching Learning
Process Monitoring and Control

- **Problems of Process Monitoring**
  - Relevance of Instruments
  - Cost and Reliability of Measurement
  - Information for Effective Control and Management

**Missing Link**

**Process Monitoring**

- **Assessment of Learning Processes**
  - Students’ perception and motivation
  - Behavioral patterns, time spent for studying, behaviors outside class
  - Reactions to different types of teaching
Process Evaluation and Control

A. HE Institution
  Faculty

B Intermediary

C. Governments

Control

Teaching Learning

Assessment

1 Input

2 Process

3 Outcome
Why Process Monitoring is important

- Learning as matching between teaching and learning
- Students
  - Increasing diversity
  - Unclear motivation to learn
  - Increasing uncertainty in building career perspective before admission
- Teaching
  - Still based on Traditional Academic Disciplines
  - Remaining influences of Humboldtian Idea
  - Target of teaching is narrowly defined
Contents

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Typology of Students

I. High Consonance
- Mature, Strong Identity with Institutional Objective

II. Independent
- Mature, but Low Identity with Institutional Objective

III. Conformist
- Less Mature, Accepts Institutional Objective

IV. Marginal
- Less Mature, Low Identity with Institutional Objective

Clear Personal

Range of Institutional Objective
High consonance is minority regardless selectivity
Learning Time

U.S.: emphasis on (1)
Japan: Emphasis on (2), (3), (4)

Control of learning

Exploration

(3) Independent Research

Mastery

(1) Course Work

(4) Spontaneous Learning/Reading

(2) Preparation for State/Professional Examination

Autonomy of learning
Time Spent for Course Work

Distribution of Students

- Japan
- U. Tokyo
- U. California

Hours Distribution:
- 0 hours
- 1-5 h
- 6-10 h
- 11-15 h
- 16-20 h
- 21-25 h
- 26-30 h
- 31 h or more

Locations:
- Japan
- U. Tokyo
- U. California
Total Time Spent for Learning

The differences are less pronounced
But, still differences
*Independent research at 4th year is not included
Courses that Students Appreciate

Mastering basics ranks the first in any type of institution

[Graphs showing preferences across different institutions for various aspects like Research in fronteer, Skillful teaching, Suggestion for career, Broaden social perspective, Helps master basis of Discipline, Humanities, Social Sciences, Sciences, Engineering, etc.]

U.Tokyo, U.A., U.B., Others
1. Mechanisms for Quality Assurance/Enhancement
2. Problems in Undergraduate Education
3. Teaching Practices and Their Effectiveness
Alternatives to enhance Learning

- Control of Learning
  - Strict enforcement of attendance
  - Rigorous examination
  - Frequent papers and quiz

- Elaborate Teaching
  - Contents to raise students interest
  - Explanations to help understanding

- Participatory Teaching
  - Students presentation
  - Written comments on papers
  - Group work
Strict Enforcement of Attendance

common

<table>
<thead>
<tr>
<th>Category</th>
<th>U.Tokyo</th>
<th>U.A.</th>
<th>Others</th>
<th>U.Tokyo</th>
<th>U.B.</th>
<th>Others</th>
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<tr>
<td>Humanities, Social Sciences</td>
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<tr>
<td>Very Rare</td>
<td>10.3%</td>
<td>15.6%</td>
<td>2.6%</td>
<td>2.8%</td>
<td>11.6%</td>
<td>9.2%</td>
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<tr>
<td>Uncommon</td>
<td>27.3%</td>
<td>64.0%</td>
<td>17.9%</td>
<td>22.6%</td>
<td>47.0%</td>
<td>53.2%</td>
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<tr>
<td>To an extent</td>
<td>53.2%</td>
<td>41.7%</td>
<td>48.9%</td>
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<tr>
<td>Sciences, Engineering</td>
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Efforts to help understanding

- Very rare
- Uncommon
- To an extent
- Frequent

Humanities, Social Sciences

- U. Tokyo: 4.5%, 3.9%, 4.8%, 5.3%, 9.6%, 4.5%
- U. A.: 27.0%, 30.8%, 30.1%, 33.9%, 41.6%, 30.4%
- Others: 62.2%, 60.4%, 59.1%, 56.5%, 45.3%, 59.5%

Sciences, Engineering

- U. Tokyo: 6.3%, 4.9%, 6.1%, 4.3%, 3.5%, 5.6%
- U. B.: 30.8%, 30.1%, 33.9%, 41.6%, 30.4%, 56.5%
- Others: 4.5%, 3.9%, 4.8%, 5.3%, 9.6%, 4.5%
Group Work

意見を求められた 一 少ない

Humanities, Social Sciences

Sciences, Engineering
### What Augments Learning Time

#### Effects of teaching on learning time

<table>
<thead>
<tr>
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<th>Sciences / Engineering</th>
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<tbody>
<tr>
<td>Require Attendance</td>
<td>-1.849</td>
<td>3.587</td>
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<tr>
<td>Frequent Quiz</td>
<td>-2.522</td>
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<tr>
<td>Raise Curiosity</td>
<td>1.907</td>
<td>1.976</td>
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<tr>
<td>Helps Understanding</td>
<td>1.925</td>
<td>1.141</td>
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<tr>
<td>Comments on Paper</td>
<td>3.995</td>
<td></td>
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<tr>
<td>Active Participation</td>
<td>3.174</td>
<td>2.429</td>
</tr>
<tr>
<td>Group Work</td>
<td>2.840</td>
<td>3.249</td>
</tr>
</tbody>
</table>

*All figures significant at 99% Level

- **Teaching approach effective**
- **Participation effective**
Study abroad

% Experienced Study Abroad

Effects of experience of abroad on learning time

<table>
<thead>
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<tr>
<td>5.917</td>
<td>5.528</td>
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Effectiveness missing
What the Monitoring Data Tells

- Certain teaching practices are still not practiced widely
- Some practices are effective in inducing learning
  - But the effects vary among institutions
  - Needs further investigation
- Monitoring can be an effective instrument in the discussion of qualitative improvement
Your comments please