University Education Reform Caused by General Education in China

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Profile of BIT

• An open, public, research-oriented, comprehensive university
• The annual research fund ranks top 10 among the universities in China.
• Launching strategic partnerships with over 203 universities from 60 countries and regions
<table>
<thead>
<tr>
<th>School of Aerospace Engineering</th>
<th>School of Life Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Mechatronical Engineering</td>
<td>School of Mathematics</td>
</tr>
<tr>
<td>School of Mechanical Engineering</td>
<td>School of Physics</td>
</tr>
<tr>
<td>School of Optoelectronics</td>
<td>School of Chemistry</td>
</tr>
<tr>
<td>School of Information and Electronics</td>
<td>School of Management &amp; Economics</td>
</tr>
<tr>
<td>School of Automation</td>
<td>School of Humanities and Social Sciences</td>
</tr>
<tr>
<td>School of Computer Science</td>
<td>School of Law</td>
</tr>
<tr>
<td>School of Software</td>
<td>School of Foreign Languages</td>
</tr>
<tr>
<td>School of Materials Science &amp; Engineering</td>
<td>School of Design and Arts</td>
</tr>
<tr>
<td>School of Chemical Engineering &amp; Environment</td>
<td>School of Education</td>
</tr>
</tbody>
</table>

4 academic divisions
10 disciplines
20 schools
20 schools
# Profile of BIT

**Education Scales in 2016**

<table>
<thead>
<tr>
<th>Employees</th>
<th>3,538</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time Faculty</td>
<td>2,142</td>
</tr>
<tr>
<td>Staff</td>
<td>1,396</td>
</tr>
</tbody>
</table>

![Pie chart showing the breakdown of employees, with percentages:
- Professors: 42%
- Associate Professors: 20%
- Lecturers & Assistant Teachers: 38%]
## Full-Time Students 28661

<table>
<thead>
<tr>
<th>Students Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>undergraduate</td>
<td>15363</td>
</tr>
<tr>
<td>Masters</td>
<td>8402</td>
</tr>
<tr>
<td>Ph.D Candidates</td>
<td>3320</td>
</tr>
<tr>
<td>overseas</td>
<td>1576</td>
</tr>
<tr>
<td>preppy</td>
<td>678</td>
</tr>
</tbody>
</table>
Outline

◆ The Concept and History of General Education in China
◆ Three Reforms Caused by General Education
  1. Changed Idea
  2. Revised Curriculum
  3. Reform the cultivation mode
Part 1

The Concept and History of General Education in China
1.1 Concepts

• Many related or similar concepts
• **China**: Quality-oriented education, Cultural quality education,
• **China HK, Taiwan**: whole-person education, all-round education, General education
• **USA**: general education, liberal education
• **Ancient Greece**: liberal education

• **Suzhi Education covers**
  liberal+general education, whole-person, all-round education...
General Education in Different Countries and Ages

- **Ancient Greece**
  - Liberal education

- **Beginning of 20th Century**
  - US-general education

- **1984**
  - China Taiwan - Whole-person education

- **1947**
  - Japan - General education

- **1990s**
  - China - Suzhi education

- **1994**
  - China - Whole-person education

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**Country/Region**

- 古希腊
  - Ancient Greece
  - Liberal education

- 美国
  - US
  - Beginning of 20th Century
  - General education

- 中国
  - China
  - 1990s
  - Suzhi education

- 日本
  - Japan
  - 1947
  - General education

- 中国香港
  - China HK
  - 1984
  - Whole-person education

- 中国台湾
  - China Taiwan
  - 1984
  - Whole-person education

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**Times**

- 古希腊 (Ancient Greece)
- 美国 (US)
- 中国 (China)
- 日本 (Japan)
- 中国香港 (China HK)
- 中国台湾 (China Taiwan)
1.2 Suzhi Education

• Suzhi ---- central concept to contemporary Chinese education since 1980s

• Comprehensive Quality, including moral, intellectual, physical and aesthetical, ability and skill

• No single English term fully catches its nuances.

• Suzhi Education

• The mission of education should instruct students not just knowledge, ability, skills but also how to be good citizen, improving the comprehensive quality of all students.
General Education & Suzhi Education

• The ideas and goals are the same, which concentrate on cultivating a whole-person
• Contents of Suzhi education are more wider and comprehensive, while general education focus on all students to learn GE courses, covered the humanity, social and natural science knowledge.
• The practice ways of sushi education are more diverse,
• Including formal course, extracurricular activities, service learning, etc.
• In a sense, Suzhi education is a Chinese liberal education and general education, and general education courses are the most important way to practice suzhi education.
1.2 History of Suzhi Education in China

• Before 1952:
  • We actually ever emphasized on general education. Many scholars and presidents at that time ever studied in Europe or USA.
  • such as 蔡元培 Cai Yuanpei (Peking University),
  • 梅贻琦 Mei Yiqi (Tsinghua University),
  • 竺可桢 Zhu Kezhen (Zhejiang University),
  • 潘光旦 Pan Guangdan, 徐特立 Xu Teli (BIT) etc.
  • They brought back western general education ideas, and advocated it in China.
1.2 History of *Suzhi* Education in China

- **1952—1978:**
  - In the 1950s, along with the demands of new China's rapid industrialization, Chinese universities learned from the Soviet Union's experience and emphasized specialist education, and narrowed the knowledge. Thus, general education gradually disappeared in China.
1.2 History of Suzhi Education in China

• 1978—1995:
  • Accompany with China Reform and Opening, we found that the over-narrow specialized education cause a lot of problems, such as emphasized too much on science and technology education and ignoring humanity and art education. Graduates were lack of creativity, Narrow vision.
  • Then general education was second broadcasted in China and Suzhi education were brought into the light.
1.2 History of *Suzhi* Education in China

1995-Now

Government (MOE) came up with an idea called *Suzhi education*, culture-oriented quality education. Its main purpose was to balance over-narrow specialized education in universities and colleges:

- All universities began establish general education curriculum, desired students in science and engineering to learn more humanity, history, philosophy and art, while students in liberal arts to learn more natural science,
- To improve all students’ cultural taste, aesthetic taste, humanistic quality and scientific quality.
Part 2

Three Reforms of University Education Caused by General Education
General Education and University Education Reforms

• Beginning from the 1990s, *sushi and GE* education caused great reform in university education.

• There are mainly three aspects
2.1 The idea of education changed profoundly

- 1950, emphasized the important role of science and technology, specialized training, narrow knowledge
- 1990s, coined the slogan *suzhi* education
- The basic goal of education system reform is to raise the comprehensive quality of all students.
- Universities should not just train specialists but cultivate the educated men.
2.2 Revised the Undergraduate Curriculum

• Changed the Structure of Curriculum

• Methods:
  • Enlarging out-class activities greatly
  • Enforcing general education curriculum,
  • Broadening students’ vision
  • Training critical thinking and creativity.
  • Improving their knowledge structure
  • Balancing general education and professional education.
### general education/suzhi education structure

<table>
<thead>
<tr>
<th><strong>Formal curriculum of general education (Common basic courses)</strong></th>
<th><strong>Common required courses</strong></th>
<th><strong>Ideological courses, 14 credits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>68 credits</strong></td>
<td>English 12 credits, computer 6 Physical Education 6 Math, physics, chemistry together 30 credits</td>
</tr>
<tr>
<td></td>
<td><strong>Elective courses of general education</strong></td>
<td>several categories, about 200 courses each year, 8 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Extra-curricular activities</strong></th>
<th><strong>Lectures reading great book S&amp;T competition</strong></th>
<th><strong>Cultural clubs activities school cultures Culture, arts, and sports activities Social practice</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Social practice</strong></td>
<td>volunteer service</td>
</tr>
</tbody>
</table>
GE Curriculum in BIT

• Required courses 14 credits, including: politics, philosophy, ethics, laws, etc.

• **Elective courses of GE**, All Students are required to choose 4 courses, 8 credits, for the BA degree.

• There are more than 200 courses each year.

• Five categories:
  • 1. literature and arts
  • 2. history and society
  • 3. philosophy and life
  • 4. maths and scientific quality
  • 5. technology and society
# BA Curriculum in MIT

<table>
<thead>
<tr>
<th>Course Categories</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Institute Requirements (GIRs)</td>
<td>17 courses account for 50% of total courses.</td>
</tr>
<tr>
<td>Humanities, Arts, and Social Sciences (HASS)</td>
<td>8 courses (Including 2 courses Communication Requirement, CR)</td>
</tr>
<tr>
<td>(REST)</td>
<td>2 courses (laboratory course), 1 course</td>
</tr>
<tr>
<td>Others</td>
<td>(PE) 8 units, 4 courses</td>
</tr>
<tr>
<td>Departmental Program</td>
<td>Required Subjects 42 units</td>
</tr>
<tr>
<td>180 units</td>
<td>Restricted Electives 90 units-120</td>
</tr>
<tr>
<td></td>
<td>Unrestricted Electives 48 units</td>
</tr>
<tr>
<td></td>
<td>natural science 6 courses: 1 biology, 1 chemistry, 2 physics, 2 calculus.</td>
</tr>
</tbody>
</table>
BIT VS. MIT structure of Bachelor-Degree Required Credits

**BIT credits structure**

- 专业课: 54%
- 自然科学 基础: 21%
- 人文社科: 21%
- 体能: 4%

**MIT credits structure**

- 专业课程: 44.7%
- 人文艺术 社会科学: 21.1%
- 自然科学 技术: 23.7%
- 体育: 10.5%
2.3 Reform the undergraduate cultivation mode

- Some universities explored a new undergraduates education way: “professional education based on general education with a wide range of knowledge”.

- Foster the aims of general education through reforming the organizational structure of the university and management system innovation.
How to Change?

University Structure

Professional schools 1, 2, 3…

Facility

Doctoral students

Graduate students

Resources

Undergraduate students

possess

Liberal arts college

General education college

Residential college

Part of Undergraduate students
Why to do so?

• Resolve the long existing problem:
• Most professional faculties prefer to do research, but not teaching
• Many students prefer to study useful major courses but not GE courses.
• Universities have largely abrogated their basic function of educating students and alter to researching and other things.
liberal education college

• 北京大学元培学院，2001
• Yuanpei College, Peking University
• 复旦大学本科生院（复旦学院），2005–2012
• Fundan College, Fundan University
• 浙江大学本科生院/求是学院，2008
• Undergraduates college, Zhejiang University
• 北京理工大学基础教育学院，2007
• Liberal education College, Beijing Institute of Technology
• 中山大学博雅学院，2008
• Liberal Arts College, Sun Yat-Sen University
Some Reform Cases

- 西安交通大学12个书院，2005
- 12 Residential Colleges, Xian Jiaotong University
- 宁波大学阳明书院, 2008
- Yangming College, Ningbo University
- 湖北大学通识教育学院
- General education college, Hubei University
- 台湾: 清华学院、政大书院、东海大学博雅学院
- Taiwan: Tsing Hua College; Classical College of Chengchi University, Liberal Arts College of Tunghai University ……
Case 1. Liberal Education College of BIT

- 2007, set up. In order to strengthen the general education and suzhi education, help students adapt to university life better.
- More than 40 administrators and tutors, responsible for the freshmen and sophomore students (about 7000).
- These students were divided into four divisions: natural science, information and mechanics science, chemistry and life science, humanity and social science.
- Close to residential college.
- General education in first 2 years, then choose majors and specialize later.
Case 2. Yuanpei College, Peking University

- Started in 2011, recruit 200 students each year, general education in junior grades and wide major education in senior grades.
- **Special small undergraduate college:**
- All students study in Yuanpei, and live in one residential institution for 4 years. Students who study different majors communicate more, and obtain interdisciplinary promotion.
Case 2. Yuanpei College, Peking University

- Free major choice and change——choose majors after 2 or 3 terms, and change their majors freely.
- Free curriculum choice——Students have right to select all the curricula of PKU including every school and department, which means more opportunities in participating interdisciplinary study.
- Tutorial system——Professors from different schools and departments
- Majors of interdisciplinary: paleobiology, politics, PPE, bioinformatics
Case 2: Management framework of Yuanpei College

Management committee of Yuanpei Plan

Yuanpei College

Teaching affair office

Executive office

Students work office

Tutorial office
University function and Reforms of institutional framework.

• Surely the hope of a sound general education in China depends on the systematic reform of higher education.

• We hope through reforming institutional framework balance the three functions of university--teaching, research, and social service. balance professional education and general education in the university.
The Chinese Association for Liberal Education (CALE)

- Established in 2011, more than 200 membership universities. The CALE’s office was set in BIT, CALE’s chairman is the president of BIT, Pang is the general secretary.
- March 9-11, 2017, Nanjing, Jiangsu, China
- 2017’CALE conference and 5th GE Forum
- Topic: Liberal Education and Cultivation of Innovative Talents
Conference Theme

- Suzhi education and first-class undergraduate education
- b. Mechanism of integrating general education and specialized education
- c. General education curriculum promotion through faculty development
- d. Philosophy of liberal education and general education
- e. Continuity of general education from primary, secondary to tertiary education
- f. Practical experience in general education
Conference Schedule

- March 9, 2017
- Registration (9:00-21:00) 1st floor lobby, Nanjing Hanyuan Hotel
- Workshops/ Roundtable discussions (20:00-21:30)
- March 10, 2017 whole day (8:30am—5:30pm) Plenary Sessions & Parallel Sessions
- March 11, 2017 Morning (8:30-12:00) Plenary Sessions & Parallel Sessions
  Afternoon (14:00-17:30) Campus & Museum visiting
ANY QUESTION?
THANKS
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