The Impact of the Fourth Industrial Revolution on Higher Education in the Asia Pacific

Empowering Future-Ready Graduates

Employability of International Students
Curriculum to Promote Employability for Japan-bound International Students

Speaker 1
Dr. Anak Khantachawana
Monotsukuri Project Program by KMUTT, Thailand

Speaker 2
Mr. Hayato Mori
WA. SA. Bi. / Mori Kosan

Speaker 3
Dr. Keiko Ikeda
SUCCESS-Osaka / Kansai University
Empowering Future-Ready Graduates

Outline of the Panel Today

11.00-11.05 Intro and orientation of the participants (Keiko)
   General trends in Japan / Job market for international students
   What seems to be on demand as employable quality in Japan?

11.05-11.20 Monotsukuri Project Program by KMTT, Thailand (Anak)

11.20-11.35 WA. SA.Bi. by Mori Kosan, Japan (Hayato)

11.35-11.40 SUCCESS-Osaka by Kansai University, Japan (Keiko)

11.40-11.45 General Questions, Comments, Discussions

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Empowering Future-Ready Graduates

General trends in Japan
Employability for international students
What would a student-created ranking look like?

- Employer Reputation: 17%
- Employability: 33%
- Cost: 8%
- Diversity: 8%
- Student Satisfaction: 13%
- Academic Reputation: 5%
- Research: 15%
- Teaching: 23%
- Teaching Quality: 20%
- Faculty/Student Ratio: 3%

Source: “How Do Students Use Rankings” Topuniversities.com
In 2015, Times Higher Education measured how well universities did in terms of graduate employability. The U.S. took seven of the top 10 slots. With the U.S. attracting more career-focused international students than any other country in the world, that's good news.

<table>
<thead>
<tr>
<th>Country</th>
<th>Youth Unemployment Rate</th>
<th>Number of Universities on Times Higher Education’s “Global Employability Ranking”</th>
<th>Number of International Students in UNESCO Institute for Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>10.40%</td>
<td>39</td>
<td>740,482</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13.7%</td>
<td>12</td>
<td>427,686</td>
</tr>
<tr>
<td>France</td>
<td>24%</td>
<td>10</td>
<td>271,399</td>
</tr>
<tr>
<td>Australia</td>
<td>12%</td>
<td>5</td>
<td>249,588</td>
</tr>
<tr>
<td>Germany</td>
<td>6.9%</td>
<td>8</td>
<td>206,986</td>
</tr>
</tbody>
</table>
Young People and Work: Dreams and Readiness

9,572 PEOPLE AGED 18-30 ACROSS 13 COUNTRIES
Do you believe that you have acquired skills and knowledge ready for your future career? (YES/ NO)
What are the skills and knowledge needed for your future career? (students’ perspectives)
<table>
<thead>
<tr>
<th>Skills</th>
<th>Foreign Lang</th>
<th>Work Exp.</th>
<th>Digital Skills</th>
<th>Communication skills</th>
<th>Prob. Solving skills</th>
<th>Team-work skills</th>
<th>Debating skills</th>
<th>Entrepreneurial skills</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>56.68</td>
<td>53.70</td>
<td>41.48</td>
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<td>72.44</td>
<td>60.27</td>
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<td>44.29</td>
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<td>47.87</td>
<td>44.42</td>
<td>26.57</td>
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<tr>
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<td>30.97</td>
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<td>44.91</td>
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<td>48.47</td>
<td>50.38</td>
<td>33.07</td>
<td>38.61</td>
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<td>37.69</td>
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<td>46.08</td>
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<td>47.57</td>
<td>36.58</td>
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<td>50.63</td>
<td>41.30</td>
<td></td>
<td></td>
<td>37.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Erasmus students more internationally minded

Image source: European Commission
https://www.topuniversities.com/student-info/university-news/international-students-more-employable-erasmus-study

92% of employers are looking for transversal skills such as curiosity, problem-solving skills, tolerance and confidence when recruiting. Erasmus increases these skills!

64% of employers think international experience is important for recruitment (37% in 2006)

64% of employers say graduates with an international background are given greater professional responsibility.
Employers’ criteria for selecting graduates

Source: Global Employability University Survey 2015
Employers’ satisfaction with higher education in their country

Source: Global Employability University Survey 2015
As part of its Japan Revitalization Strategy 2016 set out last June, the government set a goal of raising the employment rate of foreign students in Japan from just under 35% of those graduating to 50% by 2020.
Roadmap to work in Japan (example)

Three paths to building a career: i) Transferring from a student visa to a professional work visa; ii) Applying directly for a working visa; iii) Applying for highly-skilled foreign professional status. You will be able to switch your status during your stay in Japan.

※As of 2016

- Student visa (280,000 pers.)
- Working visa (270,000 pers.)
- Highly-skilled foreign professionals (5,000 pers.)
Empowering Future-Ready Graduates

What we want to learn today:

Q How do we assure through education and infrastructure to empower the employability of our graduates, particularly international students?

Q Japan being the target today
KMUTT Qualified Hands-on Engineers

Introduction

King Mongkut's University of Technology Thonburi

KMUTT Produces science, engineering, and technology related graduates for more than 50 years.

- 1960: Founded
- 1998: Autonomous (State) University
- 2009: National Research University

Thonburi
Ratchaburi
To produce qualified students having Monotsukuri Philosophy with a hands-on knowledge and experience. They will develop potential to work effectively; have profound knowledge, systematic thinking skills, learning skills, professional skills, communication skills and humanization for Thai and foreign workplaces.
## Thai Engineers

<table>
<thead>
<tr>
<th>Department</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Engineering</td>
<td>48,665</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>23,242</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>29,650</td>
</tr>
<tr>
<td>Electronic and Telecommunication Engineering</td>
<td>4,894</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>8,393</td>
</tr>
<tr>
<td>Mining Engineering</td>
<td>438</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>3,777</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>2,294</td>
</tr>
</tbody>
</table>

Total 121,353
Japanese Factory in Thailand

1,747 in 2017

1. Ayutthaya
2. Bangkok
3. Chachoengsao
4. Chiang Rai
5. Chonburi
6. Lamphun
7. Lopburi
8. Nakhon Pathom
9. Nakhon Ratchasima
10. Nonthaburi
11. Pathumthani
12. Prachinburi
13. Ratchaburi
14. Rayong
15. Samut Prakan
16. Samutsakorn
17. Saraburi
18. Singburi
19. Songkhla
**Mono** means Things

**Zukuri** mean Making

**Monotsukuri** mean Process of Making things
<table>
<thead>
<tr>
<th>KMUTT Qualified Hands-on Engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTCOMES</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>① Students imbibe ‘Monotsukuri Philosophy’ to become a new generation of KMUTT social agents.</td>
</tr>
<tr>
<td>② Students realize, accept and adapt themselves to various cultures.</td>
</tr>
<tr>
<td>③ Students come to know how to work smartly and royally by fulfilling commitments in their workplace.</td>
</tr>
<tr>
<td>④ Companies, industrial sectors and stakeholders welcome KMUTT graduates as qualified workforces.</td>
</tr>
</tbody>
</table>
A total of 95 – 120 undergraduate students for 3 academic years
KMUTT Qualified Hands-on Engineers

**Operating Plan**

**1st Year**
- Student Recruitment
  - recruitment process
  - proportion of student in each discipline
  - preparation of faculties/invitation of Japanese experts

**2nd Year**
- Provision of enhancement program; focusing on
  - Hands on through Math integrated into engineering project
  - Japanese language for communication/working in industry
  - Japanese working culture

**3rd Year**
- Same as 2nd year
- Summer: Japanese Company Experience
  - overseas

**4th Year**
- Working in industrial sectors for one semester
  - domestic

**Preparation:**
- Scholarships for 40-50 new students (all faculty/schools - proportion of disciplines according to the need of Japanese industry)
- Survey of student requirements of Japanese industry in Thailand
KMUTT Qualified Hands-on Engineers

AY 2016 (Y2)

- 1st & 2nd semester: Provision of enhancement program
- Japanese Company Experience

**Semester 1/2016 (Y2)**
- Site visit + Special Lecture (10 times)
- Japanese course (Elective)
- Enhancement on Applied Math (2hr × 10 times)

**Semester 2/2016 (Y2)**
- Site visit + Special Lectures (10 times)
- Japanese course (Elective)
- Enhancement on Applied Math (2hr × 10 times)

**Summer (Y2)**
- Japanese Company Experience (1 month in JP)
KMUTT Qualified Hands-on Engineers

AY 2017 (Y3)
- 1st & 2nd semester: Same as AY 2016
- Summer session: WIL Preparation

Semester 1/2017 (Y3)
- Site visit + Special Lecture (10 times)
- Enhancement on Applied math (2hr x 10 times)
- Japanese for a workplace (2hr x 10 times)

Semester 2/2017 (Y3)
- Site visit + Special Lecture (10 times)
- Enhancement on Applied math (2hr x 10 times)
- Japanese for a workplace (2hr x 10 times)

Summer + Wil (Y3)
- Site Preparation
- Personality Training
KMUTT Qualified Hands-on Engineers

AY 2018 (Y4)
- 1st semester: WIL
- 2nd semester: wrap up

Semester 1/2018 (WiL) (Y4)
- Internship

Semester 2/2018 - wrap up (Y4)
- Reflection
- How to attract them with a portfolio (2hrs x 1 time)
- Preparation on interview (2 hrs x 1 time)
- Step out for working life I (Thai’s views) (2 hrs x 1 time)
- Step out for working life II (Foreigners' views) (2 hrs x 1 time)
- Final orientation
KMUTT Qualified Hands-on Engineers

**Pilot Project**

13 Students

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Mechanical Engineering
- Mechatronic Engineering
- Physics
- Computer Science

**1st batch**

24 Students

- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Mechanical Engineering
- Mechatronic Engineering
- Physics
- Computer Science
- Industrial Technology
- Electrical Engineering
- Institute of Field Robotic
- Automation Engineering
- Electronic and Telecommunication Engineering
ACTIVITIES

Special Lecture

- Studying and Doing research in Japan
- Studying and Working in Japan
- Working style and Organization culture
- Japanese Manufacturing
- Professional working
- Japan Industry
- Wrap Up
ACTIVITIES

Site Visit

AJINOMOTO CO., (THAILAND) LTD.

KYB (THAILAND) CO., LTD.

KYB STEERING (THAILAND) CO., LTD.
ACTIVITIES

Applied Mathematics
ACTIVITIES

Japan trip
ACTIVITIES

KMUTT Roadshow
Thank You
» MORI KOSAN Co., Ltd.

EXPAND YOUR CIRCLE, AND REACH OUT TO STUDENTS, COMPANIES, AND TO THE FUTURE.

WA.SA.Bi.
Speaker (HAYATO MORI)

MORI KOSAN Co., Ltd.

HAYATO MORI (41)

www.apaie2018.org
Speaker (HAYATO MORI)

Desert

Friends

Ayers Rock

Fraser Island

1998.4-1999.3

Cross-dressing Contest ★2nd★

Melbourne

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WA.SA.Bi.

Users 48 Countries

Connected with 1600 Institutions

www.apaie2018.org
ENMUSUBi

100 Events

3767 Participants

www.apaie2018.org
Percentage of students

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>40.2%</td>
</tr>
<tr>
<td>2</td>
<td>Vietnam</td>
<td>23.1%</td>
</tr>
<tr>
<td>3</td>
<td>Nepal</td>
<td>8.1%</td>
</tr>
<tr>
<td>4</td>
<td>Korea</td>
<td>5.9%</td>
</tr>
<tr>
<td>5</td>
<td>Taiwan</td>
<td>3.4%</td>
</tr>
<tr>
<td></td>
<td>USA</td>
<td>1.0%</td>
</tr>
<tr>
<td></td>
<td>Singapore</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

267,042
Students in Institutions of Higher Education + Japanese Language Schools in Japan

© JASSO

APAIE 2018 Conference & Exhibition | The Impact of the Fourth Industrial Revolution on Higher Education in the Asia Pacific | 25 to 29 March 2018
Employment Ratio

Japanese
almost 100%

International students
30%
2018 - 2019 Job Hunting Schedule

- **Prep**
  - Internship
  - Self-Analysis
  - Research industries and occupations

- **Job Fair**

- **Interviews, etc.**

- **JOB OFFER!**

www.apaie2018.org
Job Hunting Process

Job Fair
Job Application
Interview
Interview
Interview
Job Offer

Pass
Pass
Pass
Pass
Pass

www.apaie2018.org
Work as a "generalist"

Salary increases by age

Work for company until retirement

Hire Recent Grad.

Aged-based System

Lifetime Employment
VISA PROCESS IS STRICT
LANGUAGE BARRIER

High Level Japanese Required

www.apaie2018.org
Japanese Business Culture
How do we solve these issues?
Size & Number of Companies

- **Large**: 11,000 (0.3%)
- **Medium**: 557,000 (14.6%)
- **Small**: 3,252,000 (85.1%)

SMEs 99.7%

© Ministry of Economy, Trade & Industry


www.apaie2018.org
100 International Students Every Year

China / South Korea
Taiwan / Vietnam
Thailand / U.S.A.
Canada and more...

1 week ~ 3 months or more
Decreasing labor force

As announced by the National Institute of Population and Social Security Research (2016 Edition)
Chart 2 – 4 Sex, Age (Ranked by 5 years) Separate estimation for future populations: 2035, 2060

76,476,000 people
63,430,000 people
44,183,000 people

2016  2035  2060

www.apaie2018.org
Building Networks
More Employment Opportunities

2018
28 million

2020
40 million

www.apaie2018.org
Let’s work together!
Speaker 3

Dr. Keiko Ikeda
SUCCESS-Osaka / Kansai University
Curriculum to Promote Employability for Japan-bound International Students
### Curriculum to Promote Employability for Japan-bound International Students

<table>
<thead>
<tr>
<th>Modules</th>
<th>Required pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese Language Module</td>
<td>10 pt</td>
</tr>
<tr>
<td>Business JPN Language Module</td>
<td>25 pt</td>
</tr>
<tr>
<td>Career Education Module</td>
<td>50 pt</td>
</tr>
<tr>
<td>Internship Module</td>
<td>15 pt</td>
</tr>
</tbody>
</table>

**Certificate pts**

100 pts

**キャリア教育群**

- **ビジネス日本語群**
- **日本語能力養成群**
  - Japanese Lang.
- **ビジネス日本語関連科目**
  - Business Japanese Related Subjects
- **カリキュラムを促進する雇用能力**
  - Curriculum to Promote Employability

**Internship群**

- **[Hybrid Type Internship]** 5 pt /科目
  - 例：プレミアム・インターンシップ
    - (関経連との共催)他
- **[10days PBL type Internship]** 5 pt /科目
  - 例：㈱帝国データバンク
    - ㈱ヤンマー
  - 他
- **[10days OJT Internship]** 3-5 pt /科目
  - 例：㈱クボタ
    - ㈱フジキン
  - 他
- **[その他学内・学外インターンシップ]** 5 pt /科目
  - 例：学内インターンシップ
    - 学外インターンシップ
  - 他

**セミナー**

- **Seminar 3：Core Skills** 3 pt /科目
  - Learning Business ethics
    - Self-understanding
- **Seminar 2：Connecting** 3 pt /科目
  - Visiting companies
    - group discussions with private sectors
- **Seminar 1：Base** 3 pt /科目
  - Cross-cultural understanding in business
    - Learning business communication

※全てのインターンシップにおいて、事後レポートを課す（SUCCESS-Osaka規定用紙）

### 日本語能力養成群

- **JLPT N1**保持者：10 pt
  - J-CAT 280点以上：10 pt
- **J1**保持者：20 pt
  - J1+保持者：25 pt

**ビジネス日本語群**

- **ビジネス日本語関連科目** 5 pt /科目
  - 例：ビジネス日本語1-2 (関大・春)
    - 日本社会のコミュニケーション (関大・秋)
  - 動画参加も可能
    - パフォーマンス評価差異あり (3-5pt)

**カリキュラムを促進する雇用能力**

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採用したいと思える人材はどこにいるか
－外国人高度人材活用について－

開催日時・場所

・日時：2018年2月20日（火）14：00－16：30
・開催場所：関西大学梅田キャンパス8階
KANDAI MeRISEホール

少子化の影響は深刻化しており、21世紀半ばには日本の生産年齢人口は2014年と比べて半減する見通しです。こうした状況下、企業は多様な働き方やダイバーシティの流れを受け入れつつ、激烈な競争での生き残りを懸けて、優秀な人材の採用を模索しています。

時代の要請もあり、政府は2008年に「留学生30万人計画」を策定しました。「日本再興戦略」では日本における外国人材の活用及びそれらに伴う外国人留学生の受け入れ、就職・生活支援の強化が図られています。セミナーでは外国人材活用（経産省）、最近の留学生（外国人高度人材）の特徴と国際交流の状況（関西大学）支援事業SUCCESS-Osakaについて紹介いたします。
Success-Osaka will provide advanced career support for high-level international personnel with low risk of leaving jobs. Specifically we aim for:

1. Creating education and seminar curriculum based on university.

2. Support domestic and foreign companies and to back up human resources after tentative job offer and starting a new job.