International Higher Education and Global Science——

A Perspective from Engineering Education in China

Jiabin Zhu, Ph. D.
Associate Professor
Graduate School of Education
Former Chairman of the Association of Chinese Higher Education, Qu Zhenyuan, envisioned a great need for many engineering talents in infrastructure constructions for the OBOR initiative (2015)
Strong Policy Supports

"Plan for Educating and Training Outstanding Engineers" (PEOTO Plan)

"Emerging Engineering Education" Plan
Proactive Internationalization

Program Level

Individual Level

Washington Accord

Sydney Accord

Dublin Accord

International Professional Engineer Agreement

APEC Engineer Agreement

International Engineering Technologist Agreement

Agreement for International Engineering Technicians

Professional Engineer

Engineering Technologist

Engineering Technician
Active Engineering Education Innovations

- Design-oriented Project-based Learning Courses
- Extracurricular Engineering Practice
- University/Departmental level EEI
- University-Industry Collaboration
- International Learning Experiences
- Outcome-based Education
Growing Number of International Students in China

The growth can be attributed to political, economical, educational and many other factors.
Joint Degrees and Other English Programs in Engineering in China
International Engineering Students’ Learning Outcomes

- **Knowledge**: Engineering knowledge; Cultural knowledge; Academic environment; Employment …

- **Skills**: Interpersonal skills; Software skills; Research skills (generic); Teamwork skills; Self-study skills; Hands-on skills; Time-management skills; Language skills; Reading papers; Presentation skills; Leadership skills; Design skills; Navigation skills; Working under pressure; Living independently …

- **Attitudes**: Hard-working; Perception of Chinese people: e.g. Friendly; Empathy; Perception of Chinese infrastructure and economic development-great progress.; Becoming more persistent; Becoming more confident; Openness to new ideas; Openness to other culture; Becoming more patient; Becoming more interested in research…
International Engineering Students’ Perceptions about Studying in China

Advantages

- Reputation obtained through major rankings
- Scholarship opportunities
- Low living cost
- Sufficient research funding
- Access to research equipment
- Conveniences of living in China (transportation, e-commerce, etc.)
- Economic environment (Job opportunities)
- More freedom

Challenges/Disadvantages

- Lack of communication with local Chinese students
- Hope to (but unable to due to limit in language abilities) attend courses offered in Chinese programs
- Not many free intermediate-level Chinese courses (only basic Chinese courses are offered)
- Many internship or employment information/websites were only available in Chinese
Future Directions

- **University level:**
  - The impact of the pandemic on the incoming international students in engineering disciplines
  - Impact on the quality improvement of Chinese engineering education with the PETEO & EEE policies and after China’s joining the Washington Accord

- **Student level:**
  - Impact of Chinese engineering education innovations on engineering graduates’ learning outcomes
Thank you!