

BEYOND BORDERS: LANGUAGE LEARNING, HUMANITIES, AND STEM

杭州市民您好,
为了改善您所在地区的城市文化基础设施, 以提高您的生活质量, 我们设计了此次调查。本调查专门用于调查市民对公共文化基础设施的需求。请您尽最大努力填写此调查表。我们承诺您所提供的所有信息仅用于研究和学习, 并且会得到保密。感谢您抽出宝贵时间填写此调查!

——伍斯特理工学院和杭州电子科技大学调查组
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杭州市文化设施问卷调查

1. 您的性别是?

☐ 男
☐ 女

2. 您的年龄段是?

☐ 18岁以下
☐ 18-29
☐ 30-39

4. 如果您居住在江干区, 请问您居住在下沙街道吗?

☐ 是的
☐ 不是
☐ 我不居住在江干区

5. 您是什么身份?

JENNIFER RUDOLPH

**PROFESSOR, ASIAN HISTORY AND INTERNATIONAL/GLOBAL STUDIES
DIRECTOR, CHINA HUB
WORCESTER POLYTECHNIC INSTITUTE**

WPI GLOBAL PROJECT CENTERS: THE NEED FOR APPLIED CULTURAL LEARNING



MAP FOR TODAY: ALL (SUBVERSIVE) ROADS LEAD TO CHINA

Quest:

China and Chinese language program at STEM school

Challenges:

Project-Based Learning curriculum

Existing requirements and ABET accreditation

Project Center model

Methods:

Applied Humanities: “China Across the Curriculum”

Integration of Chinese and China content into STEM curriculum and vice versa

NATIONAL ACADEMY OF ENGINEERS

US engineers “will be based abroad, will have to travel . . . around the world to meet customers, and will have to converse proficiently in more than one language.”

“U.S. engineers ... will have to be open to different religions, different ways of thinking, and different social values. Flexibility and respect for ways of life different from ours will be critical to professional success.”*

*“Educating the Engineer of 2020: Adapting Engineering Education to the New Century,” p 152

PROJECT-BASED LEARNING

WPI Plan since 1970 – 50 year anniversary

- ❑ Students learn *how to learn* by applying their classroom experiences in projects that challenge them from a proficiency, social, and global perspective
- ❑ Applied iterative knowledge
 - students work for extended period of time investigating and responding to authentic and engaging real-world problems, questions, or challenges

DIRECT PARTICIPATION



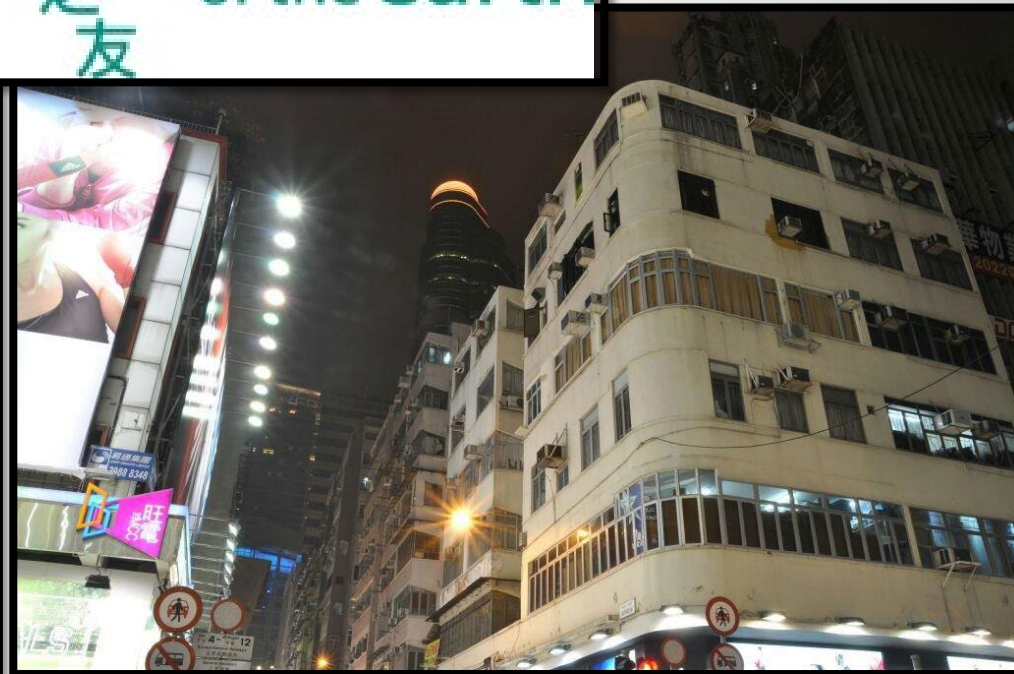
CHINA PROGRAM FOR STEM:

- ❑ **Project Centers: Hong Kong, Hangzhou, Beijing**
- ❑ **Creation of classes**
 - ❑ Chinese language classes (3 years)
 - ❑ Environmental Justice in China, Re-Engineering China, Nationalism in Asia, East Asia: China at the Center; Popular Culture and Social Change in China; History of Technology in China
- ❑ **Creation of Modules**
 - ❑ Wicked problems
 - ❑ water
 - ❑ Urban Sustainability
- ❑ **Chinese Studies minor**
- ❑ **China concentration in Professional Communication Major**

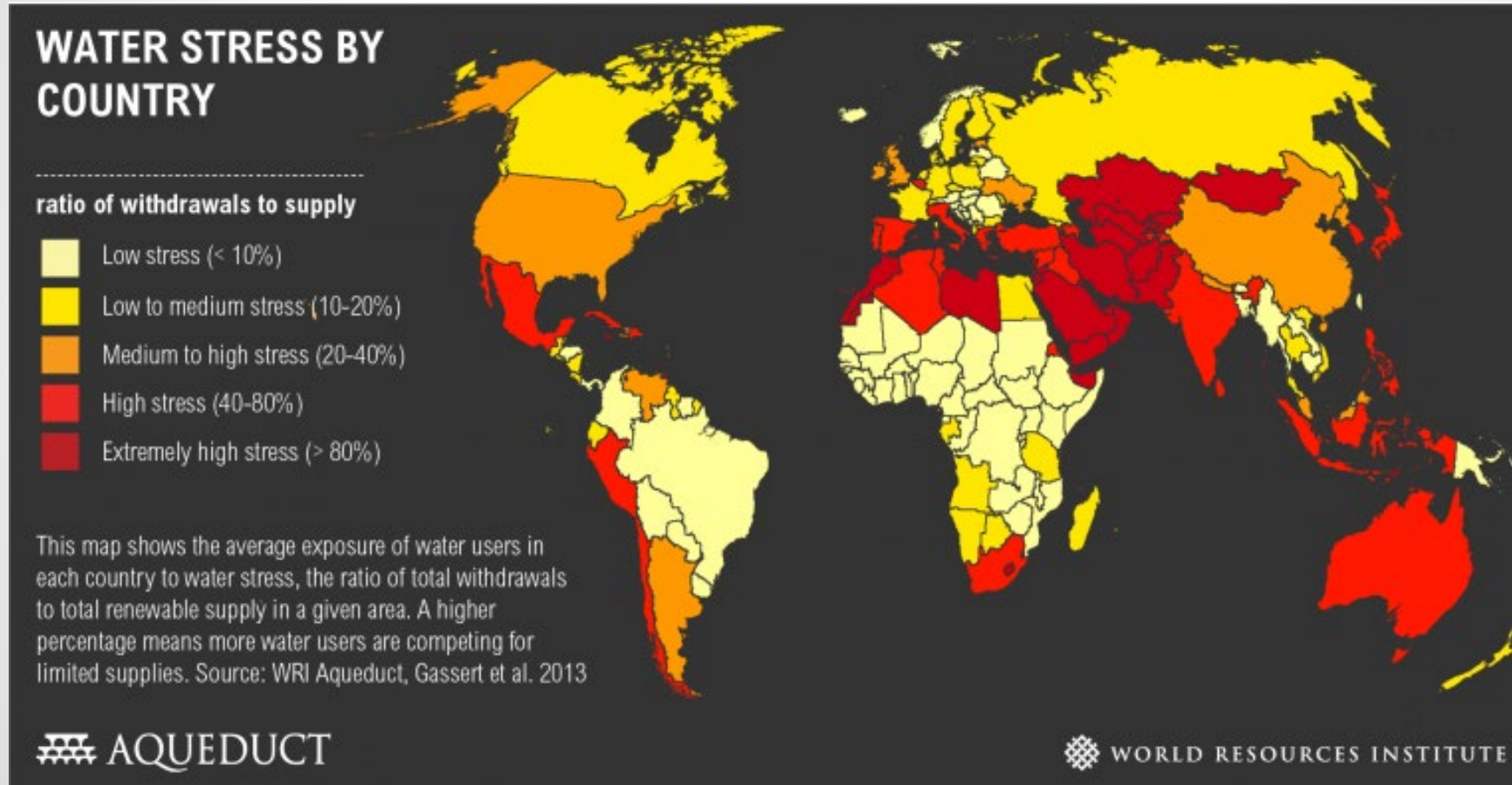
WPI GLOBAL PROJECT CENTERS: THE NEED FOR APPLIED CULTURAL LEARNING



IQP TEAM, HONG KONG



WICKED PROBLEMS: GLOBAL AND LOCAL



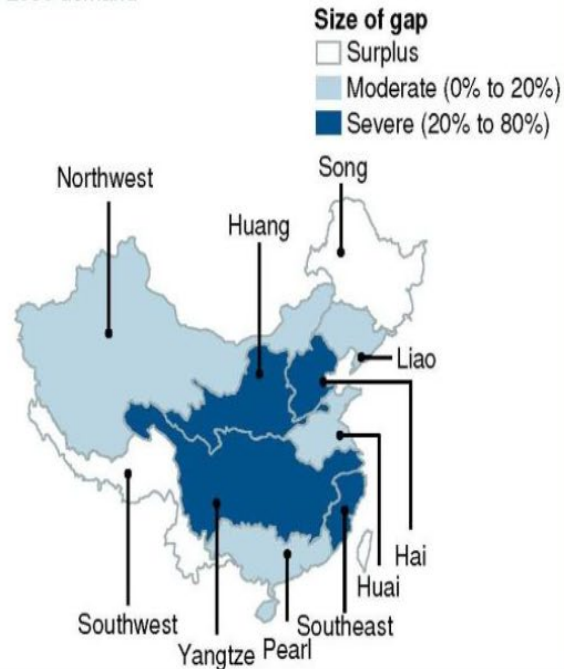
Source: World Resources Institute

APPLIED CONTENT

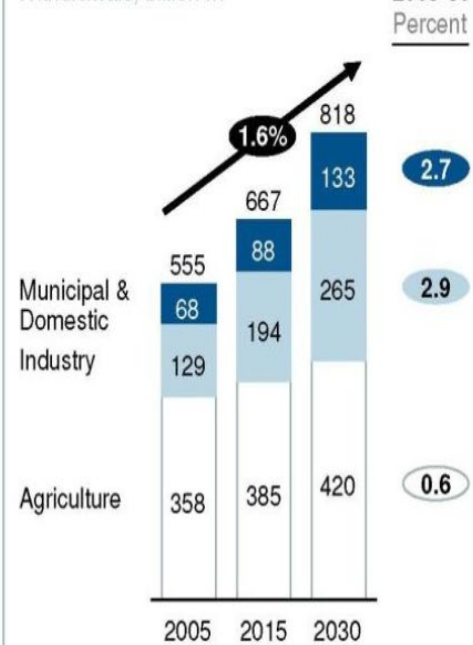
KNOWLEDGE MODULE: DATA

CHINA'S WATER SCARCITY PROBLEM: HEIHE BASIN

Gap between existing supply and projected¹ demand in 2030
Percent of 2030 demand



Water demand by sector
Withdrawals, billion m³



¹ The unconstrained projection of water requirements under a static policy regime and at existing levels of productivity and efficiency

Source: 2030 Water Resources Group, Charting our Water Future, December 2009

Refer to SCARCITY in The Big Picture on the China Water Risk website for more details on which provinces are running dry and the supply and demand gap.



Changsha, Hunan

APPLIED CONTENT KNOWLEDGE MODULE: CONTEXT

SKY CITY

CONSTRUCTION MATERIALS

GRANTS: THEY ARE UISFL

☐ US Department of Education

- ☐ BIE: Business and International Education
 - ☐ Now wrapped into UISFL
- ☐ UISFL: Undergraduate International Studies and Foreign Language
 - ☐ 2-year cycle
 - ☐ 1:1 match required

☐ US Department of Defense

- ☐ Project GO (Global Officer)
 - ☐ 3-year cycle
 - ☐ Pulled out of Mainland China; now on Taiwan

☐ Tips

- ☐ Collaborations with non-language colleagues
- ☐ Find ways to integrate offerings
- ☐ National Security 😊

APPLIED LANGUAGE LEARNING: THEMATIC INTEGRATION OF CONTENT AND LANGUAGE CLASSES -- ENTREPRENEURSHIP

- ☐ **Project Center: Hangzhou**
- ☐ **Entrepreneurship projects in Hangzhou**
- ☐ **International Entrepreneurship focus in International and Global Studies and in Business Major**
- ☐ **Development of Case Studies**
 - ☐ Coffee Shops in China (Prof. Amy Zeng, Foisie School of Business)
- ☐ **Creation of classes**
 - ☐ Chinese language classes (3 years)
 - ☐ Business in Post-Socialist States
 - ☐ Business Chinese

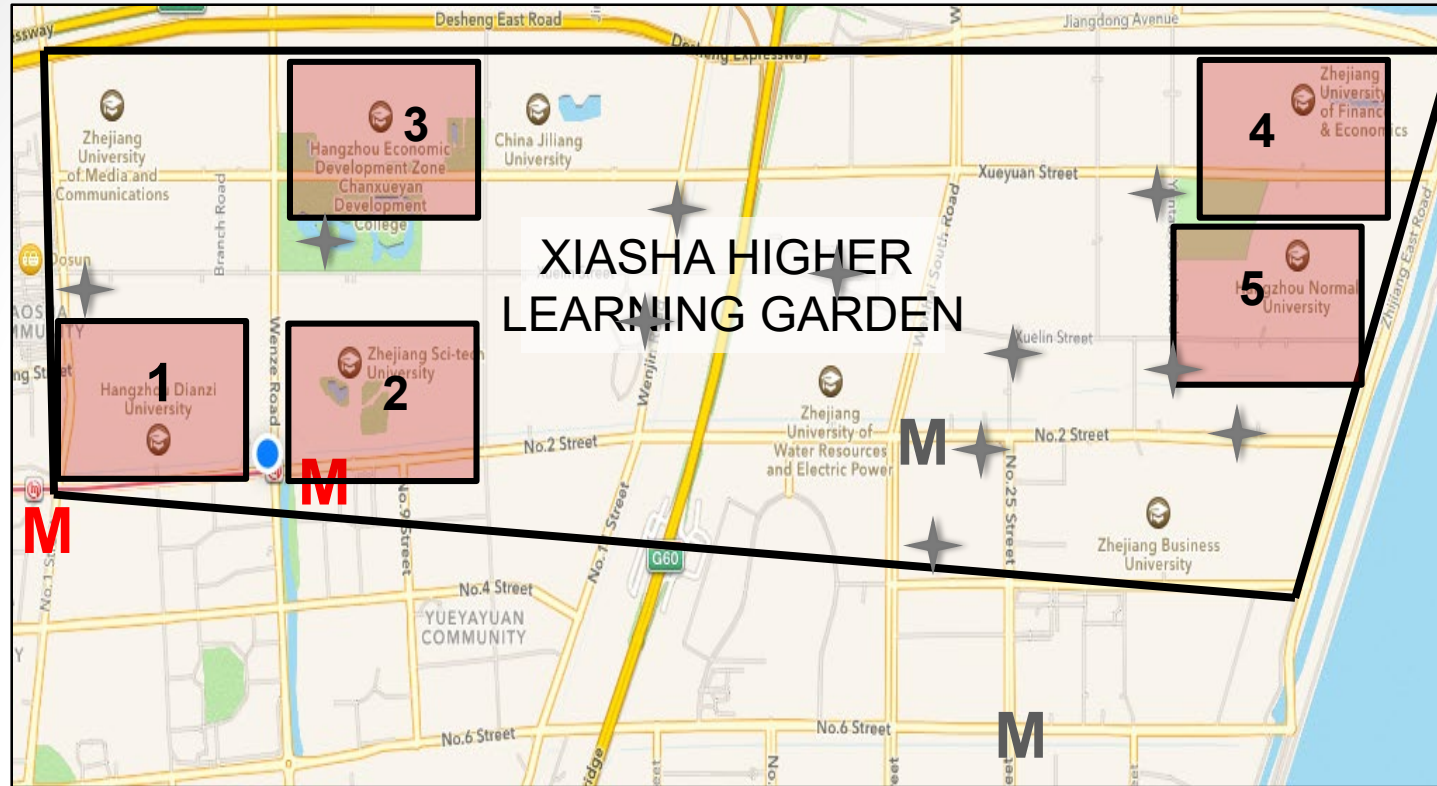
IQP TEAM HANGZHOU



Hangzhou Omnipay,

**Feasibility Study for
E-Bike Sharing System**

SURVEY AREA



1. Hangzhou Dianzi University
杭州电子科技大学
2. Zhejiang Sci-Tech University
浙江理工大学
3. Hangzhou Technical and Vocational College
浙江职业技术学院
4. Zhejiang Univ. of Finance and Economics
浙江财经学院
5. Hangzhou Normal University
杭州师范大学

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BUSINESS CHINESE

WEN-HUA DU

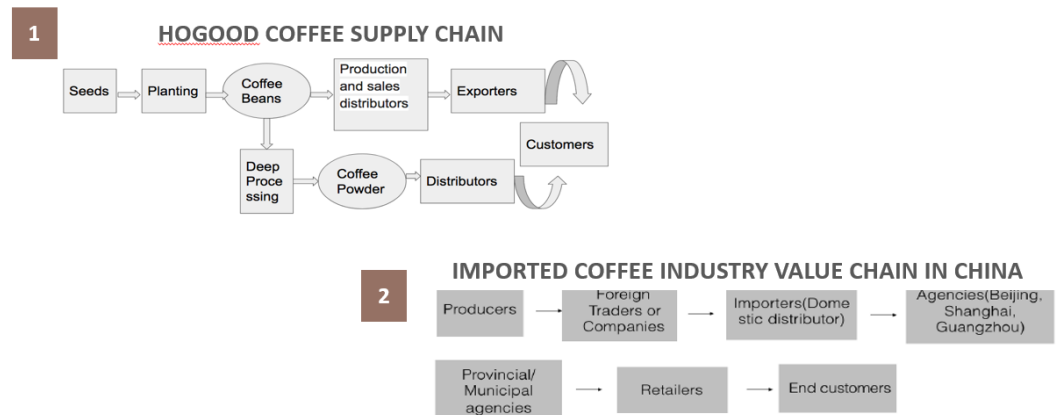
COMBINING LANGUAGE LEARNING WITH REAL CASE STUDIES

REALLY? COFFEE SHOPS IN CHINA? KE WANG, AMY ZENG, MICHAEL GINZBURG

Major Players Comparison (1/ 2)



Value Chain & Supply Chain



THANK YOU!

謝謝!

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