

FIG Working Week 2009

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Future Directions of Construction Education to Meet the Challenges and Opportunities

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Introduction

- Loss of talent to other industries has led to a shortage of construction professionals over the last decade
- To succeed in global marketplace, construction professionals must sharpen their competitive edge
- Nurturing our next generation of construction professionals is an important agenda
- What is the future direction of construction education to meet the challenges and opportunities ahead ?

Objectives

- To examine if students are willing to work elsewhere
- To identify the factors affecting their decisions
- To unveil the barriers they may face when working abroad
- To find out the competitive edge required
- To determine if the current tertiary education system can address the changing conditions in construction
- To identify the changes needed in education to prepare students from a globalized working

Methodology

- Questionnaire surveys : 380+ replies from undergraduate students in construction-related programs in Hong Kong, *viz.* architecture, civil engineering, building services engineering, surveying, and town planning
- Semi-structure interviews : 10 program leaders from 5 universities in Hong Kong

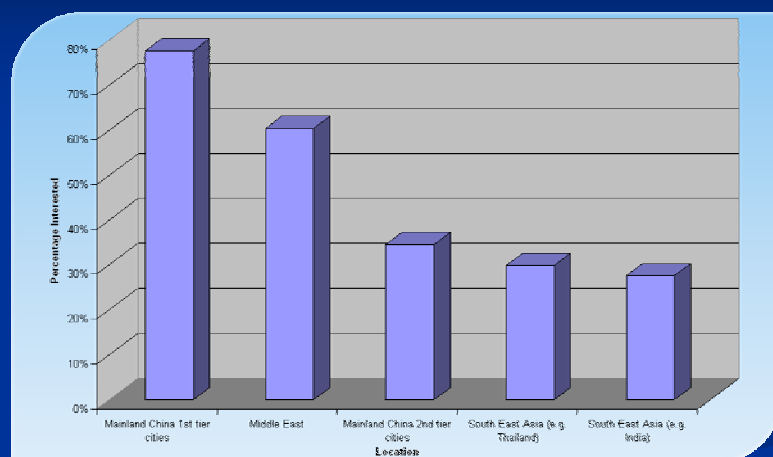
Questions for Students

- Interest and willingness to work outside of Hong Kong
- Factors that affect their decisions
- Barriers they may face
- Perception of competitive edge
- Overall development and training received from undergraduate studies

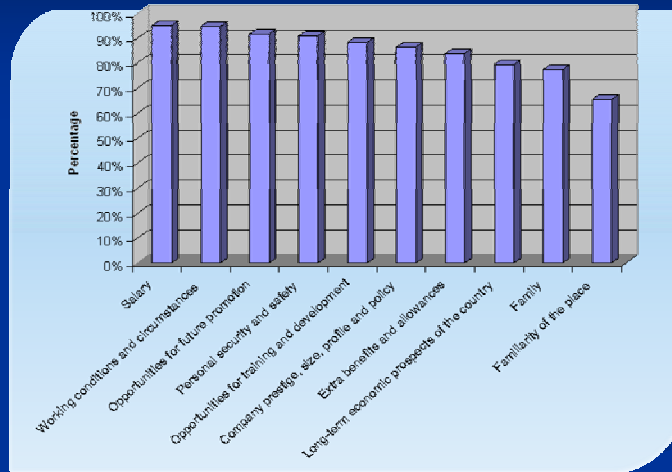
Questions for Program Leaders

- Whether it is part of their major educational objective to equip students with skills to work in overseas
- Any courses specifically designed to improve students' knowledge on overseas practices
- Availability of language courses to help improve language proficiency of undergraduate students who wish to work in overseas
- Consideration related to how much to emphasize on the emerging markets

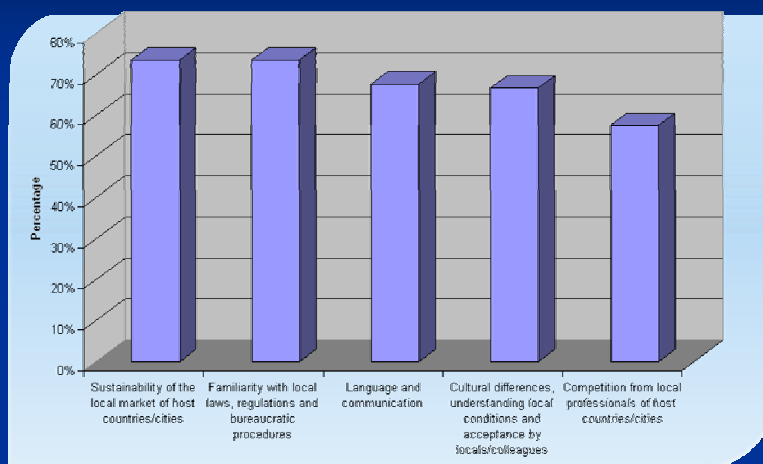
Preferred Location of Work



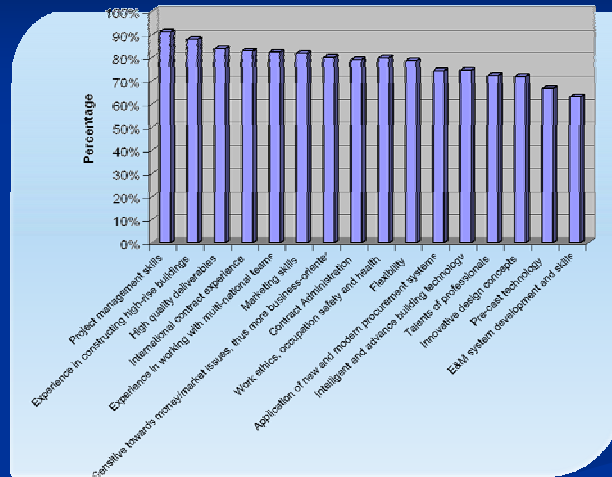
Factors to be Considered



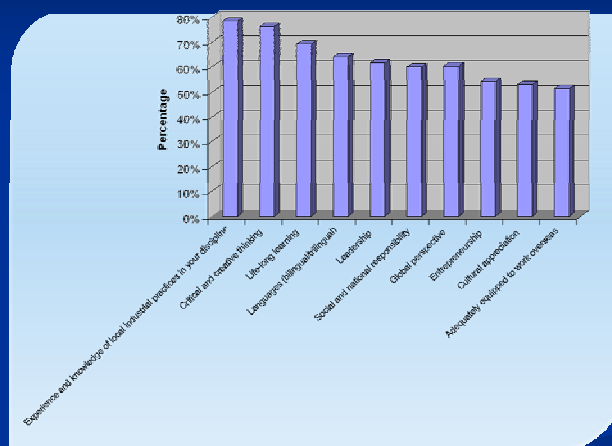
Barriers to Working Overseas



Competitive Advantages



Attainment of UG Programs



Opinions of Program Leaders

- Only about half of the program leaders interviewed confirmed preparing students to work in overseas is their “major” educational objective
- Training and knowledge on overseas construction laws and regulations are lacking
- Many universities offer industrial-related projects, site visits, internships and exchange programs but many are not compulsory courses
- Courses geared specifically towards emerging markets like Mainland China, India and elsewhere are also rare

Challenges

- Previous construction hotspots such as UAE and Macau have cooled down drastically, forcing the foreign construction industry workforce to migrate to other markets
- In the face of this changing economic environment, existing and upcoming professionals in the construction industry must be adequately trained to adapt to different markets and cater to regional demands in a more internationalized market

Opportunities

- Construction industry is vital to an economy and often used as a catalyst to revive a struggling economy
- Example: Chinese government's RMB 4 trillion (USD \$580 billion) stimulus plan with major emphasis on construction and infrastructure development
- Package will focus on 10 major areas, amongst them include low-income housing, rural infrastructure, water, electricity, transportation and environmental improvement projects

Skill Sets Required

- Project management skills, innovative technology, oversea construction laws and regulations, cultural of emerging countries, and language training will become vital for construction professionals
- Further adjustments to education curricula are necessary in response to this need

Conclusion

- Offering additional skills for working in foreign, emerging markets can help add a degree of flexibility, enabling construction industry professionals to have more opportunities
- Added flexibility can reduce chances of construction industry professionals leaving the field for other professions, thus ensuring a more constant and stable supply of human resources
- These benefits will lead to a healthier and stronger construction industry

Thank You