Work-Integrated Geomatics Higher Education in Hong Kong

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Topics:
1. Why Work-Integrated Education (WIE)?
2. Four phases of WIE programmes
3. WIE programmes for geomatics HE in HK
4. Collaboration model
5. Conclusions
6. Q & A
1. Why WIE? (1) OBE policy in HK HE; (2) transformational learning

OBE should aim at the highest learning outcomes which are achievable by students (Spady, 1994)

- **Transformational outcomes**
  - Life-role functioning
  - Complex role performances

- **Transitional outcomes**
  - Complex unstructured task performances
  - Higher order competencies

- **Traditional outcomes**
  - Structured task performances
  - Discrete content

2. Four phases of WIE programmes

- **Phase 1: Needs analysis** of occupational field; linking curriculum to long-term staff goals of employers; needs of students, parents, faculty, community.

- **Phase 2: Design** curriculum objectives; operating structures; organization, administration and staffing; implementation and assessment plan. **Finding employers**, partners and resources; matching students with placements.

- **Phase 3: Implementation**, registration, time-tabling, pre-placement training, and contracting of students with employers and mentors.

- **Phase 4: Assessment** (formative & summative) of student’s performance, programs, staff and employers.
3. WIE programmes for geomatics HE

- Credit-bearing programmes for B.Sc. students:
- Summer Survey Training Scheme: employed by Government survey & mapping offices
- Preferred Graduate Development Programs (PGDP): employed by firms and government related to surveying and mapping
- Exchange Students for Technical Experience (IAESTE): in firms and government overseas
- Employed by staff’s consultancy projects, together with M.Sc./M.Phil./Ph.D. students
- Community services: e.g. building schools and bridges in remote areas of China
- Pre-placement training programs organized by SAO and IC (site safety certificate).

4. Collaboration model

- WIE benefits: (1) Transformational (collaborative) learning, both qualitative and quantitative; (2) workplace training for students, faculty, company employees; (3) promote research and innovation.
- Needs University-Industry-Government (UIG) collaboration, good collaboration management model (e.g., Barnes et al., 2002), legal framework, and use of intermediaries
- To release faculty and staff from the burden of contract administration and other consultancy matters with firms, Institute for Enterprise has been established in PolyU, comprising:
  - PolyU Technology and Consultancy Company Ltd
  - Partnership Development Office
  - Innovative Technology Research Syndicate
5. Conclusions

- The success of HE relies on UIG collaboration in developing (1) sustainable curricula of BSc, MSc, MPhil, PhD and WIE programmes, (2) pre-placement training programmes, (3) Institute for Enterprise, and (4) products of high commercial/societal values.

- Under UIG collaboration, benefits are found in the promotion of work-integrated teaching and learning, research/innovation, good citizenship and economic development to society.

- Future challenges: how to increase employment and to attract students/talents into geomatics engineering – marketing the programs/profession.

6. Questions & Answers

Thank you.