

**The 4<sup>th</sup> HKUST Teaching & Learning Symposium 2011**  
**Notes of Group Discussion Session**

**Group** : Capstone Project  
**Session** : AM (11:15 am – 12:00 pm)  
**Chairperson** : Prof Robert WRIGTH (PolyU)  
**Note-taker** : Mr Buck NG (VTC)

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**1. Intended outcomes of Inquiry Based Learning – What skills do we want our students to develop through research and inquiry? (Part 3: Project/Course objectives in the posters could be used as a base for discussion)**

10 minutes

- Transferable skills, e.g presentation skills, communication skills
- Think out of the box
- Try to make sense of what was learnt, with context, and prepare for the next step
- Core competencies are needed to be developed in the inquiry based learning
- Interpersonal skills are important to graduates
- Being strategic, management skills, develop a complicated understanding of the real world, and think after acquiring those skills
- Experience in professional context through Capstone Projects
- Integrating and consolidating so as to spark new ways of thinking
- Mindset changed through projects and they could make use the experience and transfer the skills for their work

**ONE idea from each participant:**

- Integrate what students have learnt over the years in the undergraduate programmes
- May apply on language learning
- Putting things in context, no matter apply or not
- Collaborations
- Soft skills development so as to face different people...
- Being able to formulate the problem
- Allow students to
  - integrate their Knowledge in a logical way

- apply knowledge learnt to solve problem
- understanding how the world works
- Prepare students for lifelong learning with relevant learning skills
- Train students to learn how to deal with complicated questions
- Mindset change: students to believe that they are capable of doing something (with confidence)
- It is an identity issue. Students should be developed to think like an engineer etc.
- Transferable skills for workplaces and other contexts
- Able to give presentations using layman terms not just to professionals
- Link theories to the real world (complicated real world)
- Not just integrating own subject knowledge, but consider other issues
- Know how to ask questions, in other words, information processing
- Overview and revisit what was learnt and applied
- Making experience more memorable
- Think from a role
- An integration of skills: In universities, we tend to teach students with simple models. However, the real world is more complicated. It is important for students to develop independent skills, problem solving skills, application skills. Ask students think and apply their skills and knowledge as if they were project managers, not students.

**2. Learning Activities – What are the learning activities that we think could lead to the skills development discussed above? (Part 4: Inquiry Based Learning Activities could be used as a base for discussion)**

10 minutes

- Allow students to lead
- Give them time to fail. Not providing them with “detailed” instructions at the beginning
- Teamwork skills development. Explicit instructions and regular feedback are important
- Feedback from faculty advisers and getting the teams to work together
- Peer assessment
- Ask students to design questionnaire
- Know how to interact with the outside people
- 1st stage: instructions; 2nd give them less but with a meaningful task

- The activity to be tailor-made
- Ask students to upload one picture, then explain why the picture is meaningful to the subject. Eventually, because of different explanations, the task will help facilitate the development of multi-dimensional perspectives
- Challenges: Students may not have many ideas, or in the vice versa, they may have too many ideas. However, it is good to require students to propose a proposal and then present their ideas in a logical manner which help them think logically

### **3. Assessment – How are we assessing our students to determine if they have developed the intended skills? Are they effective? (Part 5: Assessment methods can be used as a base for discussion)**

10 minutes

- Give student topics and ask them to present to real audience (e.g. companies). If the audience likes their ideas, it means that their work is good.
- Include the corporations. Assess students by faculty and by company on students' proposal.
- Assess students' authentic experience
- Consult faculties and alumni while developing the rubrics so that will make the assessment more authentic and practical
- To assess whether students can solve fuzzy and complicated questions, and whether they could bring in ideas outside of their fields. To examine how do they formulate ideas, and also see whether their ideas come from different angles.
- A "Joining Dot" approach - draw resources from colleague as well as using self assessment
- We need to make credible claims
- Discuss with students on their grades and trying to understand expectations between teacher and student. We may also ask students to justify their own grades for themselves

### **4. Challenges – What are the challenges in implementing inquiry based learning?**

15 minutes

Participants to give 1 challenge each

- They teach among themselves and brainstorm the ideas among the groups. Eventually, they will be able to generate enormous amount of ideas. It is necessary to arrange a feedback session at the end
- Providing enough time in the curriculum
- Are the outcomes and deliverables aligned?
- If students are not motivated, it turns out to be instruction based learning
- Projects involved many disciplines and it may overload students
- Hard to find faculty (integrated project)
- We expected students to integrate what they have learnt. Supervisor should have a role because students may not see that there is a linkage between the areas
- Expectation gaps between teachers and students
- Constraints of curriculum and that students are expected to learn independently but...
- Expectations shift as time goes by
- Use of English
- Lagging of higher order thinking skills
- Students' preparedness
- Getting more colleagues to be "learning centered"
- Giving feedback
- Students to be the judge
- How can we skill up the capstone projects?
- Curriculum design: The number of teachers vs courses. We have to consider the sustainability.
- It is difficult to inform students to develop the kinds of skills and get them reflect on those skills
- Motivation is important, i.e. turn them into active learners