The 4th HKUST Teaching & Learning Symposium 2011
Notes of Group Discussion Session

Group   :   PBL
Session   :   AM (11:15 am – 12:00 pm)
Chairperson   :   Prof Lilian VRIJMOED (PolyU)
Note-taker   :   Dr Tak HA (HKUST)

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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)**

☐ The intended learning outcomes generally focus more on the generic skills and less about the subject contents.

☐ A host of generic outcomes are developed through inquiry-based learning. They can be grouped under research (academic) skills, soft skills, and attitudinal outcomes.

   ❖ Research (academic skills) – analytical thinking, searching and evaluating information, representation of problems, thinking like a professional (e.g. physicist, an engineer, a sociologist), communicating professional knowledge to laymen, writing reports, self-evaluation

   ❖ Soft skills – time management, team work skills, presentation skills, working independently.

   ❖ Attitudinal outcomes – self-confidence, building identity

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)**

☐ Peer coaching – having senior students coaching junior students in projects.

☐ Feedback and iteration – Giving students multiple opportunities to practice (e.g. presentation of research findings to secondary students) and improve through feedback.

☐ Working with real clients is particularly important – An example in CUHK geography department is to get Government officials to attend students' project presentations. This built students' confidence in the work they did and their identify as a professional in their own specialty.

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)**

☐ Assessment of product versus processes. More effort focuses on the former than the latter.

☐ It is quite a challenge if it is necessary to carry out such assessment in a large class, say 100 or more students.

☐ The assessment is particularly challenging if the intended learning outcome is attitudinal, such as self-confidence.

☐ Continuous assessment is sometimes needed. This might be in the form of regular meetings to give them feedback for improvement. Through such meetings, faculty can assess their time management and project management skills.

☐ Assessing group work has its difficulty.

❖ There is the issue of identifying free-riders. Peer evaluation is an option, but it has to be organized properly and students should be given clear guidelines (e.g. using rubrics) on how to assess their peers.

❖ Another method is to randomly pick a student from a group and ask that student to do the project presentation. In this way, all students in the group have to be getting prepared.

❖ Another method often used in cooperative learning is to assign each student in the group a clearly defined role and assess him or her accordingly.

❖ In peer evaluation, students should be asked to provide justification for their assessment, not just a score.

❖ Self-evaluation should also be encouraged for students.

❖ Peer evaluation should be carried out more than once, not just at the end of the project or semester. In this way, problems in the groups can be identified and rectified before it is too late.

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

☐ Assessing group work is a challenge

☐ Scaling up the IBL is also a challenge.