

Projects

Description Projects are popular methods of assessment in PolyU today. Projects can be based on literature and/or empirical research on a relevant problem. They can also be applied projects – solving real-life or simulated problems, producing technical prototypes, or preparing a business plan.

Example 1 *Engineering Background Research Paper*

Working in teams of 4, perform an engineering background research study for the proposed T8 Highway project. What are the important issues in terms of the goals of the project and the effects on the community? Consider users, cost, safety, environment, technology, legal issues, design methods, functionality, alternatives, etc. Submit the final project as a website.

Example 2 *Multimedia Programming Project*

Working in pairs, make a 5-minute interactive instructional video demonstrating one business application of Radio Frequency ID (RFID) technology. Your video must include at least an opening splash page, a menu page, and a credit information page. It must employ the following multimedia functions – transitions and fades, animation, sound control, hand-coded rollovers, and custom handlers. Submit the project as a streaming video website.

What Outcomes are Assessed? Both examples can assess higher-order learning outcomes. Example 1 provides more opportunities to *analyse, synthesise, theorise, generalise,* and *evaluate* Engineering knowledge in an academic context. The programming project, on the other hand, promotes the *application* of theoretical IT knowledge, problem *solving, synthesis of aesthetics* (web design), *technical skills* (web deployment) with business knowledge, and so on.

How Authentic is the Task? Example 1 uses a local (Hong Kong) civil engineering project as the theme for investigation. This level of real-world problem study makes the assignment very authentic. Another measure of authenticity is in the usefulness of the project, not to the teacher, but to the learners themselves. Example 2 demonstrates the creation of a very useful and assessable piece of learning object. The instructional videos created by the class will be useful for learning about the different application possibilities of RFID technology. These videos can also be used by subsequent classes as learning tools.

What Kind of Learning is Promoted?

- Both methods encourage active learning where students are not mere receivers of knowledge. Instead, they are involved in the construction of knowledge. In the Multimedia project (Example 2) students contextualise what might be just book knowledge, and make it into something useful and functional. The artefact constructed (the video) becomes a tool for lifelong learning.
- Example 1 is the kind of *ill-defined* problem that drives *problem-based* learning. This kind of research trains students not to find answers, but to raise deeper questions about issues – issues of safety, of the environment, of goals and objectives, and so on.
- Group projects develop teamwork and leadership abilities. The

power of *collaborative learning* is magnified by the power of the web. The projects not only give students opportunity to learn to work as a team; but, given the ubiquitous reach of the Internet, such knowledge can be shared widely beyond the walls of the classroom.