

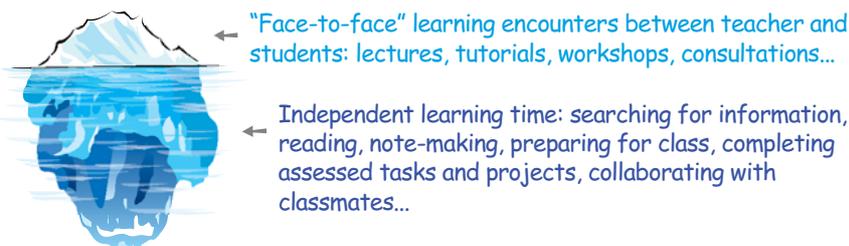
Developing Active Independent Learners

In This Issue

- The focus is on motivating students and developing their skills for independent learning.
- A PolyU teacher describes students' self-learning on an industry-based project and a PolyU librarian advises on developing students' information literacy skills.
- Online resources are recommended.

Students Learning In Their Own Time

To be successful, students must do a lot of their learning outside the classroom. In fact, many students spend more time learning in their own time than they spend with their teachers in class. An iceberg provides a useful analogy:



While some students are academically committed and have the skills and the interest to work independently and succeed, many students lack skills, motivation and/or confidence to be proficient independent learners.

Teachers Fostering Out-Of-Class Learning

Teachers have an important role to play in supporting and encouraging (particularly less able) students to make the most of their out-of-class learning time. They can make independent learning more manageable for students by:

- Setting a reasonable workload.
- Designing tasks that are sufficiently challenging but not beyond the students' skills.
- Giving clear instructions.
- Developing students' learning and self-management skills.
- Ensuring that help is available when students get "stuck".
- Making sure that facilities are accessible and resources are to be had.

Teachers can also motivate students to work in their own time by:

- Making tasks meaningful and stimulating (relevance and the "need to know" should be explicit).
- Providing choices so that students can work on tasks they personally find interesting.
- Building in opportunities to work collaboratively with classmates.
- Giving timely feedback about work in progress.

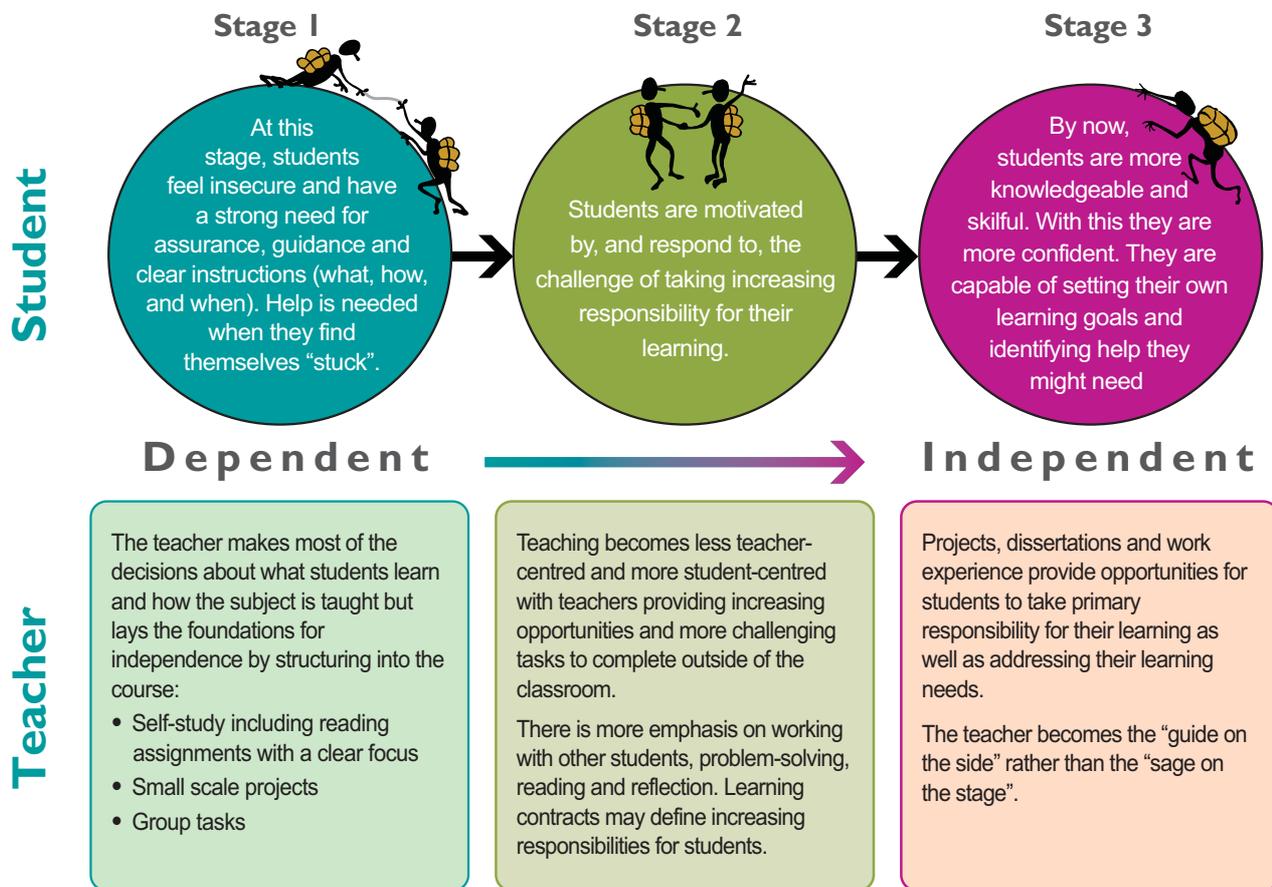
Independent learning is too important to be left to chance. We hope that the ideas and experiences you read here will be useful in getting your students to progressively exercise responsibility for their own learning.



Ottewill, R. (2002) Student self-managed learning - cause for concern? *On the Horizon*. 10.1 pp.12-16.

The “Progressive Independence” Learning Model

Students who join PolyU come with a range of prior experiences of education and some may initially need a lot of teacher support even within the classroom. Like teaching someone to swim, you don’t start by throwing your students in at the deep end. Rather, over time, build up your students’ skills by encouraging and teaching them to be more self-reliant. As this model shows, your role changes as well as the types of teaching and learning activities that students undertake.



By the end of their undergraduate years at PolyU, students should have an interest in, and well-developed skills for, independent learning. This is in line with the Education Commission’s *Education Blueprint for the 21st Century*, which contains an objective for higher education “to develop students’ ... ability to learn independently” (p. 32).



Education Commission (2000) *Education Blueprint for the 21st Century. Learning for Life: Learning through Life. Reform Proposals for the Education System in Hong Kong.*



Q & A

Q: My course has a large syllabus and I can’t cover everything in class. I repeatedly tell students that they have to do supplementary work. However, many don’t read the textbook, let alone complete other assigned readings. What can I do about this?

A: This is a common complaint. I recently read a very useful five-page article by Eric Hobson from which I picked up some excellent tips.

Hobson suggests that the first thing to do is to check that what you set is relevant and appropriate for students’ actual reading ability level and that there is an incentive for them to read regularly (sometimes students perceive a weak correlation between reading activity and course success). Other tips include:

- “Less is more.” Ensure your list has fewer, carefully chosen selections so students don’t feel overwhelmed.
- Explain the relevance of reading assignments. Explicitly link the reading to topics that students will

need to know to complete assignments, projects or exam questions.

- Assign reading close to the “use date” - the class session for which the reading is important.
- Use some class time. Allow around 15 minutes of class time for students to read “high priority” material.
- Teach reading strategies. Show students how to mark their texts. Marking texts is a useful way of analysing complex material, identifying key ideas, making sense of technical language and cross-referencing topics.
- Provide a reading guide. Identify the areas that students may find difficult. Provide help with technical vocabulary, explain background concepts and suggest ways of making the most of statistical and graphic illustrations.
- Pose study questions that focus students’ attention on what they are reading.

IDEA Paper No.40, Getting Students to Read: 14 Tips by Eric H. Hobson, Georgia Southern University

http://www.idea.ksu.edu/papers/Idea_Paper_40.pdf

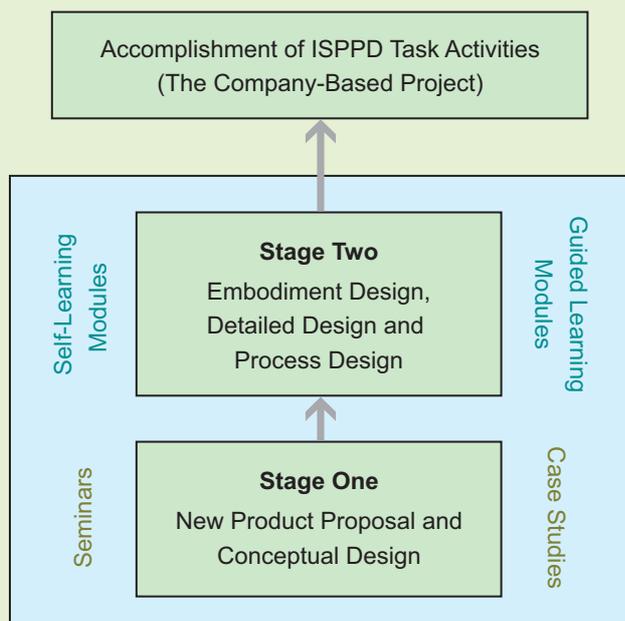
Developing Independent Learners in ISE

Dr C K Kwong from the **Department of Industrial and Systems Engineering** has been involved in re-engineering one of their subjects to boost students' independent learning skills.

“Many of our students have been quite passive learners at school. When they come to the university they use these old learning patterns. So we try to get them more involved in the learning process in order to build up their self-learning capabilities by the final year.

“Integrative Studies in Product and Process Design (ISPPD) is a nine-credit, third-year subject. It focuses on new product design and on integrating product and process design for new product development. The subject is designed so that as students acquire knowledge, they are also enhancing their capabilities in problem solving, independent learning, analytical ability, teamwork, creativity, communication and critical thinking. We try to provide a ‘live’ experience so our students work on a company-based project – for example designing new toys – which is provided by an industrial partner.

The course structure is as follows:



“There are no formal lectures. We brief students, arrange seminars conducted by guest speakers and provide some workshops and case studies. We have developed self-learning modules and guided learning modules. Throughout, we encourage students to identify the knowledge and technical skills they need to complete their projects. The students work in pairs and then in teams, and for each group we assign a tutor. The role of the tutor is not to solve their problems but to guide them and give advice. Basically the students manage their own learning and acquire the knowledge they will need in the workplace by working on a real-life problem.

“Students have to take two compulsory self-learning modules so that they have gained knowledge of important aspects. Other self-learning modules and guided learning modules are elective so that students have flexibility and can study topics of direct relevance to their project needs.

“We keep the learning modules in our laboratory so students can access print-based and online materials. We also have them on WebCT. Students know that they can select their tasks based on their interests; some will focus on product design, others on process design. They propose what they would like to do, and their tutor will advise them and monitor their progress.

“If other teachers are considering using this kind of active, independent learning approach, I would recommend:

- Writing a clear and concise problem case. It can be quite time consuming to contact companies, interview staff and write the document.
- Providing clear guidance so that students know what they have to do and the expectations we have of them. Students should understand the project aims and outcomes, the process, what resources are available, where they can get help and the ways they will be assessed.
- Inviting industrial partners to participate in the initial student briefings and as part of the assessment panel. This encourages students to see the project as significant and worthwhile.
- Ensuring the resources that students need are accessible and up-to-date.
- Encouraging students to plan their projects and decide the frequency of their meetings with their tutor. Some like to meet every two weeks, others at milestones in the project.
- Encouraging students to see the project as a real job – being a design team for a company and developing a new product.

“We have found that this course works really well. Students get excited because they get a chance to learn something new and interesting. They see the whole process: formulating ideas → working out a detailed design → developing process solutions.”

Online Resources

There are many websites that explain different tools and strategies that will build up students' skills for lifelong learning. As well, there are some excellent sites that you can recommend to your students for using independently to develop their learning skills when they, or you, identify gaps.

Tools for Teachers

1 **Learning Contracts** are useful if you are willing to allow students some flexibility about what they do in, for example, an assignment or project. As the name suggests, students have to “contract” or negotiate with their teacher what they will do, by when and to what standard. Go to:

Learning and Teaching: Learning Contracts by J.S. Atherton, De Montford University

http://www.dmu.ac.uk/~jamesa/teaching/learning_contracts.htm

2 **The Learning Review Table** is a simple tool that requires students to review their understanding of a topic by actively asking different types of questions. Further information, along with other methods to develop better independent learning skills can also be found at:

Learning to Learn, Teachers' Site, The Hong Kong Polytechnic University

http://www.polyu.edu.hk/learn-to-learn/teacher/_contents/htm/fs_g1.htm

3 **WebQuests** require students to analyse what they find online from a range of perspectives. Although creating a WebQuest requires quite a lot of preparation, the “pay-offs” are considerable because many students find them motivating. You can start by using simpler alternatives such as Hotlists and Treasure Hunts. See:

Teaching and Learning Centre, Vocational Training Council, Hong Kong

http://www.vtc.edu.hk/tlc/webContents/newsletters/news10_04.pdf

Students' Self-Study Sites

4 Online, reader-friendly, **Study Skills Improvement** information on a host of topics (including time management, note-taking systems, and personal reading improvement) are made available to students by:

California Polytechnic State University, Academic Skills Center <http://www.sas.calpoly.edu/asc/ssl.html>

5 Refer students to the following site for developing their skills to work in teams, manage projects, and set their own learning goals:

Learning to Learn, Students' Site, The Hong Kong Polytechnic University

<http://www.polyu.edu.hk/learn-to-learn/student/html/>

6 Recognising that **undergraduates** and **postgraduates** require different skills for successful university study, the **Student Learning Centre** at the **University of Auckland** have put together multiple instructional materials that will help students from these two groups. See:

http://www.slc.auckland.ac.nz/resources/for_undergraduates/index.php

http://www.slc.auckland.ac.nz/resources/for_postgraduates/index.php

Developing Students' Information Literacy Skills: Working with the Library

Susanna Tsang is the Section Head of the Information Services Section of the **Pao Yue-kong Library**. She is also the Faculty Librarian of the Faculty of Communication. Here she describes the ways in which library staff can help teachers develop students' information literacy skills.

“Training our users to be information literate is our goal because we want to help them to be skilful and independent learners. To this end we run different information literacy programmes.

“Most new PolyU students will come along to the library during Orientation. Sometimes students are not able to attend these sessions so we hope that teachers can contact the Library to arrange a suitable time for the class.

“In addition to the wide range of face-to-face workshops that we offer, we have also developed an online **Information Literacy Programme**. This four-module self-study resource is available to both students and staff. At the end of each module is a quiz, and a certificate is awarded on successful completion of the programme. You can find the Programme at:

<http://myweb.polyu.edu.hk/~lclcau/literacy/>

“Library staff are very willing to work alongside teachers. We tailor-make workshops because we believe it is important that students are provided with a good service throughout each stage of their academic life. For example, we have collaborated with teachers in preparing students for project work and this has been very effective.

“Another way we can support teachers is when they are designing a new course. I would encourage any staff member who is starting to design a course to contact their Faculty Librarian early on in that process. We can discuss the resources that their students will need from the Library and inform them of any recent changes about which they may be unaware such as subscriptions to new databases and new e-journals. Go to the **Library Website** at: <http://www.lib.polyu.edu.hk/about/staff/facindex.html> to find the names and contact details of your Faculty Librarian.”

Thanks to ...

In this issue, we would like to thank Dr C K Kwong of ISE and Susanna Tsang of the Pao Yue-kong Library for sharing their ideas about ways to develop active independent learners.

Read “Activate” Issue 5 online at:
<http://edc.polyu.edu.hk/Activate/5.pdf>

Further Information

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