When small classes are not just another lecture, they offer exciting possibilities and clear advantages for active learning.

Opportunities for Teachers

Teachers who carefully plan and deliberately structure their small classes commonly talk about the rewards that come when working with fewer students. These include:

• Finding out more quickly what students know and don’t yet know (but need to know), what they understand, what insights or misconceptions they share, whether or not they are able to apply what they know.
• Getting to know their students as individuals, understanding their social and emotional needs, finding out what motivates them, and watching their personal growth.
• Enabling students’ professional competencies to develop by providing activities that simulate real-world situations.
• Having the opportunity to be more experimental and creative. It is easier to try out new things when you have fewer students.

Opportunities for Students

Drawing on the “The Video Interview Project: Listening to Our Students Talk” conducted at PolyU a few years back, students talked about these benefits:

• Learning from each other.
• Finding it easier to ask questions.
• Being given the chance to practise what they have been learning.
• Establishing closer relationships with other students and their lecturers.
• Being stimulated to think for themselves.

It all sounds good. But one problem we must face is that small classes have a relatively high cost compared to large classes. Over 10 years ago, Griffiths and Partington cautioned university teachers “to ask frequently of oneself whether what is being aimed at and what is being done in small groups is qualitatively different from that which is carried out in lectures; and whether the extent of the gains for the students of the small group justify the extra cost incurred.” Because the economic climate now is much tighter than it was then, it is even more important that we can say categorically that small class teaching is qualitatively different and does justify the extra cost incurred. Otherwise, we face the risk of losing the many and varied opportunities that small classes make possible.
Overcoming Barriers to Participation: Ideas and Resources

As well as finding out from PolyU students how they benefited from small group teaching, “The Video Interview Project” also sought to establish what stopped students from participating in tutorials/seminars. Some of the reasons students provided are listed below in this section. Under these reasons are ideas and resources that might help in breaking down these barriers.

**Student view**

“We don’t know our classmates and our teacher well... their styles and expectations. So, all of us are very quiet most of the time.”

**Encourage social interaction**

It is important to plan ways of building confidence and social interaction. Here are some tips.

计划 for and expect participation right from the first lesson:

- Use a non-threatening “icebreaker” to get students talking. There are plenty to be found on the WWW. IdeaZone has a few unusual icebreakers you may like to try. But watch out for the snapping teeth! [http://www.ideaZone.com/IceBreakers_&_Warmups.html](http://www.ideaZone.com/IceBreakers_&_Warmups.html)

- Relate some information about yourself so your students get to know you are a human being as well as a teacher. Your modelling may encourage students to share in a similar way.

**Student view**

“[Participation] also depends on whether students’ questions and responses are respected and treated seriously. Sometimes I feel that the tutors seem really disinterested when they ask questions or receive a response from the students.”

**Develop your questioning skills and treat students’ questions seriously**

Students provide us with multiple reasons why they don’t ask or answer questions: “our English is not good”; “I don’t want my classmates to laugh at me”; “other students might think I am showing off”.

However, a supportive classroom culture and a skillful teacher will encourage students to ask and answer questions.

To encourage students to ask questions you might:

- Discuss why all questions are useful and that no question is a stupid one.
- Say “thank you” to students who ask questions. Avoid saying “good question” as other students might fear their own questions are not “good” enough.
- Post FAQ on your course website to demonstrate your interest in their questions.
- Make questions anonymous. Ask for group rather than individual questions; use Post-its for students to write their questions and have a designated place for posting; end a lecture with a “Muddiest Point” form. If you don’t know about the “Muddiest Point”, a simple explanation and example is available from: South Illinois University, Edwardsville [http://www.situe.edu/~deder/assess/cats/muddy3.html](http://www.situe.edu/~deder/assess/cats/muddy3.html)

For getting answers to the questions you pose:

- Start with questions you know they can answer.
- Make sure your questions are clear: write them up.
- Recycle questions. “Last semester, a student asked me … what reply would you have given?”
- Say “thank you” to students who answer questions and never ridicule answers you disagree with. There are productive ways to handle incorrect responses. See point 18 in Cashin’s paper referenced on the next page.
For advice on improving questioning skills, try these two resources:

- IDEA Paper No. 31, Answering and Asking Questions by William Cashin, Kansas State University
- Questioning Techniques for Active Learning by Professor C. M. Wang and Associate Professor Grace Ong, National University of Singapore
  http://cdtl.nus.edu/Ideas/iot2.htm

**Student view**

Most students have not prepared for the tutorials.

**Use the 3M rule to encourage students to prepare for class**

**Manageable**: Specify pages or chapter that must be read. Be realistic. Give questions on a well-designed worksheet to help students focus.

**Meaningful**: Use current events, case studies or problems which have clear relevance.

**Motivating**: Capitalise on students’ web surfing interest and ask them to hunt for articles. Expect them to explain to their classmates what they found and how they found it.

**Choose activities that are inclusive, fast moving, interactive, and from which students cannot escape**

Motivation is not fixed and by choosing interesting learning tasks, you may be the one that switches students on to their studies. Activities that are inclusive, fast moving, interactive, and from which students cannot escape include:

- Rounds
- Snowball groups
- Fishbowls
- Circular questioning

Find detailed instructions (and diagrams) for these and other activities in:

**ABC of Learning and Teaching in Medicine**
Teaching Small Groups by David Jacques
http://bmj.bmjjournals.com/cgi/reprint/326/7387/492.pdf

Note: all links worked at February 2005 but things can change fast on the Web!

**Stimulating Students to Think in Small Classes**

**Professor Howard Davies** from the Department of Management and Marketing uses a variety of teaching strategies including Knowledge-building Worksheets with undergraduates and postgraduates. These aim to help students make connections between information and ideas by requiring them to work through three stages:

1. **Collect** (write down what they know about a topic).
2. **Connect** (draw a diagram to connect the concepts).
3. **Create** (generate new ideas based on the understanding obtained from the previous section).

An example of a topic is “Evaluate the corporate strategy of xyz”. This requires students to apply the concept of corporate strategy (covered in an earlier lecture) to a real-world, real-time business situation. How does this teaching strategy work?

“I use Knowledge-building Worksheets as a tutorial activity. Students work in small groups of four or five, working through the questions and writing answers on sheets individually or as a group. I find it takes them about 40 minutes. While they work I am available to help as needed, but mainly I mark the previous week’s worksheet. I stop the session 10 to 15 minutes before the end and I give feedback on the previous worksheet.

“You don’t have to invent special questions, you can use questions developed for a presentation or for an examination. I think it is better working as a group on these because students sometimes find it hard to get started on their own. If they don’t understand something they can ask their friends, and they can contribute with what they understand. I find students are very engaged (and the noise levels are high), but at the end of the session I can see the written results and I find they have some interesting ideas.

“I would advise other teachers to give this a try as it really gets students thinking. I would make sure that students actually write on the sheet you give them rather than on other papers as (for some reason) this keeps them on track. I have had universally positive feedback from students and will continue to use Knowledge-building Worksheets along with a range of other teaching and learning strategies.”

You can find more detailed information about Knowledge-building Worksheets, along with examples, on PolyU’s Learning to Learn Website. Follow the link below, and then click on “Enhancing understanding by engaging students in actively constructing knowledge”.

http://www.polyu.edu.hk/learn-to-learn/teacher/_contents/htm/fs_gl.htm
Peer Teaching with Presentations

Dr Larry Chow from the Department of Applied Biology and Chemical Technology uses a range of teaching strategies, including Peer Teaching with Presentations. He has found this approach which he uses with his 35 to 40 students to be effective in promoting independent and cooperative learning. Students get research experience and practise in presenting information and ideas concisely. He thinks that these skills are extremely important for their lifelong learning. So how does it work?

“Biopharmaceuticals (drugs made by modern biotechnology) is too large a topic for me to cover comprehensively; I simply cannot cover all kinds of drugs available in the two timetabled lectures. I choose several illustrative drugs for students to study independently in groups of three to four. During the tutorial, each group will be responsible for peer teaching the rest of the class about the drug they have investigated.

“In 2004 I asked one student group to research on Xolair which is one of the first monoclonal antibodies approved by the FDA (Food and Drugs Administration) in 2003 for treating asthma. It was so new that it was not included in any textbooks, but there is plenty of information available online. I asked students to find out what Xolair is, which company makes it, how it is made, and what the market potential of the drug is. I wanted my students to understand what kind of drugs are available and what benefits they can offer to the patients. Different groups will be looking at different drugs targeting different diseases. Together, the whole class will be able to get a sense of what diseases the biotechnology companies are focussing on.

“Students work in small groups, and then present their findings during a tutorial. They somehow communicate in a language that is easy for them to understand. As their teacher, I take a ‘quality control’ role to ensure that the information presented is correct. Students give a 5 to 10 minutes presentation which is followed by a Q & A session. This is part of their assessed work with 5% of the overall grade being given as a group mark.”

Students’ Presentations

Q: I find that getting students to research, prepare and give a presentation can be a great activity for tutorial classes. There is potential for students to enhance their research and communication skills, as well as get up-to-date information that will deepen their subject knowledge. My first year students put a lot of effort into getting their presentations ready. However, when it comes to the presentations, the presenter rarely gets any questions. The other students just sit like wooden blocks. How can I get them involved?

A: Nowadays when I work with students to prepare them for planning and giving a good presentation, I also discuss with them how to be a good audience. On top of that, I have found that students often benefit from the structured approach of being part of a “listening team” with a specific task. I’ve adapted this approach from Mel Silberman. All you need is a set of coloured cards and instructions:

- **Agreers**: After the presentation, be ready to tell one point you agree with (or find helpful) and explain why.
- **Questioners**: After the presentation, be ready to ask one question about the material covered.
- **Disagreers**: After the presentation, comment on one point you disagree with (or find unhelpful) and explain why.
- **Example givers**: After the presentation, give an example from your own experience.

Either allocate these cards randomly, or form small groups and rotate the tasks around the groups. “Listening teams” is a simple idea that encourages students to keep concentrating.

Stop Press

If you are still not convinced of the benefits of small classes, then take a look at the article “Depression rife among university students” (South China Morning Post, C4, 22 January 2005). Winnie Yeung reports on a survey that has recently been done across 10 Hong Kong tertiary institutions. The research suggests that one reason why first year students may be experiencing higher levels of depression, anxiety and stress is that they have left home for the first time and are in a different study environment. Building on research from other places, first years students are helped with the transition to tertiary education when – amongst other things – they have opportunities to get to know their teachers, learn together rather than in isolation, find out what is expected of them academically, and get feedback about their performance. Small classes provide an excellent context for these things to happen.

Further Information

Educational Development Centre
The Hong Kong Polytechnic University
Hung Hom, Kowloon
Phone: 2766-6292 Fax: 2334-1569
Email: etdept@inet.polyu.edu.hk

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Read “Activate” Issue 4 online at: http://edc.polyu.edu.hk/Activate/4.pdf