

LEARNING MATTERS at LINGNAN

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From the Editor:

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'Learning Matters at Lingnan' are short papers that aim to promote a dialogue on teaching and learning. I encourage all staff to consider this as a vehicle for sharing thoughts on educational issues as they might affect us at the University. If you feel you have something which might be appropriate for inclusion in an issue of this publication, then please forward it to the TLC. I would be delighted if staff (and not only academic staff) from outside the Teaching and Learning Centre were to be prominent or even occasional contributors.



The PBL Process

Introducing Problem-based Learning

Problem-based learning (PBL) has its origins in the medical school when most major pioneering work has been conducted with programmes in medicine since the last few decades. PBL in medicine is viewed as part of curricular renewal which generally calls for less lecture-based instruction and more emphasis on independent learning and problem-solving.

In the medical and allied health context, PBL at its most fundamental level is an instructional method characterised by the use of patient problems as an impetus for students to learn problem-solving skills and acquire knowledge about clinical sciences. The PBL strategy involves several stages which include (1) encountering the problem; (2) problem-solving with clinical reasoning skills and identifying learning needs in an interactive process; (3) self-study; (4) applying newly gained knowledge to the problem; and (5) summarising what has been learned (Barrows, 1985). Finally, the PBL process concludes with students' evaluating the information resources they used and then analysing how they might have better managed the patient problem.

The 'problem' in PBL can be used to denote any situation that may stimulate thinking in the learner, in contrast to the passive transmission of knowledge of the conventional lecture. The 'problem' provides an opportunity for students to become actively involved in the discussion of issues for new learning, with appropriate feedback and corrective assistance from teachers. The PBL strategy is student-centred, wherein learning sessions are carried out in small groups which help to foster teamwork and promote communication skills. The teacher's role is to facilitate the problem-solving process, to guide, probe, and support the students' initiatives, not to lecture, direct or provide solutions.

Applying PBL

What distinguishes PBL from other problem-centred methods, such as the case method, is that in PBL, the problem is presented first, before the students have learned the basic concepts, not after. This helps to promote relevance and interest for subsequent learning when students have a purpose for the acquisition of knowledge and concepts required for solving the 'problem'. The strength of this approach is that students acquire personally meaningful knowledge that is learnt in a relevant (problem-based) context, and also come to a personal understanding of how to acquire knowledge to resolve a situation.

The implications of adopting PBL on teachers and students are many folds. The initial implementation may not be an easy task, especially trying to persuade academic staff to accept the challenge of developing well-written and realistic problem for the PBL curriculum when they are blissfully happy with the traditional knowledge transmission mode. This change in role from a safe transmitter of knowledge to a facilitator of learning can be difficult and quite traumatic to the teacher, as well as the students.

Playing a critical part in PBL, students too have to learn to take on a new role. They have to accept responsibility for their own learning by identifying the gaps in their knowledge, determining their learning needs, and collaborating in the search for information so that they can share it with each other in the next session. Students should be reminded from time to time of not lapsing into their usual, passive mode of looking up to their teachers to be fed with on-the-spot answers as in conventional teaching.

In a nutshell, the PBL strategy is characterised by the following features:

1. The problem is the starting part.
2. The problem is a 'real problem' that the students may have to deal with.
3. Knowledge that students should acquire is organised around problems, not disciplines.
4. Students, as a group and individually, assume the major responsibility for their own instruction and learning.
5. Much of the learning occurs within the context of small groups rather than lectures.

An aphorism attributed to the Chinese has helped to summarise this PBL concept very succinctly: 'Give me a fish and I eat today. Teach me to fish and I will eat for a lifetime'.

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Barrows, H.S. (1985) *How to Design a Problem-based Curriculum for the Preclinical Years*. New York: Springer.

N.B. Colleagues interested in adopting PBL in the curriculum and/or teaching can contact the Hong Kong Centre for Problem-based Learning at the HKU or the TLC for assistance.