

# THE MASTER OF AUDIOLOGY PROGRAM (FLINDERS UNIVERSITY): AN EVOLVING PBL CURRICULUM



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## EDUCATIONAL PHILOSOPHY

The Master of Audiology (MAud) course at Flinders University commenced in 1998. It was the first audiology award to have problem based learning (PBL) as its major instructional method. PBL has a distinguished history in medical education. It is student-centred and uses adult learning strategies. Self directed group learning (Image 1) is achieved through working towards a solution to an evolving problem, usually presented in the format of a weekly written case (Image 2).

The process:

- is hypothesis driven, requires students to think broadly and to identify their boundaries of knowledge and extend them
- demands integration of knowledge across systems
- demands integration of knowledge with clinical perspectives
- requires prioritising hypotheses
- leads to resolution of a problem/diagnosis
- values group learning which may also model multidisciplinary activities



In this way the clinical process and practitioner role are constantly modelled. This is probably PBL's strongest feature. Additionally conventional wisdom has it that the "active learning" of the PBL approach facilitates deep learning, with benefits for recall, integration and problem solving. Course Structure (First Curriculum, 1998 - present)

## COURSE STRUCTURE (FIRST CURRICULUM, 1998 PRESENT)

The course is full time and 3 semesters (54 units) in duration:

- Semester 1**
- Audiology 1 (12 PBL cases and associated sessions) 9 units
  - Professional Practice 1 3 units
  - Clinical Audiology 1 3 units
  - Directed Study 1 (elective literature review) 6 units

- Semester 2**
- Audiology 2 (8 PBL cases and associated sessions) 6 units
  - Professional Practice 2 3 units
  - Clinical Audiology 2 6 units
  - Directed Study 2 (case study of deaf child) 6 units

- Semester 3**
- Audiology 3 (4 PBL cases and associated sessions) 3 units
  - Clinical Audiology 3 9 units

## COURSE STRUCTURE (SECOND CURRICULUM)

In reviewing the First Curriculum we have concluded that an important part of the education of any health professional, namely research, has been undervalued. Accordingly from 2003 onwards the MAud. will become a 4 semester course. Group research projects will extend over Semesters 3 and 4.

## PROFILE OF STUDENTS

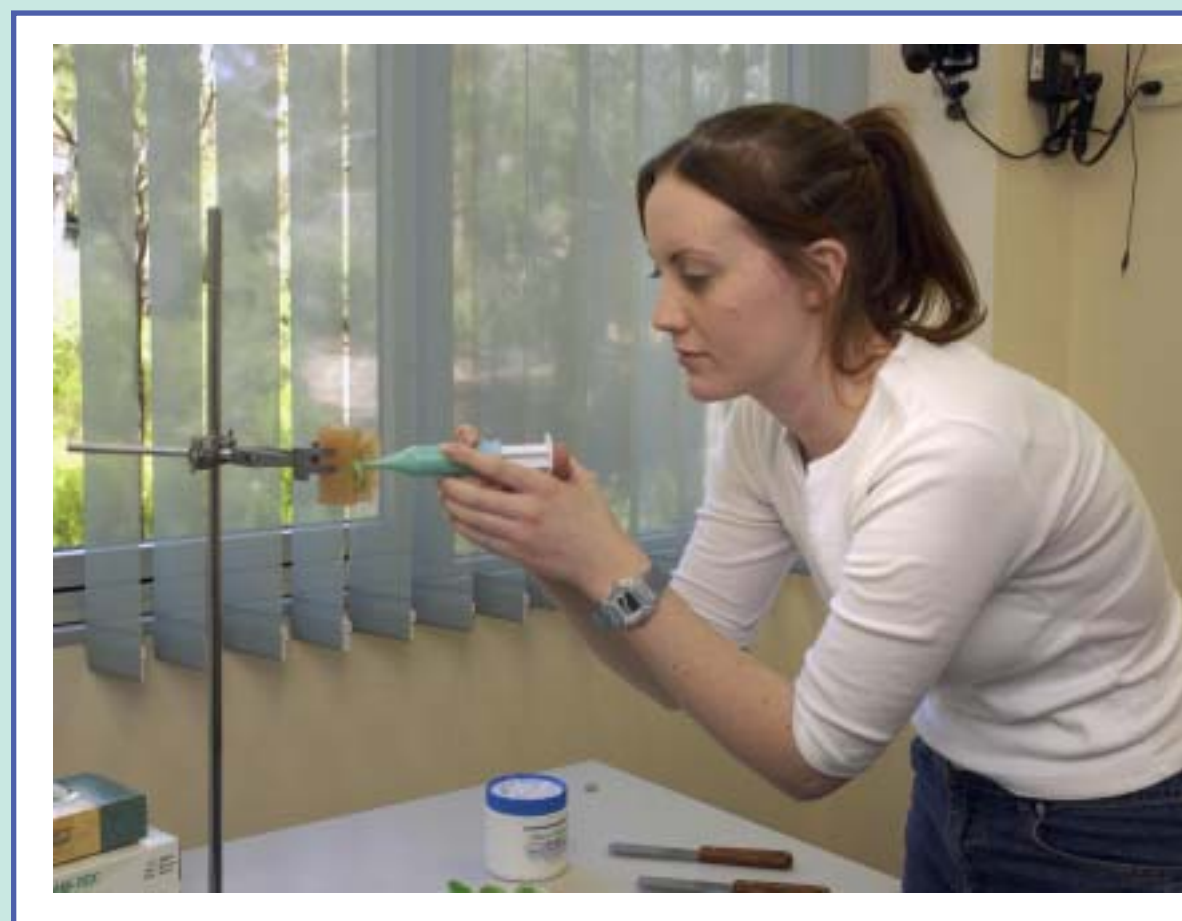
Students entering the MAud. must have an undergraduate degree recognised by Flinders University. There are no preferred undergraduate degrees. The course attracts many more applicants than there are places and entry is based on merit determined by grade point average (GPA) and a highly structured interview based on that used for the Flinders University Graduate Entry Medical Program.

Australian and international students admitted to the course had first degrees in:

Arts	5
Education	4
Engineering	1
Health Sci.	3
Medicine	1
Nursing	2
Occ Therapy	1
Psychology	6
Science	5
Sp. Pathology	4

## INNOVATION IN ASSESSMENT AND EVALUATION

**Assessment:** Assessment procedures seek to maintain the contextual nature of learning in PBL and the focus on integration and problem solving skills. "Mini cases" and longer "progressive case disclosures" in written examinations and various types of oral examination require the student to demonstrate these PBL-related competencies as well as the relevant knowledge base. Clinical skills in audiology lend themselves to diverse assessment methods.

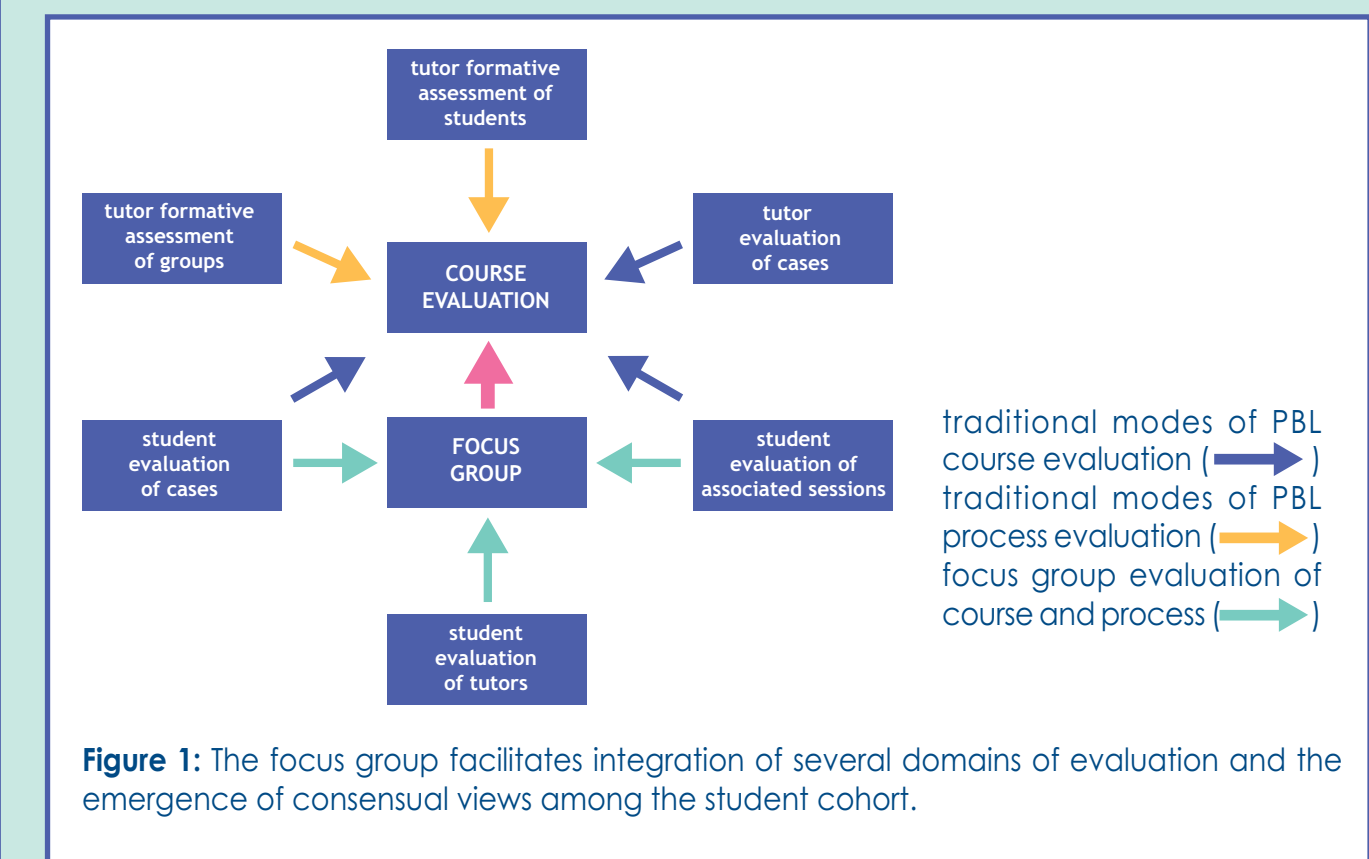


Some of the assessments are effectively borrowed from medical curricula; these include structured practical, oral and/or performance examinations. A multi-station rotational examination (OSCE: Objective Structured Clinical Examination) allows the rapid examination of highly specific core clinical skills such as otoscopy, sound level measurement and ear mould impression making (Image 3). More generic skills related to diagnosis and management are hierarchically examined using simulated and real patients.

**Evaluation:** We believe evaluating an audiology course centred on PBL requires methods which:

1. capture students' views across the curriculum in ways which are more congruent with the educational philosophy of a PBL based course and reflect its implementation mode;
2. allow the students' main concerns about the course to surface and to be advanced without undue influence of the staff's perspectives and expectations.

Student focus groups have featured prominently in our course evaluation process, concurrently and at course-end. The sessions are conducted by experienced academic staff external to the program. Figure 1 shows the position of the focus group evaluations within the context of broader course evaluation and the capacity for focus groups to integrate several domains of evaluation, consistent with a PBL curriculum.



**What the students say:** We have evidence for strong student support for the Flinders PBL based Master of Audiology course. All respondents to our Graduate Survey within 12 months of course completion Agreed or Strongly Agreed with the statement, "The use of problem based learning was an appropriate education method for audiology." (60% response) A number of graduates cited PBL as a course strength, "Associated discussion and research was a fabulous way to learn. Lectures worked in conjunction with the PBL tutorials which aided learning."

Concurrent focus groups with students in Cohorts 2 and 3 also documented student enthusiasm for the PBL approach, which was said to be "positive for learning, clinically realistic, motivating, stimulating and helpful for learning goals."

There was more variable student feedback about the detailed implementation of PBL, eg. concerns about the use of 'expert' versus 'non-expert' PBL group tutors; specific cases; case sequencing; and the overall timing and integration of the PBL cases with associated sessions and the broader curriculum. Student feedback has allowed us to directly address issues of better student preparation for the PBL process, tighter case evaluation and revision, timetabling of associated sessions and the perennial problems of assessment.

## CONCLUSIONS

1. There is little research into educational methods in audiology. A burgeoning knowledge base which does not readily fit into a traditional curriculum and concepts such as "lifelong learning" mandate new and innovative approaches to audiology education. PBL appears a good vehicle for these.
2. The new Flinders University Master of Audiology course was designed and developed using PBL as successfully modelled in many medical program in the past two decades.
3. Flinders University audiology students are very positive about PBL and they remain so as graduates.
4. While the staff's views are less important than those of the students, they are just as enthusiastic about PBL!