Problem-based learning (PBL) was developed nearly 40 years ago and has been widely adopted in many medical school curricula worldwide. Frequently, students and academic staff members alike, requested for reading materials on PBL. With the rapid increase in the numbers of medical schools in Malaysia and the developing world, it was felt that a handbook would be useful to cover some of the frequently asked questions on PBL, as well as to give a multi-disciplinary and systematic approach to the use of PBL in medical education.

This handbook is largely based on the authors' experiences in using PBL at the Faculty of Medicine, University of Malaya. It is useful for medical and health science students who are probably encountering PBL for the first time in the education system. It is also intended as an adjunct reading material to junior or new academic staff members who are taking their first "baby-steps" in the world of medical education.

This handbook is divided into seven chapters. The first five chapters deal with the pedagogical processes of PBL and gives an overview on the fascinating development of PBL in medical education, including its use in the clinical years. In chapter six, we incorporate real case scenarios used in our PBL program. Using this 'tested' methodology, the authors are confident that students and teachers will be able to utilize a similar approach to the development of PBL in their respective programs.
integration of knowledge, better appreciation of understanding the knowledge, improved communication skills and increased rapport with the tutor/facilitator. Whether these results reflect students’ increasing confidence with PBL or improvements in PBL facilitation is difficult to assess at this moment. Nevertheless, these preliminary results are positive and provide evidence the students considered PBL to be beneficial in their learning process.

In the next chapter, an outline of the approach to the development and design of cases scenarios will be emphasized, with the use of sample PBL cases to highlight this approach.

6 Development and Design of Case Scenarios

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Background

Perhaps one of the reasons why PBL is especially popular in medical schools is that medical cases are tailor-made for PBL. Almost every real case involves a wide spectrum of learning objectives. That does not mean, of course, that one can just lift cases off the hospital records and present them as PBL cases. A real case can be used as a basis of a PBL case, but sometimes, other features have to be added to make the case complete and also to make the case interesting to students. This does not imply that PBL would not be successful in other fields of study; indeed PBL has been successfully implemented in other courses as well. Cases would have to be written such that students would be curious enough about the case that they would want to discover more and do it by finding out about it themselves. This is optimized learning.

Writing Cases

While cases can have single authors, multiple authors writing a case can possibly produce a more multi-layered case. Whether the case has one author or multiple authors, they must be vetted independently. This is especially important when there is a single author. A case is not presented as a whole case, but piecemeal as Triggers. This is to whet the appetites of students to discover more. A case can have two or three triggers; too many and they can become tiresome. The case must be authentic. A good case would not give too much information but yet be complex enough that there would be many avenues to arrive at a solution.

A typical clinical PBL case scenario will consist of three separate triggers, which will be handed out individually to the students after every 30 minutes of discussion. In the tutor’s copy, in addition to the triggers, tutor’s guides are usually inserted after each trigger to highlight the main learning points. The learning objectives are divided into two parts: biological issues and secondly, behavioral, social and population issues. The case scenario is summarized into two or three main concepts for the tutors. A page of reference materials printed with titles of journal