

Web resources for problem based learning

A search under 'problem based learning' using the Google search engine finds 3.8 million hits with no trouble at all. Of course, no academic is ever going to make even a modest attempt at browsing even a tiny fraction of those. What follows here are brief summaries of the some of the more interesting and useful aspects of several sites on PBL.

Most PBL websites give a definition of the key characteristics of problem based learning and extol the virtues of the approach. Most give extensive lists of links to other sites and, consequently, almost any PBL website is a reasonable starting point. Few attempt to give any sort of realistic advice on implementation, overcoming difficulties, preparing staff and students or writing problems. Even fewer sites give examples of problems and many that do give materials which are, to say the least, disappointing. Much of what is presented as PBL is really no more than reasonably creative problem solving.

Most quality PBL sites originate in the USA, Canada and Australia. Much of what is available is in Medical education but is often still applicable to other disciplines. Many of the sites are interdisciplinary and provide resources and ideas which many practitioners may find useful.

The University of Adelaide's Advisory Centre for University Education is home to the 'Leap into PBL' website. This site is aimed primarily at the university teacher who wishes to explore this approach for the first time, but may also be useful to the teacher who has dabbled with PBL. The site aims to provide a structure around which practitioners can build their own course. It includes a step by step induction to PBL and covers a wide range of issues such as training staff, preparing students, assessment, evaluation, dealing with non-participation, keeping the groups going, timetabling sessions, etc. It also provides guidance on writing problems that do not gloss over the effort and time involved as well as a useful list of references and links to other useful PBL websites. This is a very useful and practical site and is a good starting point, especially for the lecturer new to PBL.

<www.adelaide.edu.au/clpd/resources/leap/leapinto/ProblemBasedLearning.pdf>

The National Center for Case Study Teaching in Science based at the University of Buffalo is a real treasure trove of case studies, most of which easily fall within the PBL definition. There are many examples of cases covering many areas of science and links to a large number of sites which could provide ideas for new cases. This is an excellent place to start if you are thinking of writing your own problems.

<ublib.buffalo.edu/libraries/projects/cases/case.html>

The University of Delaware site is extremely useful. The list of books links directly to reviews or publishers. There are several full text articles as well as back issues of the in house journal 'About Teaching' which features many articles on PBL. There are also a number of sample problems taken mainly from the sciences. By far the most useful feature of this site is the PBL Clearinghouse which is a searchable collection of many peer reviewed problems. The Clearinghouse is accessed via an email user name and password but these are available easily and you can be signed up within minutes. Once into the Clearinghouse users can search by keyword, author or discipline. There is also an invitation to become an author or reviewer. This is a really excellent resource.

<www.udel.edu/pbl>

Of course McMaster University in Canada has a long tradition in PBL. One staff member PK Rangachari has some very useful advice related to writing problems in his 'Writing Problems: A Personal Casebook'. This casebook discusses the many aspects of writing good quality problems and includes many examples drawn mainly from the biomedical, and biological sciences.

<www-fhs.mcmaster.ca/pbls/writing/>

The University of Colorado Denver Center for Instructional Support's problem-based learning checklist is a very useful tool for those new to facilitating PBL. It provides a ready made prompt that will help tutors ensure that their students are properly prepared for and supported through the PBL process.

<www.uchsc.edu/CIS/PBLChkList.html>

The Illinois Mathematics and Science Academy's PBLNetwork site gives examples of how PBL might be used to teach science and mathematics in situations ranging from primary education to adult education. It gives a very good walk-through PBL example, 'Lunar Outpost', which investigates the challenges of establishing an outpost on the moon.

<pbln.imsa.edu/>

Project LeAP (Problem-Based Learning in Astronomy and Physics) was a three-year FDTL project. The project increased the profile of problem-based learning (PBL) in university Physics and Astronomy courses in the UK. The University of Leicester led the project consortium, with the Universities of Hertfordshire, Reading, and Sheffield as partners. The site includes a comparative analysis of PBL within physics, case studies, exemplar support materials for students and tutors, and original PBL problems. The project continued under the auspices of the π CETL.

<www.le.ac.uk/leap>

<www.open.ac.uk/picetl/>

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