Because Wisdom Cannot Be Told:

Problem-Based Learning in Higher Education

Developed by

Edwin M. Bridges

Stanford University

&

Philip Hallinger

Mahidol University

Version 2.0

Because Wisdom Cannot Be Told
Problem-Based Learning in Management Education

> So he had grown rich at last, and thought to transmit to his
> only son all the cut-and-dried experience which he himself
> had purchased at the price of his lost illusions; a noble last
> illusion of age. (Balzac)

This quote vividly highlights the difficulty that people experience in transmitting their knowledge to others. In 1940, Charles L. Gragg published an article (see attached Resources) in which he asserted that "the goal of education is to prepare students for action." The problem of knowledge transfer is particularly acute in the professions (e.g., education, law, medicine, management) where the application of knowledge is paramount.

Yet, there has been a growing recognition that professional education has fallen short of the demands of the workplace. Graduates often report that the content of their preparation programs is irrelevant to their work roles. Theory and research appear unrelated to the problems they face in practice. Studies confirm the belief that knowledge gained in professional education often transfers poorly to the workplace. Students often forget much of the material which they have learned and/or are unsure how to apply the knowledge they have retained. Moreover, professional education programs have generally ignored the affective domain of education despite its importance in the practice of many professional fields.

The challenge of preparing students for the workplace has taken on increased importance over the past decade as research continues to generate new knowledge at increasing rates. The explosion of knowledge and the use of more efficient information technologies have placed a greater premium on life-long learning as a legitimate goal of professional education. In most professional fields, important curricular domains have changed substantially over the past decade; change in the knowledge base of most professions is likely to accelerate in the future.

Professional education must increase its capacity to make both current and future knowledge accessible to practitioners. One potential vehicle for closing the gap between our aspirations for student learning and the reality of workplace application is problem-based learning (PBL). This educational approach holds promise for making education more meaningful and for increasing students' ability to access and apply knowledge outside the classroom. In this project, you will have the opportunity to learn about problem-based learning by participating in the process of problem-based learning. It is hoped that you will learn about PBL in a manner that enables you to apply your knowledge to the development of your own educational program.

The Problem

Assume that your institute is experiencing a 10 percent cutback in its budget. Further assume that the Director has conducted a thorough review of each department. Her review reveals that the enrollments in your department show a downward trend over the past four years. In addition, a survey of program graduates and employers found them extremely critical of the quality of preparation. Graduates maintain that the content lacks relevance to professional practice and that the instructors rely much too heavily on two methods of instruction -- lecture and teacher-led discussion. Local employers say that your graduates seem ill-equipped to work with others in creatively tackling real problems.

The Director shares the results of her review with your Department Head and asks your department to develop a plan that responds to the declining enrollments and criticisms. Unless your department comes up with a reasonable plan, it is in danger of suffering a much larger cut than 10 percent and being phased out or merged with another department.

Your Department Head has created three sub-committees to look into problem-centered instructional strategies: case method, learning technology, and problem-based learning (PBL). You have been assigned to the subcommittee investigating PBL.

The Department Head has charged your sub-committee with reviewing the literature on PBL and preparing a brief report on what you have learned about PBL. You won't have time during this session to draft the report, but you will make a presentation to the other faculty in your department.

Learning Objectives

At the conclusion of this project learners will know the following.

1. What is problem-based learning (PBL) and what is the rationale for its use?

2. What is the role of students in PBL?

3. What is the role of the instructor in PBL?

4. How does PBL operate in a classroom setting?

5. What do we know about the effectiveness of PBL in professional education.

Guiding Questions

1. What are major differences between the role of a student in PBL and traditional and case methods of instruction?

2. What are major differences between the role of an instructor in PBL and the traditional and case methods of instruction?

3. What facets of problem-based learning foster *transfer of learning* to the workplace?

4. What are some of the advantages and disadvantages of PBL from the teacher's perspective? From the student's perspective?

5. What characteristics of PBL make it appropriate for learning programs oriented towards application in the workplace?

[Note: the guiding questions are designed to orient you to important learnings/issues in the project. It is not intended that you will answer these questions explicitly.]

Product Specifications

1. Prepare an oral report that you will deliver to the rest of your department's instructional staff; this report should address these questions:

    a. What you have learned about PBL that is of greatest importance to your staff, particularly as it concerns the problems they face?

    b. What should the department do next concerning PBL? (e.g., drop the idea of using PBL; study the idea in more depth, noting what you want to know more about; use PBL on a limited, trial basis)

    c. Why you are making the recommendation?

2. Your group will have 10 minutes to present its oral report to the other staff in your department. Your group is encouraged to prepare a short handout for the department that outlines your findings. Please include copies of any overheads that you may use in your presentation.

Resources

For this PBL project, you will have the following resources:

1. Reading materials:

Albanese, M & Mitchell, S. (1993). Problem-based Learning: A review of Literature on its outcomes and implementation issues. *Academic Medicine, 68* (1), 52-81.

Bridges, E. & Hallinger, P. (1995*). Implementing Problem-based learning for Leadership Development*. Eugene, OR: ERIC.

Colliver, J. (2000). Effectiveness of problem-based learning curricula. Research and theory. *Academic Medicine, 75*(3), 259-266.

Gijbels, D., Dochy, F., Van den Bossche, P., & Segers, M. (2005). Effects of problem-based learning: A meta-analysis from the angle of assessment. *Review of Educational Research, 75*(1), 27-61.

Gragg, C. Because Wisdom Can't be Told. *Harvard Alumni Bulletin*, Oct. 19, 1940. Reprinted Harvard Business School, # 451-005.

Seifert, E. & Simmon, D. (1997, March). Learning-centered schools: Using a Problem-based Approach. *NASSP Bulletin*.

Smits, P., Verbeek, J., & De Buisonje, C. (2002). Problem-based learning in continuing medical education: A review of controlled evaluation studies. *British Medical Journal, 321*, 153-156.

2. Video Resource: NOVA video: Can We Make a Better Doctor?

Feedback

1. What was the most important thing you learned in today's session?

2. What questions do you have from today's session that remain unanswered?

3. How might this session be changed to make it more useful? (Please be as specific as possible.)