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Introduction

Problem-Based Learning A Collection of Articles

We are confronted by a condition, not a theory.

—Grover Cleveland

Problem-based learning (PBL) is the search for solutions to life's messy problems. It is learning by encountering the perplexing, the bewildering, the dilemmas of real-world problems. PBL is about becoming immersed, as stakeholders, in problematic situations and addressing the concerns with empathy. It is about understanding the circumstances and the subsequent consequences of actions taken. PBL is learning in its most authentic state. It is the real world.

More specifically, PBL is an elegant design for learning that begins with an ill-structured or open-ended problem scenario. What do students need to know to survive and flourish in their careers of choice? How might the power of the waterways be harnessed without polluting the cities and countryside? PBL is inquiry learning. The investigations that develop, strand by strand, thread by thread, continue until appropriate and acceptable solutions emerge. Throughout the PBL unit, the learner directs the design of the web of inquiry and, ultimately, is responsible for its final architecture.

To explore the true nature of problem-based learning as a curricular framework and an instructional model for kindergarten to upper secondary classrooms, this collection of articles has been assembled. It provides a broad perspective to the concept of PBL and is intended as an introductory volume on the issues, for the professional library of today's informed educator.

Through a spectrum of articles that range from a historical perspective of PBL to the theoretical underpinnings that validate the model for schooling, to a more practical vision of uses in the regular classroom and in special applications, this collection

presents PBL as a viable alternative to traditional curriculum. It is a pocket guide for the busy professional who wants to know more about PBL or for those who may want to create study groups to explore the nature and nuances of the model.

Section 1

Beginnings . . . Problem-Based Learning

Probe the earth, and see where your main roots run.

—Henry David Thoreau

While the opening section is comprised of a single article, its scope broadly encompasses the historical roots of problem-based learning (PBL) as a medical model. Bridges and Hallinger present a comprehensive review of the literature on PBL in medical education and make a case for using PBL in schools of education for preparing administrators.

In their paper, *Problem-Based Learning in Medical and Managerial Education*, they delineate five defining characters of PBL: it is the starting point for learning, the problem is one that students are apt to encounter in their future work, subject matter is organized around problems rather than disciplines, students assume a major role in their learning, and most learning occurs within the context of small groups.

In addition, eight design issues are addressed: PBL's incorporation into the curriculum, selection and definition of problems, identification of goals, components of small group learning, program planning, evaluation, student orientation, and faculty preparation. Within the context of these eight issues, a research agenda is proposed and educators are encouraged to tackle the challenges of moving from a traditional approach to a PBL approach.

While its original intent was not solely to provide a historical perspective in the sense that it is used in this collection, the discussion serves this serendipitous purpose nicely. To begin the readings with this well-supported research seems to, in turn, serve the reader well.