PEER-LED TEAM LEARNING
EVALUATION

THE IMPORTANCE OF EDUCATIONAL RESEARCH

MARK S. CRACOLICE

In a 1961 essay, the Educational Policies Commission wrote, "The purpose which runs through and strengthens all other educational purposes— the common thread of education— is the development of the ability to think." They go on to state, "... in the general area of the development of the ability to think, there is a field for new research of the greatest importance."

One of the most important tasks of human society is making people smarter. What technological advancement could possibly top an understanding of human cognition and the development of methods to enhance thinking abilities? I believe there are none. The great unsolved puzzle of the mechanism of functioning of the human brain is the most fascinating and challenging frontier before us yet to be explored and understood. This understanding can only come from research.

The complexities of human cognition and of understanding how people learn lead to complexities in the design of high-quality educational research. The challenge of doing field research as opposed to clinical research only increases the complexity of the task. This leads to a reliance on the *preponderance of the evidence* as being more valuable than a single, elegant experiment, such as is often done in the natural sciences. This acknowledgment does not diminish the importance of the single experiment. There can be no preponderance of the evidence without the individual investigations.

Ironically, there has been an historical bias in the United States toward ignoring the results of educational research. A common flaw in human reasoning is to pay more attention to a single, emotionally-close datum than to a large sample of data. For example, an endorsement of a car by one friend carries more influence on a buying decision for most people than an analysis by *Consumer Reports* based on the results of weeks of testing and thousands of consumer experiences. Similarly, people tend to be more strongly swayed by their individual learning experiences than by the accumulation of data from research on many students.

It is saddening to know that other countries place a higher value on American educational research than do Americans. The results of the Third International Mathematics and Science Study (TIMSS) show that although U.S. and Japanese students are at similar achievement levels in the fourth grade, the U.S. students are about one grade level behind by the seventh grade (Schmidt, McKnight, Raizen, 1997; Schmidt, Raizen, Briton, Bianchi, & Wolfe, 1997). When Japanese teachers are interviewed to discover the reasons behind the superior performance of their students, they cite American educational scholarship: "Indeed, Japanese elementary teachers expressed surprise that we [American educational researchers] were so interested in their science instruction, which they saw as heavily influenced by Western approaches, including the work of John Dewey and Jerome Bruner, discovery learning, inquiry-based approaches, and various Sputnik-inspired reforms"(Linn, Lewis, Tsuchida, & Songer, 2000).

We must, through rigorous research efforts, document the remarkable benefits that we intuitively know result from Peer-Led Team Learning. Our understanding of PLTL can only be enhanced by such investigative efforts. Those who choose to study the results and modify their implementations accordingly will benefit, and the ultimate outcome will be a better project. Because PLTL is a relatively new undertaking, there is still a cornucopia of areas that need to be studied. Our group is presently pursuing studies of the epistemological changes of peer leaders, the development of scientific reasoning ability among adolescent students, and applications of a PLTL strategy in an inquiry laboratory curriculum. We enthusiastically invite discussion, collaboration, and consultation with other members of the PLTL project.

Mark S. Cracolice
The University of Montana

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