

Breakthrough Thinking For Educational Transformation: Problems, Engagement, Creativity And Tools

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Education in the new millennium must respond to the knowledge-based economy, the rapid proliferation of technology, globalization and industrial and business innovations. Educational leadership, economic leadership, scientific leadership, technological leadership and national survival call for breakthrough thinking in educational curricula, methodology and assessment. We need to develop key competencies and the intangible qualities of resilience, determination, adaptability, problem solving acumen and creativity in our graduates. The search for educational paradigms that address these needs appear to have a confluence in the use of problem-based learning (PBL) and tools for engaged and creative learning. This plenary paper will review some of the recent research on learning sciences and what works for educational transformation. It will address on how real world problems can be used to encourage reflective and creative learning. Drawing on breakthroughs in cognitive psychology we will also elucidate on the new engagements needed in learning and problem solving. Issues of optimizing the use of tools and e-environment with problem-engaged learning will also be deliberated.