

Problem solving- What does the research say?

Problems come in all sizes, shapes and colours.

Society is breaking into two classes.

1. The first class are people who know how to think
2. The second class, the vast majority of North Americans, is people who cannot think for themselves- they collect images and facts which leads them, and everyone else, to the illusion that they are educated and competent.

Knowledge is power, but only if you learn how to apply it through problem solving.

Most thinking is problem-solving thinking

In "How we think" (1933) John Dewey, "The origin of thinking is a problem".

Dr. Otto Hollaway stated that teaching problem solving should be a national educational objective. From the beginning, problems solving should be taught in every grade and across the curriculum. Even in two year college or four year university, problem solving should be a required course, and this course will increase the value of the diploma/degree.

In 2005, Stephen Downes recently referred to a paper written by Kelvin Tan and Cynthia Ming entitled “No subjects, no teachers, no schools, no peers-just problems

- ♥ Learning should be based on problems, not subjects, as subjects stress content rather than process
- ♥ Individual learning is authentic (group work may hinder this learning)
- ♥ When the teacher is also the assessor, then the power to fail students may be detrimental to self-directed learning (teachers need to be facilitators, not content experts)
- ♥ Scheduled class times, as in any regulated school, are not supportive to problem based learning (learning can not fit squarely with the traditional school system of regular lecture and tutorial time slots)

(Hom and Murphy, 1983) Found that a growing body of research shows that students are more motivated and efficient when they work on goals set by themselves and they achieve more than when they work on goals sets by the teachers

As problem solvers, we need our clients to have more in common with the cabinet-maker than the assembly-line worker.

They need

- plans and blueprints
- high quality materials
- a decent place to work
- a well-stocked tool box
- **and** the skill and knowledge necessary to properly select and use the tools in it.

It is critical that we support our clients in becoming good problem solvers!