

So Why Should Education?

"...PRESENT THE ONLY THING THAT HAS NO END."

The American educational crisis touching all our children in countless ways is actually part of a much broader and greater knowledge crisis, touching all of us: simply put, how do we know when we know?

My premise is that the educational crisis is not fundamentally different from the knowledge crisis. Education is the transfer of knowledge; thus, it follows: what holds true for knowledge holds true for education.

My thesis is: If the knowledge crisis (at its fundamental level) has been solved by science, then the educational crisis has also been solved (at its fundamental level) in similar ways.

One way of doing this is to formulate knowledge into the three primary concepts of Past, Present and Future knowledge and define them as such:

⊗ Past knowledge is symbolic and therefore is removed from

experience such as the knowledge found in books, theories and beliefs. These words, for example, are symbolic.

⊗ Future knowledge is imaginative and speculative in nature, such as dreams and plans, and is also symbolic.

⊗ Present knowledge is right now. It is about the experience of the reality that is happening here and now. It is "non-symbolic" or real know- ledging. What do you know that you don't know now? What are you doing now?

Once illuminated in this manner, which is certainly not new, it becomes clear that symbolic knowledge, in both past and future forms, is only an aspect of a far broader and encompassing knowledge that is "more than both".

Symbolic knowledge, while quite useful and necessary, is only the tool. The root cause of the knowing crisis - what science has called, "the fallacy of

mis-placed concreteness" (Whitehead) - is simply mistaking our concept of reality, i.e., past knowledge, for reality itself. Worse yet, a mind ruled by its own symbolism or conceptualism may not recognize any other mode of knowing and hence may believe its own reality is the only reality there is. The tool has made itself master and lord. Nevertheless, to think is not to know.

But the only reality there is, is now! Forever! Physicist Erwin Schroedinger, a founder of quantum physics said, "...For eternally and always there is only now, one and the same now; the present is the only thing that has no end." This is what the cutting edge of science looks like.

What has been said here about knowledge can be applied to education (this is a new application of the very old idea) by expressing education in past, present or future terms as well. The results are identical. We

find that past-orientated education is about symbols, and now orientated education is about learning by experience (doing).

The crisis in American education then, is clearly the result of overemphasizing the teaching of past-orientated knowledge which obviously doesn't work anymore.

Now-Orientated Educational Systems (NOES) emphasizes experiences which the student needs or wants now, (What does a ten year old need and want to know now?) and directly involves the student, now, in that experience.

Experience is not just the best teacher, it is, for better or for worse, the only teacher!

And we were so sure the kids were the cause of it all ...



Quantum Physics and the Ordinary

ONLY "RELATIONSHIPS" CAN DESCRIBE THE FUNDAMENTAL LEVEL, LOVE & MATH; IS EVERYTHING ELSE THAT DIFFERENT?

by Tom Mandel

While the American educational crisis is relatively recent, the fundamental knowledge crisis has been plaguing scientists since the turn of the century. It was then that they first looked inside the atom and found a brand new world, a different kind of world; and to describe it required a different kind of knowledge, a new kind of knowledge. It is this new knowledge that has important ramifications for education, indeed, for everyone.

The world view prevalent in 1900 was Newton's classical physics. According to his system everything worked together much like a machine or a dock, which, of course, could be taken apart and examined bit by bit. The parts of the machine were thought to be separate and absolute like space and time and thus had a kind of identity. Everything was something - a thing. Presumably, then, what is not a thing, a something, is nothing and therefore doesn't exist?

But when scientists delved into the atom at the fundamental level, Newton's mechanistic model didn't work. It predicted the impossible would happen, and that what was happening was not possible. The classic example of the profound puzzle is that of parts that are, at the same time, particles and waves - that is, spread out and at a point at the

same time. Clearly such an arrangement is impossible.

This enigma confounded the greatest minds until eventually they were forced to develop a new physics, a quantum physics, that could describe their experiments correctly. And it worked.

But the revolution in fundamental thought didn't happen overnight. It was a slow and agonizing evolutionary process that is still growing to this day, nearly a century after it began.

It is extremely difficult to explain quantum mechanics with our ordinary symbolic ways. Quantum mechanics find it difficult to explain it to themselves, to explain it to everyone would be unheard of. But not because the theory is difficult to grasp, (it is merely a computational system) but because they haven't found a way to explain the quantum philosophy with ordinary language. The micro and the macro, the small and the big, remain as if separate things. But that is exactly the point to be grasped.

They both, nevertheless, can be explained philosophically, that is to say here, in general terms. This allows us to say anything, or nothing at all.

Quantum systems are about relationships, ordinary physics is about things. The new physics is about both, actually, "more than both".

Einstein said that the minimum of parts or quanta in a quantum experiment are two. What scientists measure is their relationship, i.e., the typical quantum operation is to establish that relationship using Schroedingers wave equation. This relationship, then, is more fundamental than the particles. Consider the quanta of his page - the black and white. What is more fundamental to your reading, the quanta or their relationship? The answer to this is important.

Quantum theory is the language of relationships at the fundamental level.

The point to be made here is that science has found, from experience, that relationships are the foundation of our existence. Explorations into specific relationships comprise the forefront of 21st Century science.

Our educational system needs to reflect this fact if it is to truly resolve the educational crisis.

It is ironic that Chicago is going through an educational crisis, almost one hundred years ago, the world renown American philosopher, John Dewey, started the Chicago school experiment at the University of Chicago. His emphasis was on the relationship between the student and society which he says is only learned by doing. His works have been translated into several languages. And Now...