Commentary on:

Will the Semantic Web Change Education?
Not Likely.

Greg Kearsley

In 1989, Ben Shneiderman and I published a book about hypertext (*Hypertext Hands-On! A New Way of Accessing and Organizing Information*) in which we explored the tremendous potential of hypertext, even before the web had appeared and proved the point. However, we anticipated that the power of hypertext would come from sophisticated forms of linking, not simply the sheer number of links and the ability to search for documents so easily. In the intervening years, I have puzzled over this. Indeed, I have spent most of my 25 year career trying to understand the adoption and use of technology in education (and lack thereof).

I have come to the conclusion that no form of technology is likely to have much of an impact on our education system – at least not for a long time. Schools, colleges and training departments have a great deal of inertia and self-interest in preserving the status quo of classroom instruction. It's directly analogous to why we can't get away from the use of fossil fuels or have better mass transit. The technology exists, but the sociopolitical will doesn't. On the other hand, I'm optimistic about the use of technology by individuals for learning – watching kids use the web to explore subjects they are interested in, demonstrates that clearly. One day the collective desire of individuals will surely force change in the education system – a generation or two down the road.

So while there is nothing technically wrong with the ideas of Clark, Parsia and Hendler for development of a semantic web, especially RDF and OWL, I don't see it having any near-term effect on educational practice. And I certainly don't think it likely that many educators will turn into "hyperkrep hackers". Faculty learn HTML and create web pages in order to share their own work. I doubt that anyone who be willing to spend the extra time and effort required to fully specify the attributes of their information, unless they are being paid to do as in the case of catalogers or instructional designers. For years, authoring systems have included attribute documentation capabilities and they almost never used. The Achilles heel of the efforts to develop reusable learning objects is that nobody will complete the specifi-

cation fields needed to properly catalog the objects in databases. Bottom line: people creating web documents for educational purposes aren't going to do one iota more work than they absolutely have to.

And that is the reason why I believe hypertext has never progressed beyond simple unidirectional links – it's as much effort as a normal person is willing to expend. If there was financial or personal gain involved in creating semantic webs, that would be a somewhat different story. So if companies that market educational programs perceive that they will have a competitive advantage by developing richer linked structures, they will do so. Likewise, if some faculty believe that they will be able to create more powerful representations of their subject areas by being hyperkrep hackers, they will do it. But this would still represent a very miniscule percentage of the educational world.

In summary, I think these ideas are wonderful theoretical explorations, but nothing that can have real impact on our education system – which is incredibly resistant to innovation and change. For a reality check, walk into almost any school or college classroom and observe what goes on and how little technology is used. But if we make semantic web capability available to high school and college kids, they will embrace it and incorporate it in the systems they build in a decade or two. And that's the whole value of pursuing this line of research.

About the author

Greg Kearsley is currently an independent consultant specializing in online education. He has designed online courses for Walden Institute as well as the MEPP program <http://epdweb.engr.wisc.edu/mepp> at the University of Wisconsin. He has also taught at many universities including Nova Southeastern University in Ft Lauderdale, FL and the George Washington University in Washington, DC; was the Chief Executive Officer of Park Row Inc., a software publishing company in San Diego; chief scientist of Courseware Incorporated, a training development firm based in San Diego; and a senior scientist at the Human Resources Research Organization (HumRRO) in Alexandria, VA.

Dr. Kearsley received his PhD in educational psychology from the University of Alberta in 1978 and has written many books and articles about technology and education. His most recent book/web project is Online Education: Learning and Teaching in Cyberspace. (For a more detailed list of publications, see resume <http://home.sprynet.com/~gkearsley/ resume.htm>)