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Engaging Students in Quantum Physics – Research and Practice[1]

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In recent year some research and development has been conducted on teaching and learning of undergraduate quantum physics although the amount of R&D is still not nearly as great as on introductory physics. This research, including some concept inventories, has helped us understand some of the difficulties that both introductory and advanced students have with some contemporary ideas in physics. And, new materials, including many visualizations and simulations, have provided research-based learning tools for students at all levels – from non-science students to graduate students. The teaching methods have also changed and even include some attempts to teach quantum mechanics on-line. A review of some of these components, including my attempt to teach quantum physics on-line to non-science students, will be given.

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