0.15 and for interactive videodiscs, the effect sizes range from 0.17 to 0.66 depending on the population. The effect size for flight simulation is 0.54 and the effect size for tutorials range from 0.25 to 0.41 depending on the presentation of the tutorial material.

Although the effect sizes for instructional technology range from 0.15 to 0.66 standard deviations, they all report favorable findings when compared to conventional instruction. There are many possible explanations for the differences in instructional technology effectiveness; it might be the result of population differences, system differences, interactivity or individualization. From a purely utilitarian point of view, the reason may not be all that important. If, at the very least, using instructional technology forces the producer to rethink the content of the course to match the delivery system, then revisiting the pedagogy may be enough to produce the positive effect sizes. Whatever reason for the changes in effectiveness, the use of instructional technology saves instructional time, overhead costs, and results in a higher level of achievement for the students in a variety of domains.

7 The abbreviations in figure one: CBT=Computer Based Training, DL=Distance Instruction, IVD=Interactive Video Disc, SIM=Simulation. More than 300 research studies were used to develop these effect sizes, see Chen-Lin Kulik, James Kulik and Barbara Shwalb, “Effectiveness of Computer-Based Adult Education: A Meta-Analysis”; Chen-Lin Kulik and James Kulik, “Effectiveness of Computer-Based Education in Colleges”; Rob Johnston and J. Dexter Fletcher, A Meta-Analysis of the Effectiveness of Computer-Based Training for Military Instruction.
8 Godwin Chu and Wilbur Schramm, Learning from Television; J. Dexter Fletcher Effectiveness and Cost of Interactive Videodisc Instruction in Defense Training and Education; J. Dexter Fletcher, “Computer-Based Instruction: Costs and Effectiveness.”