

	1. Goal and Use	2. Track record	3. Malleability	4. Integrative Potential	5. Cost	6. Commercialization	7. Implementation Barriers:
CBT	Training of low-level, well-defined skills and knowledge. CIDS guide career choice	Strong effects of CBT but less useful for complex skills and diverse learners. Few studies of CIDS effects	Moderate: Some ability for instructors to change language and students to change order of modules in both CBT and CIDS	Low for CBT, but high for well-designed CIDS enable improved information sharing among stakeholders	Moderately low: Labor intensive to develop new modules	Already strong: CBT widely used by commercial and military, many CIDS on the market	Low: Mature technology able to fit into fairly traditional curricula
ITS	Training of well-defined knowledge and skills, including structured social interactions	Very strong effects for well-designed ITSs training well-defined tasks; but brittle outside of narrow domains	Low: Little ability for instructors to change language and students to change order of modules.	Low: ITSs are aimed at teaching well-defined skills, often independent of STW context	High: Very labor /research intensive to codify skills, low transfer to related domains	No standards, high cost; far from wide commercialization	Moderately low, but restricted to domains that are well-defined
Multimedia/Hypermedia	Learner-controlled knowledge transfer; enabling skills practice via goal-based scenarios	Strong effects, but dependent on learner's abilities to work without substantial structure and guidance	High: increasing number of authoring tools that allow easy modification and addition of content	Moderate, but careful front-end design needed, as well as installed base capable of delivery	Moderate for simple webs, but expensive for high-production-value video and animation	Already happening: major issue is transition of installed base to multimedia-capable devices	Low for presentational applications; moderate to high for learning-by-doing approaches
CSCL	Enabling intellectual and emotional interchange among STW stakeholders	Some evidence of strong effects; for most learners, not as powerful as face-to-face interaction	High, but team members must adopt a common CSCL approach	High if learning/curriculum design groups cross traditional STW stakeholder communities	Moderate: enabled by emerging, standard telecomm capabilities	Beginning to happen in workplace settings; challenge is building school market for learning applications	Moderate: finding a common style of interchange among a large group can be challenging
Experiential Simulations	Practicing already acquired skills and knowledge; understanding reality via illusion	Some evidence of strong effects; still in early stages of development	Moderately low: as standards emerge, will increase	Moderate: shared virtual environments can enable joint activities to include various members of the STW stakeholders	Low to high, depending on the degree to which the virtual environment is distributed and immersive	Low-end, single-user simulations are mature; distributed and immersive forms are in early stages of development	Moderate to high: Demands alternative types of teaching and assessment
Learning Enablers	Understanding complex data; supporting career and job search	Strong utility for scientific visualization and for webcrawlers in database access; educational applications in early stages	High: Because these are general "tools" they are, by design, highly flexible and are being designed to be highly tailorable	Potentially high for tools that gather and integrate disconnected STW-related knowledge	Low to Moderate: simple Webcrawlers available at no cost, "off-the-shelf" tools designed to minimize development costs	Webcrawlers and low level visualization are close to "off-the-shelf"; agents are farther from realization	Moderate: rights to underlying software and access to distributed career/job information are barriers

Table 3. Summary Comparison of Technology Attributes