8 Ways Educational Technologies Can Foster Learning

Based upon what the educational research tells us

Workshop on MIT Online Learning & Residential Education

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the same design principles that promote learning in traditional environments are likely to promote learning in electronic environments. The consensus among researchers is that e-learning has the potential to offer different (and perhaps better) learning opportunities only to the extent that it can offer different instructional methods.

Educational technologies can . . .

1. Allow students to be more actively involved in learning

Learners are active agents, who purposefully seek and construct knowledge within meaningful (and specific) contexts
Educational technologies can . . .

2. Present the same concept in different contexts

Opportunities for transfer are strengthened by presenting the same idea in multiple contexts
Teaching for transfer

Slide courtesy of Dr. Sanjoy Mahajan, Professor, Olin College of Engineering
Educational technologies can . . .

3. Provide easily referenced frameworks to show relationships among different concepts

Successful learners develop mental models and strong frameworks of related concepts
2.001 Framework

S. Socrate, A. Hosoi, C. Livermore, W. Seering, J. Rankin
Educational technologies can . . .

4. Describe the same concept using different means of representation

Learning and recall are strengthened when learners integrate information from both auditory-verbal and visuospatial channels
Educational technologies can . . .

5. Tailor feedback more individually

Thereby providing a solution to Bloom’s “2-sigma problem”
Educational technologies can . . .

6. Increase time on task (and make that time more flexible)

“The single most important variable in promoting long-term retention and transfer is ‘practice at retrieval’.”

Educational technologies can . . .

7. Provide opportunities to demonstrate new mastery to others

. . . which increases motivation to improve
Educational technologies can . . .

8. Provide more opportunities for interaction between faculty & students and students & students

. . . which are the two factors that correlate most closely with college students’ achievement and satisfaction