
Exhibit 14.1. A Summary of e-Learning Guidelines.**Three Types of e-Learning:**

<i>Type</i>	<i>Best Used for Training Goals</i>	<i>Examples</i>
Show-and-Tell—Receptive	Inform	New hire orientation Product updates
Tell-and-Do—Directive	Procedural Performance	Computer end-user training
Problem-Solving— Guided Discovery	Far Transfer or Problem-Solving Performance	Bank loan application analysis Sales skills

Chapters 3 through 8. Media Elements Guidelines for All Types of e-Learning:*If Using Visual Mode Only:*

1. Use relevant graphics and text to communicate content—Multimedia Principle
2. Integrate the text into the graphic on the screen—Contiguity Principle
3. Avoid covering or separating information that must be integrated for learning—Contiguity Principle
4. Avoid irrelevant graphics, stories, and lengthy text—Coherence Principle
5. Write in a conversational style using first and second person—Personalization Principle
6. Use virtual coaches (agents) to deliver instructional content such as examples and hints—Personalization Principle

If Using Audio and Visual Modes:

7. Use relevant graphics explained by audio narration to communicate content—Multimedia Principle
8. Maintain information the learner needs time to process in text on the screen, for example, directions to tasks, new terminology—Exception to Modality Principle
9. Avoid covering or separating information that must be integrated for learning—Contiguity Principle
10. Do not present words as both onscreen text and narration when there are graphics on the screen—Redundancy Principle
11. Avoid irrelevant videos, animations, music, stories, and lengthy narrations—Coherence Principle

Exhibit 14.1. (Continued).

12. Script audio in a conversational style using first and second person—
Personalization Principle
13. Script virtual coaches to present instructional content such as examples and hints via audio—Personalization Principle

Chapters 9 and 10—Guidelines for e-Learning with Performance Goal Outcomes

In addition to the above guidelines:

14. Provide job-relevant practice questions interspersed throughout the lessons—
Practice/Encoding Specificity Principles
15. For more critical skills and knowledge, include more practice questions—
Practice Principle
16. Design space for feedback to be visible close to practice answers—Contiguity
Principle
17. Provide training in self-questioning when learning from receptive e-lessons—
Practice Principle
18. Provide a worked example using realistic job tools and situations in the form of
demonstrations for procedural skills—Encoding Specificity Principle
19. Provide several diverse worked examples for far transfer skills—Varied Context
for Far Transfer Principle
20. Provide training in effective ways to study worked examples—Practice
Principle

Chapter 11—Guidelines for Use of Collaboration in Internet/Intranet e-Learning

If your learning environment has high to moderate levels of concurrency:

21. Assign collaborative projects or problem discussions to heterogeneous small
groups or pairs
22. Use e-mail, chats, message boards, and conferencing facilities for collabora-
tive assignments
23. Use message boards for learner exchanges related to course topics

If your learning environment has low levels of concurrency:

24. Use e-mail and discussion boards for collaborative assignments modified for
individual learners

Exhibit 14.1. A Summary of e-Learning Guidelines. (Continued)

25. Use e-mail for learners to contact instructors
26. Use message boards for learner exchanges related to course topics

Chapter 12—Guidelines for Navigational Options—Learner Control Principles

Allow learners choices over topics and instructional methods such as practice when:

27. They have related prior knowledge and skills and/or good self-regulatory learning skills
28. Courses are designed primarily to be informational rather than skill-building
29. Courses are advanced rather than introductory
30. The default option leads to important instructional methods such as practice

Limit learner choices over topics and instructional options when:

31. Learners are novice to the content, skill outcomes are important, and learners lack good self-regulatory skills

Use advisement diagnostic testing strategies when:

32. Learners lack good self-regulation skills and the instructional outcomes are important
33. Learners are heterogeneous regarding background and needs and the cost to produce tests pays off in learner time saved
34. Always give learners options to progress at their own pace, review prior topics/lessons, and quit the program

Chapter 13—Guidelines for Training Problem-Solving Skills

35. Use real job tools and cases to teach work-specific problem-solving processes—Encoding Specificity Principle
36. Provide worked examples of experts' problem-solving actions and thoughts—Worked Examples Principle
37. Assign learners to write out their problem-solving plans—Practice Principle
38. Provide learners with a map of their problem-solving steps to compare with an expert map—Feedback Principle
39. Base lessons on analysis of actions and thoughts of expert practitioners—Encoding Specificity Principle