Exhibit 1. Conceptual Framework for Online Learning

Learning Experience Dimension	Synchronicity	Face-to-Face Alternative	Face-to-Face Enhancement
Expository	Synchronous	Live, one-way webcast of online lecture course with limited learner control (e.g., students proceed through materials in set sequence)	Viewing webcasts to supplement in-class learning activities
	Asynchronous	Math course taught through online video lectures that students can access on their own schedule	Online lectures on advanced topics made available as a resource for students in a conventional math class
Active	Synchronous	Learning how to troubleshoot a new type of computer system by consulting experts through live chat	Chatting with experts as the culminating activity for a curriculum unit on network administration
	Asynchronous	Social studies course taught entirely through Web quests that explore issues in U.S. history	Web quest options offered as an enrichment activity for students completing their regular social studies assignments early
Interactive	Synchronous	Health-care course taught entirely through an online, collaborative patient management simulation that multiple students interact with at the same time	Supplementing a lecture-based course through a session spent with a collaborative online simulation used by small groups of students
	Asynchronous	Professional development for science teachers through "threaded" discussions and message boards on topics identified by participants	Supplemental, threaded discussions for pre-service teachers participating in a face-to-face course on science methods

Exhibit reads: Online learning applications can be characterized in terms of (a) the kind of learning experience they provide, (b) whether computer-mediated instruction is primarily synchronous or asynchronous and (c) whether they are intended as an alternative or a supplement to face-to-face instruction.