

Models of Technology-Distributed Teaching and Learning Delivery Strategies¹

Given the advances of systems and Web 2.0 applications, the delivery of instruction is only limited by the imagination, ingenuity, and resources of the institution. The following strategies are not exhaustive, but provide a starting point to consider how to move from traditional to distributed course delivery. The following summarize the characteristics of the five course redesign models that emerged from the Program in Course Redesign.

Model	Pros and Cons	Examples
<p>Distributed Engagement Approach</p> <p>This approach allows the learner to complete instructional modules at his or her own pace, in various learning environments and with various supports. Usable for both face-to-face and online environments, the intent is to allow students to progress through material in the way and speed that is most appropriate for the individual. This approach is often structured in a modular format and has success with underprepared students.</p>	<p>Pros:</p> <ul style="list-style-type: none"> • Supports individualized learning needs. • Distributes the cost and maintenance of campus resources in a centralized repository. • Provides for ready re-use of learning resources across programs, disciplines, and courses. • Can promote peer learning. <p>Cons:</p> <ul style="list-style-type: none"> • Requires space, hardware and software, and just-in-need resources. • Redefines instructional role of tutor, coach, and instructor. • Requires a different type of discipline and commitment from the learner. 	<p><i>The Emporium Model</i></p> <p>The emporium model eliminates all class meetings and replaces them with a learning resource center featuring online materials and on-demand personalized assistance, using a) an open attendance model or b) a required attendance model depending on student motivation and experience levels.</p> <p>Examples from NCAT: http://www.thencat.org/PCR/model_emporium.htm http://www.center.rpi.edu/PlanRes/R2R_Model_Emp.htm</p> <ul style="list-style-type: none"> • Northern Arizona University: College Algebra • The University of Alabama: Intermediate Algebra • University of Idaho: Pre-Calculus • Virginia Tech: Linear Algebra <p><i>The Buffet Model</i></p> <p>The buffet model customizes the learning environment for each student based on background, learning preference, and academic/professional goals and offers students an assortment of individualized paths to reach the same learning outcomes.</p> <p>Examples from NCAT: http://www.thencat.org/PCR/model_buffet.htm http://www.center.rpi.edu/PlanRes/R2R_Model_Buffet.htm</p> <ul style="list-style-type: none"> • The Ohio State University: Statistics

¹ Adapted from the National Center for Academic Transformation Five Course Models, http://www.thencat.org/PCR/Proj_Model.htm

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<p>Web Enhanced Course Approach</p> <p>Classroom courses that include between class meeting activities using learning systems or other Information Communications Technology.</p>	<p>Pros:</p> <ul style="list-style-type: none"> • Extends learning application • Reinforces classroom experience • Prepares learner for class • Supports independent learning • Can increase learner to learner interaction <p>Cons:</p> <ul style="list-style-type: none"> • Requires re-thinking some course activities • May require instructor supervision • May require learner capabilities not required for classroom experience 	<p><i>The Supplemental Model</i></p> <p>The supplemental model retains the basic structure of the traditional course and a) supplements lectures and textbooks with technology-based, out-of-class activities, or b) also changes what goes on in the class by creating an active learning environment within a large lecture hall setting.</p> <p>Examples from NCAT:</p> <p>http://www.center.rpi.edu/PlanRes/R2R_Model_Sup.htm http://www.thencat.org/PCR/model_supp.htm</p> <ul style="list-style-type: none"> • Carnegie Mellon University: Statistics • Fairfield University: General Biology • Indiana University-Purdue University at Indianapolis (IUPUI): Introduction to Sociology • University of Massachusetts Amherst: Introductory Biology • The University of New Mexico: General Psychology • University of Southern Maine: Introductory Psychology

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<p>Blended/Hybrid Approach</p> <p>Classroom courses that include between class meeting activities use learning systems or other Information Communications Technology.</p>	<p>Pros:</p> <ul style="list-style-type: none"> • Supports classroom instruction through active learning. • Engages the learner in thinking and through interaction with others and/or the course content. • Relives classroom space demand. <p>Cons:</p> <ul style="list-style-type: none"> • Requires commitment and new skills from the learner. • Requires course redesign. • Requires supports for the learner and instructor between class meetings. • Works best for courses that do not require constant use of institutional resources, e.g. science equipment, computers, etc. 	<p><i>The Replacement Model</i></p> <p>The replacement model reduces the number of in-class meetings and a) replaces some in-class time with out-of-class, online, interactive learning activities, or b) also makes significant changes in remaining in-class meetings.</p> <p>Examples from NCAT: http://www.center.rpi.edu/PlanRes/R2R_Model_Rep.htm http://www.thencat.org/PCR/model_replace.htm</p> <ul style="list-style-type: none"> • Brigham Young University: English Composition • California State Polytechnic University, Pomona: General Psychology • Drexel University: Computer Programming • Penn State University: Elementary Statistics • Portland State University: Introductory Spanish • Riverside Community College: Elementary Algebra • Tallahassee Community College: College Composition • University at Buffalo (SUNY): Computer Literacy • University of Central Florida: American National Government • University of Colorado at Boulder: Introductory Astronomy • University of Illinois at Urbana-Champaign: Economic Statistics • University of Iowa: General Chemistry • The University of Tennessee, Knoxville: Intermediate Spanish Transition • University of Wisconsin-Madison: General Chemistry <p>Estrella Mountain Community College: http://www.estrellamountain.edu/ctl/el_sloan-c.asp</p> <p>Sloan-C: http://www.aln.org/publications/view/v2n1/blended1.htm</p>

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<p>100% Online Course Approach</p> <p>All course activities, resources, interactions, and communications occur online, typically through an institutional learning/course management system.</p>	<p>Pros:</p> <ul style="list-style-type: none"> • Convenience for the learner regarding location and time. • Can be modularized or self-paced. • Requires reusable content. • Can engage the learner in a way that does not occur in a classroom. • Can reduce evaluation and grade calculation efforts. • When L/CMS are used, documents learner effort in a central location. <p>Cons:</p> <ul style="list-style-type: none"> • Requires 24/7 Internet access for faculty. • Requires technical and instructional support for the learner. • Most successful when learner has a certain level of technical expertise, motivation, and time management skills. • Requires that all course materials are developed prior to the course start date. • Students cannot access course before the course starts or after it ends. • Controls for students are limited in most environments. 	<p><i>The Fully Online Model</i></p> <p>The fully online model eliminates all in-class meetings and moves all learning experiences online, using Web-based, multi-media resources, commercial software, automatically evaluated assessments with guided feedback and alternative staffing models.</p> <p>Examples from NCAT:</p> <p>http://www.thencat.org/PCR/model_online.htm http://www.center.rpi.edu/PlanRes/R2R_Model_Online.htm</p> <ul style="list-style-type: none"> • Florida Gulf Coast University: Fine Arts • Iowa State University: Discrete Mathematics • Rio Salado College: Introductory Algebra • University of Dayton: Introductory Psychology • The University of Southern Mississippi: World Literature <p>Examples from WebCT Exemplary Course Projects:</p> <p>http://www.webct.com/exemplary</p>