Teaching and Learning Scenarios

# Introduction

Learning Ecosystem Range

The following from University of Wisconsin Madison Educational Innovation usefully anatomizes teaching and learning bearing on architecture

The above is to be considered according to the three perspectives: Student/Learner, Instructor, School/Department
Also, please consider this excerpt from the U.S. Department of Education: Exaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies:

Exhibit 1. Conceptual Framework for Online Learning

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

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.

Personnas

1. Biology 201
   a. Dr. Joyce Settembrini - Biology professor teaching large freshman and sophomore classes
   b. Anand Rathi - TA in Dr. Settembrini's class
   c. George Massey - Administrative assistant in the biology department
   d. Dr. Samuel Cumberland - Chair of biology department
   e. Lee, Ching Tzu, Caitlin - students among 300 others in the biology 201 class
   f. Students concurrently register in the lecture (enrollment limit 500) and one of 20 Lab sections (enrollment limit 15). As enrollment in the lecture increases, more lab sections are added.
2. Spanish 340
   a. Dr. Enrique Perez teaches a conversation and fluency course
   b. Jaime Kurtz TA in Dr. Perez's course
   c. Joe, Elizabeth, Carrie - students in the Spanish 340 class
3. Spanish 420
   a. Dr. Enrique Perez - Spanish professor teaching an upper-level Spanish literature course.
   b. Elizabeth Koestler TA in Dr. Perez's course
   c. Tony, Tyrone, Kate - students in the Spanish 520 class
4. Urban Anthropology 350
   a. Dr. Taymour Malak - Anthropology professor teaching a class of about 30 students
   b. Sarah, Derek, Abdiwahid - students in the Urban Anthropology 350 class
5. Computer Science Coop-WorkStudy semester (10 credits)
   a. Ann Ying - Manager of the Computer Science Coop program
   b. John Thurlow - Manager at IBM. Will be managing and evaluating 2 coop students
   c. Elaine Zhao - 3rd year Computer Science student in the coop program who has applied for the IBM position
6. Master’s Thesis in Literature (requirement for the completion of MA): “Technocratic existentialism in the works of Stanislaw Lem”
   a. Dr. Joyce Starr - Thesis supervisor
   b. Dr James Howard - External examiner
   c. John Stokes - Master’s student in the Department of English
7. Distance Education “Calculus 12” Not a for credit course. But can be used as a prerequisite for some first year Math courses
   a. Michael Smith - contract instructor
   b. Joanne Metzinger - course administrator

Other personnas (need fleshing out)
- Videographer (i.e., curriculum author)
- Learning Object Author (i.e., curriculum author)
- Advisor
- Librarian
Scenarios (categories derived from the perspectives chart)

Scenarios Form

Curriculum/Course Offering
1. Department adds class to set of offerings (rubrics defined, course registered with SIS, degree audit systems, department listings, etc.)
2. Department assigns instructor(s) to class/section
3. Department reserves classroom for class/section

Course Development (content collection & organization)
1. Instructor or SME defines course outline & lists content to collect, discover
2. Videographer captures lectures, compresses for delivery
3. Learning Object Author creates activity around textbook chapter content

Learning and Teaching Management (content delivery)
1. Instructor defines texts assignments for class/section
2. Instructor sets up library reserves
3. Instructor sets up lecture notes and other content
4. Instructor sets up quizzes and other assessment tools
5. Instructor sets up learning experiences (e.g., blogs, wikis, simulations, experiments)
6. a) Instructor adds a class event to the student's calendar. b) Student schedules meeting with collaborators. c) Student schedules appointment with instructor or advisor.

Career Planning (student, advisor, peers)
1. Student selects initial program.
2. Student takes a personal inventory.
3. Student changes their program based on new criteria.

Course Selection
1) Student reviews goals. (Advisor assists student) (Student reviews requirements and degree audit) (Student reviews online resources)
2) Student Reviews Course Options (Student browses from course catalog, Student searches on specific criteria, Student reviews course material, Student views instructor ratings)
   • Abdiwahid Reviews Urban Anthro 350 Course
3) Student selects course (student registers or puts herself on a waitlist)
4) Student drops a course

Class Rostering
1) Student list used to set up permissions for the class resources

Course Engagement -- Student
1) Student interacts with assignment; submits assignment
2) Student takes quiz
3) Student or student group completes homework
   • Spanish 420: Kate turns in an essay
4) Student interacts with a simulation
5) Student listens to a lecture
6) Student gathers data for undergraduate research. Student gathers data for undergraduate research -- Urban Anthro 350
   • Urban Anthro 350 Sarah, Derek, and Abdiwahid photograph tagged buildings
7) Student team collaborates on a video production
   • Spanish 340: Joe, Elizabeth, Carrie make a video of a Spanish conversation
8) Student annotates etext made available as part of the course.
9) Students engage in group project.
10) Students provide peer reviews to each other
Course Engagement -- Instructor

1) Instructor introduces and explains concepts
2) Instructor reviews homework or quiz and returns to student
3) Instructor engages in discussion with students
4) Instructor evaluates student's participation
5) Instructor submits final grade

Subject Mastery / Student Proficiency

1) Student maintains notes and other class artifacts beyond the end of class
2) Student adds certain artifacts including those from extra-curricular work to portfolio
3) Early warning system flags student at risk.
4) Student performance receives assessment, both formative and summative, from Instructors and others.
5) Student peer assessment can be offered and receive Instructor grades or not.

Course Evaluation

1) Students assess course/instructor
2) Student achievement measures are used to evaluate course effectiveness.