Chapter 11
Active Teaching Phases:
Skills Based and Analysis/Synthesis Pedagogies

PEDAGOGIES IN SKILLS BASED COURSES

In designing and teaching skill based courses, courses requiring students to gain a particular mental or physical skill(s) set that is applicable to a specific environment, online learners again, must be engaged learners. The goal with the online skills course is to allow the student to become as naturalized in the skill as possible given the time constraints of the course or training. This requires a focus on assuring that the skill is properly modeled for the student and that ample guided practice is provided and promoted. The instructor needs to give sufficient interactive feedback to allow the student to achieve a high level of competency, as can be measured through a summative assessment tool. The online instructor must utilize the best methods to assure that the learners in the online course are active learners.

In teaching skills online the instructor needs to use similar pedagogies as are incorporated into the traditional face-to-face course. There are several models designed to teach skills which ascend from the inclusion of direct instruction. One method is the DECA system for attaining skills. This method presents a direct instruction focus that provides proper modeling of the skill and sufficient practice and feedback to assist the student toward naturalization of both mental and physical skills. DECA stands for Demonstration, Explain, Criticism, and Assistance.

The first step in the DECA process is to demonstrate the skill. This requires that the instructor present the model by showing the procedure and demonstrating the ideal way to conduct the process or perform the task. Modeling in this step provides the student an end target which they can use to match what they are doing with the desired end result. It assists them to self-evaluate their progress toward naturalization of the skill. This requires that the instructor pay attention to detail and provide the textbook way to perform the skill as the student will emulate what he sees the instructor do. If the instructor models the skill with an error, the student not understanding that it is an error will see this as correct, as the instructor is the expert, and perform as the instructor. The DOI: 10.4018/978-1-61520-865-4.ch011
danger is, the first way a student sees a skill is how the skill process will be imprinted and how they will remember it.

In the online environment, the physical skill can be modeled in several ways. Some may see this as a limitation in the online environment as the student and instructor are separated by time and space; however there are several opportunities that can be as good if not better than the traditional. This does require initial instructor or course developer production time to prepare online demonstrations or publisher created materials may be utilized. These demonstrations can be presented in the course shell as videos and graphic presentations through programs such as PowerPoint or other graphic presentations packages. This can be a stronger demonstration as the instructor can assure through production that the skills are being properly demonstrated utilizing the textbook way with no errors to cause student confusion. The skills can be practiced through the demonstration and culmination of final projects such as with the development of a science lab project or such as the development of CPR skills where the student must practice and demonstrate proficiency in front of a physical preceptor. As discussed in chapter 9, some skills such as healthcare clinical skills may have a physical presence requirement to validate skill attainment.

Cognitive skills can be demonstrated with ease through text or again demonstration of the skill through a narrated graphics presentation (PPT). Instructors can provide a series of instructions on how to conduct the skill that include the steps and procedures with clues for success and a rubric that specifically lays out the criteria for success. The instructor should follow this with an exemplary model of the final product such as a project or paper that demonstrates the culmination of the desired skills. This goes far to model the process and illustrates to students the final skill to be attained.

The second step in the process is *explain*. Once the model has been presented and the student has a final picture or model in mind, the instructor explains the steps of the skill in detail, actually analyzing the process as if each step itself is a separate skill. The instructor needs to assure that the mental or physical skill process is both accurate and complete during this step. Instructors need to be careful that they don’t focus on bad habits that they themselves have developed over the years, but center on proper textbook methods with clues for success at each step. In the online education or training program, this is accomplished again through the use of video and narrated graphic presentations.

The third step is *criticism*. This is where the instructor provides an online activity that focuses the student on practicing the newly demonstrated skill. In this mode the instructor needs to be sure that each of the steps are broken down into easily understood components so that the student can practice with a clear understanding of the dynamics of the skill. The instructor can then coordinate activities that have the student demonstrate the skill or a portion of the skill in an online component through email exchange or in a threaded online discussion board. An example skill in this phase might be the development of a focused research question. The activity can have the student chose a subject area and then write research questions. Through the posting of the research questions in a discussion board thread, all in the course can see and learn from each other with proper feedback and suggestions for clarification and greater focus. This is the time for the instructor to spot potential problems and prevent the development of bad habits. This also becomes the “teachable moment” to correct errors and to support proper skill demonstration by the participants.

The final step of the process is *assistance* were the instructor helps the person being trained through encouraging them to ask questions and to grow along Bloom’s taxonomy toward the naturalization of the skill. This can be done by perturbing things as Beaubien (2002) states. In the teaching of skills this is done by not only focusing on their questions, but also posing questions that