

The Classroom Flip

Pedagogy & the Role of a Course Management System

A. First Things First

The Classroom Flip model (discussed below in § 2b) fits within the general category of a Hybrid Classroom, one that combines face-to-face instruction and online support through a Course Management System (or CMS, such as Moodle). A move to a hybrid classroom often prompts faculty to think strategically about the pedagogy they want to use in their classes. A good place to start in thinking about pedagogy is Chickering & Gamson's (1987) "Seven Principles." Their principles are provided below, along with a summary statement from their explanation of each.

Seven Principles for Good Practice in Undergraduate Education

1. **Encourages contact between students and faculty** – "Frequent student-faculty contact in and out of class is an important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans" (p. 3).
2. **Develops reciprocity and cooperation among students** – "Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding" (p. 3).
3. **Encourages active learning** – "Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves" (p. 4).
4. **Gives prompt feedback on performance** – "Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. When getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, why they still need to know, and how to assess themselves" (p. 4).
5. **Emphasizes time on task** – "Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis of high performance for all" (p. 4).
6. **Communicates high expectations** – "Expect more and you will get more. High expectations are important for everyone—for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts" (pp. 4-5).
7. **Respects diverse talents and ways of learning** – "There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learn in new ways that do not come so easily" (p. 5).

Although these principles were stated almost 30 years ago (and the first discussion of how instructional technology could help implement the Seven Principles (Chickering & Ehrmann, 1996) came almost 20 years ago), they continue to be helpful as you think about your teaching and your students' learning.

So, as you develop a hybrid approach to your classes, keep these principles in mind and seek ways to implement them. As we work through the steps introduced in the next section I will highlight points at which using a CMS can help you do that.

B. Steps in the Process

In order to make a connection between pedagogy and your use of a CMS (such as Moodle), you should go through these steps:

1. Identify a need in your teaching and/or your student's learning
2. Develop an instructional strategy to meet the need.
3. Select an element of the CMS that can be used in the strategy.
4. Identify what skills in pedagogy or the use of the CMS you need to develop in order to implement the strategy.
5. Identify any software you need to learn as part of that skill development.

Tip! A crucial point to note here is that we are starting with your need, not with the technology. Too often faculty are pushed to adopt a technology for its own sake. That puts the cart before the horse. The technology should be the handmaiden of the instructional strategy that helps meet the need.

Step 1. Identify a Need

Almost every faculty member can easily identify at least one key need—related either to teaching or student learning. Perhaps you want to change how you handle material in a unit of a class. Perhaps you want to find a way to improve on what you are already doing. Or, perhaps you are just curious about the capabilities of the new instructional technologies.

Often it helps to identify a frustration you have in your teaching or with your students' learning. How would you finish this sentence? "If I could fix one thing in my class, it would be . . ."

Example

Need Statement: I want 100% of my students to demonstrate an understanding of the key points of this unit by providing a "significant contribution or question" to class discussion.



So, let's start by identifying a need you have in your teaching or your students' learning. Take a few minutes now to turn to your "learning buddy" and talk about what you would like to accomplish in teaching or learning. Then write a short statement in the box below that articulates that need.

Statement of my need or my students' need

1a. Categorizing Your Need

Often when faculty express a frustration or need, it fits one of these categories (suggested by Roblyer, Edwards, & Havriluk, 1997, p. 29). Some examples of the types of need statements that fit under each category are provided to help you identify one that fits your need.

Student Motivation

- I need to capture the interest of my students.
- I want students to have a greater sense of control over their own learning.
- My students aren't prepared for class discussion because they haven't kept up with the textbook reading.

Unique instructional capabilities

- I need to be able to demonstrate processes.
- My students need access to extra resources to update or expand on what the text offers.
- I would like to help students track their own progress in the course.
- My students need to be able to assess their understanding of the content.
- I would like to provide students with more immediate feedback on their work.
- My students need to spend more "time on task" practicing a skill.

Support for new instructional approaches

- I would like to reduce the amount of time spent in class on lecturing (in order to bring some active learning strategies into the classroom) without sacrificing coverage of the content.
- I would like to move from reception learning ("ideas to be learned are presented to the student directly and in a relatively complete form") to discovery-based learning ("the student must work to uncover, or discover, what is to be learned") (Grabe & Grabe, 1996, p. 48).
- My students need opportunities for continuing discussion for peer learning.
- My students need a chance to experiment with the effect manipulation of variables has on a process.
- I would like to give my students a greater sense of their own responsibility for their learning.

Increased teacher productivity

- I would like to do more activity-based learning in class, but I have a lot of material I need to cover.
- I would like students to have more frequent grade updates.

Example

Need Statement: I want 100% of my students to demonstrate an understanding of the key points of this unit by providing a "significant contribution or question" to class discussion.

Category: Support for new instructional approaches



Into which category would you put your need statement from the previous page?

| Category | ✓ |
|--|---|
| Motivation | |
| Unique instructional capabilities | |
| Support for new instructional approaches | |
| Increased teacher productivity | |
| Other: | |

1b. Relating Your Need to the Seven Principles

Another helpful way of thinking about your need is to relate it to Chickering and Gamson's (1987) Seven Principles for good practice in teaching.



Which of the Seven Principles are implicated in the need you have identified?

Example

Need Statement: I want 100% of my students to demonstrate an understanding of the key points of this unit by providing a “significant contribution or question” to class discussion.

Category: Support for new instructional approaches

Principle: Good practice uses active learning techniques.

| Seven Principles for Good Practices (Chickering & Gamson, 1987) | ✓ |
|---|---|
| 1. Good practice encourages contact between students and faculty. | |
| 2. Good practice develops reciprocity and cooperation among students. | |
| 3. Good practice uses active learning techniques. | |
| 4. Good practice give prompt feedback. | |
| 5. Good practice emphasizes time on task. | |
| 6. Good practice communicates high expectations. | |
| 7. Good practice respects diverse talents and ways of learning. | |

Step 2. Develop an Instructional Strategy

In this step we move to specific approaches to teaching and learning in order to try to meet the need and implement the principle. The following chart seeks to connect each of the Seven Principles to some supporting instructional strategies. This is intended to be suggestive, not comprehensive, in making the connections.

| Principles | Instructional Strategies |
|-------------------------------------|---|
| Encourage Contact | <ul style="list-style-type: none"> Provide for multiple opportunities for contact with your students, in and out of the classroom. |
| Develop Reciprocity and Cooperation | <ul style="list-style-type: none"> Classroom management to encourage team-building. |
| Use Active Learning Techniques | <ul style="list-style-type: none"> Use active learning in-class and online. |
| Give Prompt Feedback | <ul style="list-style-type: none"> Use channels to provide feedback quickly. |
| Emphasize Time on Task | <ul style="list-style-type: none"> Communicate expectations on time spent on class work to students. |
| Communication High Expectations | <ul style="list-style-type: none"> Make students aware of changes in roles and expectations. |
| Respect Diverse Ways of Learning | <ul style="list-style-type: none"> Provide a mix of alternative ways in which learning occurs. |

We will get even more specific about these connections when we get to Step 3.

2a. Active Learning

One thing you may have noted is that one of Chickering and Gamson's (1987) Seven Principles suggests a particular pedagogical approach: active learning. From the beginning, the Classroom Flip model (Baker, 2000) sought to provide a way to help faculty implement active learning strategies in their classrooms by using instructional technologies to move things normally done inside the classroom to outside the classroom. More on that model in the next section.

Defining "Active Learning"

In its simplest definition, *Active Learning* simply means that students are active participants in their learning and not simply passive recipients of received knowledge. McKeachie (n.d.) defines it as "involving students directly and actively in the learning process itself. This means that instead of simply receiving information verbally and visually, students are receiving **and** participating **and** doing" (para. 3).

Bonwell and Eison (1991) offer a more formal definition, which is, interestingly, drawn from Chickering and Gamson's (1987) Seven Principles: "Analysis of the research literature (Chickering and Gamson 1987), . . . suggests that students must do more than just listen: They must read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation. Within this context, it is proposed that strategies promoting active learning be defined as **instructional activities involving students in doing things and thinking about what they are doing**" (p. iii; emphasis added).

From the faculty member's perspective, Active Learning means that the instructor is less involved in transmitting information and is doing more to plan, implement and supervise student learning activities.

Examples of Active Learning Strategies

TTYT-type Activities

Those who have gone through the Iowa faculty development sessions will be familiar with **Turn To Your Partner (TTYT)** where students are paired as "partners" and engage in periodic conversations during a class session to check on their understanding or to think through questions posed by the professor. A number of fairly simple types of interactive activities were presented in the Iowa sessions. McKinney (2011) has a similar approach in her **Think-Pair-Share** activity, adding having some pairs share what they discussed with the rest of the class. Johnson, Johnson & Smith (1998) refer to it as **Pair Discussion**, one of several activities that can be done with a pair of students scattered within a class session that includes short lecture segments (Chapter 3, Informal Cooperative Learning).

Collaborative Learning Groups

This is a less formal approach to the Team-Based Learning sequence and can be similar to the strategies in the previous section. For example, one description of his use of this strategy is, "Usually it involves breaking the class into small groups (of 2 or 3 students) and me posing a question, often of a conceptual nature, and allowing each group to discuss a possible answer for a period of a minute or two. I then seek answers at random" (Active learning, n.d., para. 4). The major difference between this and McKinney's **Think-Pair-Share** would seem to be the size of the group coming together for the brief discussion.

The typical way I have implemented it is to have students do an individual preparation on an activity outside of class and then bring their worksheet to class. There they meet in their learning teams (typically around 5 students) and then the teams either work on filling out the worksheet by consensus through team discussion or work on an applied problem that draws from the individual activity.

Concept Mapping

This kind of activity is especially good when students are having to connect a large amount of information and arrange it in ways that help them make sense of it. There are a number of computer tools available (I have used Cmap, which is available for free use in classes) that help students create the maps. The Prezi presentation program is also a helpful tool for a conceptual approach to course information.

Student-led Review Sessions

Here is McKinney's (2011) description of how she uses this strategy: "Instead of the traditional instructor-led review session, have the students do the work. For example, in my review sessions, we spend half the time working in small groups. Each student is to ask at least one question related to the material he or she doesn't understand, and to try to answer a question raised by another student. Students can also practice discussing, illustrating and applying difficult material or concepts, or drafting exam questions. For the second half of the review session, the whole class works together. Students may ask questions; other students volunteer to answer them" (para. 5). I am experimenting this term with a new social media-like online forum called *Piazza* that creates a space where students can ask and answer questions. One nice feature about this new site is that the instructor can flag "good" answers posted by students, giving the other students confidence in those answers.

Team-Based Learning™

Larry K. Michaelsen of the University of Oklahoma has practically made an industry of a formal approach to the use of teams in the classroom, trademarked as Team-Based Learning™. One of Michaelsen's co-authors, Fink (2004), defines TBL as "a particular instructional strategy that is designed to (a) support the development of high performance learning teams and (b) provide opportunities for these teams to engage in significant learning tasks" (p. 9; original in italics). This approach is carefully structured for implementation in 5-7 units over a 15-week term. See the separate handout, "Team-Based Learning Instructional Activity Sequence," for an overview of how each unit is organized. This approach has taken hold in several disciplines, including business and marketing (Michaelsen's own discipline), nursing and medical schools.

Student Debates

Students can be assigned positions they have to argue on an issue. McKinney (2011) says, "These can be formal or informal, individual or group, graded or not, etc. They allow students the opportunity to take a thesis or position and gather data and logic to support that view, critically. Debates also give students experience with verbal presentations" (para. 8).

Role Playing

Morrison, Ross, Kalman and Kemp (2010) describe role playing as "the spontaneous dramatization of two or more persons of a situation relating to a problem. . . . Each person acts out a role as he or she feels it would be played in real life. Other learners or trainees observe the performance and then, when the performance ends, discuss the feelings expressed and actions observed" (p. 232).

Case Studies

This is a time-honored approach—perhaps one of the oldest of the active learning strategies—having been used in business classes for many years. Many professional programs use a case study approach.

Simulation

Morrison, Ross, Kalman and Kemp (2010) say, "Simulation is an abstract representation of a real-life situation that requires a learner or a team to solve a complex problem" (p. 232). Computer simulations can be effectively used, but require a lot of time and resources to be done well, anticipating all of the directions a learner might take within the simulation. Our earliest experience at Cedarville was with simulated Chemistry lab experiences, which are easier to predict.

Problem-based Learning

As the name suggests, this approach presents students (typically in teams) a problem that they have to solve. See the handout, "Team Learning Defined" (Baylor College of Medicine, n.d.) for a contrast between Team-Based Learning and Problem-based Learning (written from the TBL perspective).

Class Projects

Class projects can range anywhere from short projects that may take a few class sessions to a project that students work on through the whole term. Any disciplines that emphasize application can find projects an effective way of having their students learn by doing. Areas such as Engineering make heavy use of projects for their classes. I have used this for years in my Survey Research class, having the students develop, administer and analyze the results of a survey for a client. It takes the entire term and the students work on the steps of the survey process as they are learning about them in class.

Barriers to Implementation of Active Learning Strategies

Although Bonwell and Eison (1991) were writing very early in the development of active learning, the barriers to adoption they list continue to be true today:

To address adequately why most faculty have not embraced recent calls for educational reform, it is necessary first to identify and understand common barriers to instructional change, including:

- The powerful influence of educational tradition;
- Faculty self-perceptions and self-definition of roles;
- The discomfort and anxiety that change creates;
- The limited incentives for faculty to change.

But certain specific obstacles are associated with the use of active learning:

- The difficulty in adequately covering the assigned course content in the limited class time available;
- A possible increase in preparation time;
- The potential difficulty of using active learning in large classes;
- A lack of needed materials, equipment, or resources.

Perhaps the single greatest barrier of all, however, is the fact that faculty members' efforts to employ active learning involve risk—the risks that students will not participate, use higher-order thinking, or learn sufficient content, that faculty members will feel a loss of control, lack necessary skills, or be criticized for teaching in unorthodox ways. Each obstacle or barrier and type of risk, however, can be successfully overcome through careful, thoughtful planning (pp. v-vi).

Tip! One of the most important things the professor must do is to explain to students the approach that is being taken in the class. Based on their previous experience, students come expecting the professor to tell them what they need to know. When that expectation isn't met, the students become frustrated and complain that the professor is not doing his or her job. In fact, D. R. Woods, in his book on Problem-based Learning, "observes that students forced to take major responsibility for their own learning go through some or all of the steps psychologists associate with trauma and grief" (as cited in Felder & Brent, 1996, para. 5). The experience of Cedarville University faculty involved in the early implementation of the Classroom Flip showed that if students are told at the beginning what the approach of the class is and why it is being done, they will "buy into" the approach. Those frustrations are lessened because expectations have been changed. O'Brien, Millis & Cohen (2008) recommend that the professor share his or her philosophy or approach to the class in a "Learning-Centered Syllabus." (See the separate handout of the opening pages of the syllabus for my Introduction to Media Writing class for an example of such a statement.)

2b. The Classroom Flip Model

My motivation for developing the Classroom Flip approach came from needs I identified in my own teaching, particularly a need to make more effective use of class time to help students learn. At that time (the late 1990s), faculty were being encouraged to move from a teaching model to a learning model. What few were addressing was *how* to do that in one's class. The question I faced was, "How do I, as a faculty member at an institution that emphasizes teaching, move from 'the sage on the stage' to the 'guide by the side'—or, as some prefer, the "sage by the side"? The typical answer, then and now, is to open up class time for active learning strategies. But an initial objection by faculty is always, "How do I do that and still provide the same coverage of the content?"

The resulting Classroom Flip model (Baker, 2000) sought to steer a middle course on the issue, bringing the advantages of both the teaching and learning models together in an approach that recognizes the value of each. As Shambaugh & Magliaro (1997) point out, ". . . each theoretical approach to education has its own strengths and weaknesses" (p. 29). The lecture, for example, is acknowledged by those advocating other approaches to be an efficient way of presenting information (Johnson, Johnson, & Smith, 1998). In addition, some of the gains in learning ascribed to multimedia may be attributable to the design and increased interactivity of the instructional material (Najjar, 1996), suggesting similar gains could be achieved by applying those techniques to a classroom approach. Therefore, although this model draws from learning models, it also seeks to retain strengths of the traditional lecture model.

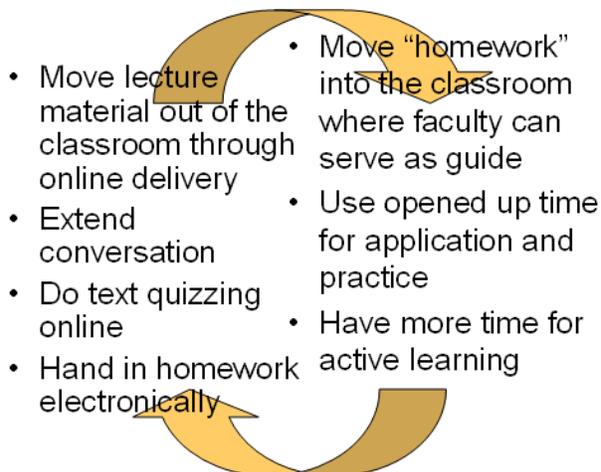
Goals of the Model

The goals of the model are:

- Find an approach that would make it possible for faculty to move from *sage* to *guide*.
- Reduce the amount of time spent in class on lecturing, opening up class time for the use of active learning strategies.
- Focus more on understanding and application (critical and creative thinking) than on recall of facts (content/basic thinking), while not sacrificing presentation of the factual base (categories from Jonassen, 1996, p. 27ff.).
- Provide students with more control over their own learning.
- Give students a greater sense of their own responsibility for their learning.
- Provide students with more opportunities to learn from their peers (Baker, 2000, pp. 11-12).

This model seeks to accomplish these goals by "flipping" what traditionally has been done inside and outside the classroom—deliver rote lecture content online for students to study outside of class and use the time opened up in the classroom for learning-based activities.

The Classroom Flip



Step 3. Select an Element of Your CMS that Connects with Your Pedagogical Strategy

Let's go through the main features of a typical Course Management System and indicate how they can be used to help implement pedagogical strategies that, in turn, address needs faculty often raise. The ⑦ symbol is used to flag elements that connect to Chickering and Gamson's (1987) Seven Principles.

Course Content (“Online Lectures”)

Features

- Documents or Web pages delivered in CMS or website
- Multiple media sources available
- Student use is recorded (in CMS)

Benefits

- Not restrained by class time
- Can link to extra resources
- Data on student use available
- Student accountability ⑦
- Increased time in-class for application and discussion ⑦

Classroom Changes

- Time for active learning strategies ⑦
- Emphasis on “higher order” thinking
- “Sage by the side” there at point of need

Online Discussion (Chat and Threaded Discussion)

Types of Discussion

- Synchronous (Chat Rooms)
- Asynchronous (Threaded Discussion)

Features

- Automatically created by CMS
- Messages archived
- Public/Private
- With names/anonymous

Benefits

- 100% participation ⑦
- “Voice” to the silent students
- Thoughtful, articulate responses
- “Time on task” with content ⑦
- Use for student presentations with Q&A
- Transcript available for review

Classroom Changes

- Small groups carry over into class work
- Students better prepared for in-class discussion
- Students may gain more confidence to participate in class
- More time in class for “higher order” thinking

Example

Need Statement: I want 100% of my students to demonstrate an understanding of the key points of this unit by providing a “significant contribution or question” to class discussion.

Category: Support for new instructional approaches

Principle: Good practice uses active learning techniques.

CMS Support: Threaded discussion

Online Quizzes

Types of Questions

- True-False
- Multiple Choice
- Matching
- Short Answer
- Calculated
- Paragraph Answer

Features

- Set time available
- Generate quiz from pool of questions
- Automatic grading
- Immediate feedback, which can be set based upon response ⑦
- Allow multiple attempts ⑦

Benefits

- Holds students accountable for reading ⑦
- Saves class time
- Provides immediate feedback ⑦
- Can repeat for mastery

Classroom Changes

- Less need to overview text
- Better discussion, since students have read material prior to class
- “This leaves class time for expanding on the topics and discussing them at a deeper level because they have been prepared before coming to class.” [Faculty comment]

Student Presentations or Other Work Products

Features

- Collaborative workspace for groups of students ⑦
- Area for students to upload assignments, group work
- Access limited to student or workgroup
- Access can be provided to the rest of the class, if desired

Benefits

- Student work available for review or peer evaluation
- Place for posting student projects
- Provides a workspace for group, peer and faculty/student interaction ⑦

Assignment “Drop Box”

Features

- Place for students to submit electronic assignments
- Documents related to assignment can be delivered to student
- Can set cutoff time for assignment submission

Benefits

- Comments can be provided by the professor electronically ⑦
- All assignments are together in one place
- Cutoff times for assignments easily enforced
- Grades are automatically posted to the grade book

The Classroom Flip: Pedagogy & the Role of a CMS

Making the Connections

The following chart helps tie all of this together—starting from typical needs expressed by faculty, then moving to instructional strategies and finally suggesting which components of a CMS can be used the help implement that strategy. (*Note:* Items that relate to the Seven Principles are flagged with an indication of the principle at work.)

| Student Motivation | | |
|---|--|---|
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> I need to capture the interest of my students. I want students to have a greater sense of control over their own learning. [#3 – <i>Active learning</i>] | Provide a rich environment in which students can pursue their own interests and which accommodates different learning styles [#7 – <i>Diverse ways of learning</i>] | Done generally through extensive online material in Course Content , which can include resource material and links to other online sources for students to follow as their interests take them |
| <ul style="list-style-type: none"> My students aren't prepared for class discussion because they haven't kept up with the textbook reading. [#5 – <i>Time on task</i>] | Use more frequent quizzes over the text readings. [#6 – <i>High expectations</i>] | Online Quizzes can be setup to be made available right up to the time class starts and then turn off. The student must read the material and take the quiz before class. |
| | Encourage their engagement with the readings through discussion of key points with others in the class. [#2 – <i>Reciprocity & cooperation</i>] | Set up discussion groups for the class in the Threaded Discussion area in which regular discussion of text reading can be done. |
| Unique instructional capabilities | | |
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> I need to be able to demonstrate processes. | Use the various electronic media available for creating a demonstration (e.g., stepping through slides, animation, video, narrated screen grab) | The media can be delivered on Web pages in the Course Content area. |
| <ul style="list-style-type: none"> My students need access to extra resources to update or expand on what the text offers. | Provide the resources through Web pages you create or link to, if they are already available on the Web. | The extra material and/or links to online resources can be delivered on Web pages or URL links in the Course Content area. |
| <ul style="list-style-type: none"> I would like to help students track their own progress in the course. [#4 – <i>Prompt feedback</i>] | Provide up-to-date reports to the students on a 24/7 basis. | The CMS's automatic tracking and reporting functions provide student access to reports on their use of course content and threaded discussion and assignment and class grades. |
| <ul style="list-style-type: none"> My students need to be able to assess their understanding of the content. | Provide student self-assessment and immediate feedback. [#4 – <i>Prompt feedback</i>] | Online Quizzes and Student Self-Assessment Questions allow students to check their understanding and receive immediate feedback, including suggestions for further study, as appropriate. |

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| Unique instructional capabilities (con'd) | | |
|---|---|--|
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> I would like to provide students with more immediate feedback on their work. [#4 – Prompt feedback] | Provide student self-assessment and immediate feedback | Online Quizzes and Student Self-Assessment Questions allow students to check their understanding and receive immediate feedback, including suggestions for further study, as appropriate. |
| | Use electronic assignment submission to help speed up turnaround on assignments | An Assignment “Drop box” allows students to submit assignments electronically and receive them back with comments (e.g., the Notes feature in Microsoft Word). |
| <ul style="list-style-type: none"> My students need to spend more “time on task” practicing a skill. [#5 – Time on task] | Provide online resources that increase the amount of time students are engaged with the course content. | This is accomplished through all of the parts of a CMS. Online Discussion results in more time spent in engagement with the material than is possible sitting in class. Online Quizzes motivate them to read and think through the text. Time spent in the Course Content increases the time they are spending working through class material. The fact all of this is monitored also motivates them to actually follow through on their assignments. |
| | Provide more time for application and practice in class, when the faculty member is available as a mentor to the student or teams of students. [#1 – Contact between students & faculty; #3 – Active learning] | Mainly indirect CMS support for this strategy, by making the time available as a result of moving content coverage online. |

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| Support for new instructional approaches | | |
|---|--|--|
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> I would like to reduce the amount of time spent in class on lecturing without sacrificing coverage of the content. | Deliver the content in a multimedia online for the students to study outside of class | Course Content section in which the class material is provided through Web pages |
| <ul style="list-style-type: none"> I would like to move from reception learning to discovery-based learning I would like to help my students focus more on understanding and application, rather than “will this be on the test?” | Use active learning strategies during the class time opened up from the movement of lecture material [#3 – <i>Active learning</i>] | Mainly indirect CMS support for this strategy, by making the time available as a result of moving content coverage online. |
| | Provide increased opportunity for 100% of the students in class to spend time thinking about the course material. | Online Discussion in which all students are required to participate in the discussion of key questions. |
| | Add interactive elements to the “lecture” material so students can work on application as they are reading the material | Hyperlinks and media plug-ins on the Course Content pages |
| | Provide student self-assessment and immediate feedback [#4 – <i>Prompt feedback</i>] | Online Quizzes allow students to check their understanding and receive immediate feedback, including suggestions for further study, as appropriate. |
| <ul style="list-style-type: none"> My students need opportunities for continuing discussion for peer learning. Provide students with more opportunities to learn from their peers [#2 – <i>Reciprocity and cooperation</i>] | Use small group discussion techniques in class. | Mainly indirect CMS support for this strategy, by making the time available as a result of moving content coverage online. |
| | Include more partner or team-based learning projects. | |
| | Assign students or teams of students report topics and require the other students to ask questions and add comments to the reports. | Have students deliver their reports in the Threaded Discussion or Student Presentation area. Have the other students follow up with questions and comments in the Threaded Discussion area. Require the original posters to follow up on those questions and comments, extending the conversation beyond what you have time for in the classroom. |
| | Involve 100% of the class in discussion of class material | Online Discussion provides a forum in which <i>all</i> students must participate. This provides a “voice” for student who, while thoughtful and articulate, are unwilling to participate in class discussion. Bringing them into the discussion online provides the others in the class with access to their insights. |

| Support for new instructional approaches (con'd) | | |
|--|--|---|
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> My students need a chance to experiment with the effect manipulation of variables has on a process. [#3 – Active learning] | Use interactive media that can respond to student input. | The media can be delivered on Web pages in the Course Content area. |
| <ul style="list-style-type: none"> I would like to give my students a greater sense of their own responsibility for their learning. [#3 – Active learning] | Move from reception learning to discovery-based learning through active learning strategies. | Mainly indirect CMS support for this strategy, by making the time available as a result of moving content coverage online. |
| | Students now have to get material formerly provided for them | Done generally by making material available that the students have to access on their own |
| Increased teacher productivity | | |
| Need | Instructional Strategy | CMS Support |
| <ul style="list-style-type: none"> I would like to do more activity-based learning in class, but I have a lot of material I need to cover. | Deliver the content in a multimedia online for the students to study outside of class | Course Content section in which the class material is provided through Web pages |
| <ul style="list-style-type: none"> I would like students to have more frequent grade updates. [#4 – Prompt feedback] | Provide up-to-date reports to the students on a 24/7 basis. | The CMS's automatic tracking and reporting functions provide student access to reports on their use of course content and threaded discussion and assignment and class grades. |

Example

Need Statement: I want 100% of my students to demonstrate an understanding of the key points of this unit by providing a “significant contribution or question” to class discussion.

Category: Support for new instructional approaches

Principle: Good practice uses active learning techniques.

CMS Support: Threaded discussion

Skills to Develop/Software to Learn:

- How to write effective prompts for discussion.
- How to develop a rubric for evaluation of what is a “significant contribution or question.”
- How to set up a threaded discussion area in our CMS.

The Classroom Flip: Pedagogy & the Role of a CMS



Take a few minutes now to turn to your “learning buddy” again. This time work together to determine how an objective of the model could help you meet your need. Write your initial conclusions down here.

| Brief Need Statement | Instructional Strategy to meet need |
|----------------------|-------------------------------------|
| | |
| CMS Support | Skills to Develop/Software to Learn |
| | |

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Resources

Center for Research on Learning and Teaching. University of Michigan. (2011). Teaching strategies: Active and collaborative learning. [Web page.] Available
<http://www.crlt.umich.edu/tstrategies/tsal.php>

From the page: “This section provides links to bibliographies, research summaries, articles, and other resources about active learning.”

Center for Teaching, Learning, and Technology. Illinois State University. [Website.]
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Starke, D. (2007). Professional development module on active learning. [Web page.] Available
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