Facilitating Adult Learning

Managing the Instructional Environment

LEARNING

SKILL

KNOWLEDGE

GOALS

TUTORIAL

MENTOR

CIMC

OKLAHOMA DEPARTMENT OF CAREER AND TECHNOLOGY EDUCATION

Facilitating Adult Learning

Managing the Instructional Environment

Curriculum and Instructional Materials Center

MANAGING THE INSTRUCTIONAL ENVIRONMENT

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Qualities of an Effective Teacher

Confident

- Speak loudly and directly to students.
- Use humor and be able to laugh at yourself.
- Know that nervous feelings will decrease with experience.
- Dress in a professional manner.

Prepared

- Ensure that the lighting is sufficient, the temperature is set to a comfortable level, and the furniture is arranged that best supports the planned learning activities.
- Develop a lesson plan.

Organized

- Place all materials needed for the class in an easily-accessible location.
- Store assignments in neatly labeled folders.
- Be conscious of time and transition the class smoothly from one activity to the next.
- Maintain and frequently update the course record book.

Clear

- Give specific directions for each assignment and activity.
- State the grading criteria for each assignment and activity.
- Give concrete examples whenever possible.
- Write unfamiliar or confusing terms, names, or references on the board.
- Use visual aids.

Engaging

- Call on students by name during class.
- Present a variety of information, such as facts, examples, opinions, illustrations, statistics, or anecdotes.
- Incorporate activities that encourage active learning.
- Utilize technology.

Caring

- Contact students who have missed class or are doing poorly.
- Give positive feedback on every assignment.
- Encourage students to visit during your office hours.

Creative

- Use a variety of teaching techniques. (For ideas, see Active Learning Activities on page 9.)
- Utilize the course management system (Blackberry or Moodle) to enhance learning outside the classroom.
- Involve students as much as possible in the course development.
- For more ideas, see Additional Teaching Tips and Suggestions on page 16.

Professional

- Improve your teaching techniques by participating in microteaching (lecturing in front of your peers). See "Micro-Teaching Group Session Guidelines" at http://www.brown.edu/Administration/Sheridan_Center/docs/Micro_teaching.pdf
- Videotape yourself giving a class lecture to later view and critique your teaching style.

Techniques for Different Teaching Settings

Lecture Hall and Small Classroom

- **Develop a relationship with students.**
  - Share information about yourself.
  - Make yourself available to students both before and after class.
  - Call on students by name.
  - Move around the room while teaching.
- **Keep students engaged.**
  - Address different learning styles throughout the lesson.
  - Develop a well-structured presentation with a clearly defined beginning, middle, and end.
  - Remember that a typical attention span is 15-20 minutes. Therefore, take frequent breaks in your presentation to actively involve students in the learning process.
  - Break down the class period into chunks, such as 20 minutes lecture followed by 10 minutes of group activity.
  - Avoid reading your notes like a script, but instead use them as a guide.
- **Encourage student participation.**
  - Ask questions while you lecture. (See "Asking Questions to Improve Learning" at http://teachingcenter.wustl.edu/asking-questions-improve-learning.)
  - Invite the class to brainstorm answers to questions you propose. (See Brainstorming on page 11.)
  - Use a personal response system as part of the lecture. If one is not available, propose multiple choice questions and have students raise their hands in response to the answer they think is correct.
  - Divide the class into small groups to complete tasks such as solving a problem, analyzing data, listing pros and cons, or reordering information into the correct sequence. (See Managing the Classroom
  - Getting Small Groups to Work Effectively on page 13.)
- **Effectively manage in-class activities.**
  - State clearly on the first day of class that student interaction is expected.
  - For each planned activity, clearly explain what you expect the students to do.
  - Encourage interaction among students in their groups by walking around the room and asking questions or providing feedback while they work.
  - Set specific time limits for each activity.
  - Offer participation points for students who actively contribute to their groups.

For additional ideas on in-class activities, see "Actively Engaging Students in Large Classes"
http://depts.washington.edu/cidrweb/Bulletin/Engaging.html

"Increasing Student Participation"
http://teachingcenter.wustl.edu/increasing-student-participation

Laboratory

- **Be familiar with the laboratory facility.**

  - Verify that there are adequate supplies for each class period.

  - Make sure all tools function properly.

  - Know where the first aid kit and fire extinguisher are stored.

- **Complete the lab activity before the class meets.**

  - Work through the entire lab exercise before the day of class.

  - Thoroughly understand the theory that supports the lab exercise as well as the purpose for the lab.

  - Anticipate areas where students may struggle or run into problems.

  - Review your instructions to verify they are clearly stated and complete.

  - Complete the analysis and consider the information students must know to do this step.

  - Track how much time the entire lab activity requires.

  - Talk to others who have taught the same lab activity.

- **Create a handout for the first day of class.**

  Include the following information:

  - General lab rules

  - Importance of lab safety and a complete list of the safety rules

  - Information for students with physical impairments

  - List of the supplies that students need to provide

  - Methods for preparing for class

  - Grading policies

  - Format for notebooks or assignments (provide examples)

  - Any additional information (attendance requirements, submitting assignments, make-up work, cheating policy)

  NOTE: This information can also be included in the syllabus or posted online.

- **Assign a pre-lab assignment.**

  - Purpose: Helps students better understand the purpose of the lab and to prepare for the lab activity. Prepared students make fewer mistakes and work more efficiently.

  - Possible items to include: a review of concepts and theories, procedures and methods, troubleshooting techniques, predicting trends, practicing calculations, and interpreting results.

  - Possible formats: worksheet, lab notebook, online quiz, or quiz given at the beginning of class.

- **Begin each lesson with a short introduction.**

  NOTE: Can be in the form of a lecture, group discussion, or small group format.

  - Review the questions in the pre-lab assignment and discuss their relevance.

  - Discuss the purpose and relevance of the lab assignment and its connection to the course content.

  - Explain any new lab terms and demonstrate any new lab equipment.

  - Outline the activities to be accomplished, such as the specific steps to follow and the materials to hand in for grading.

  - Review methods for analyzing the data, provide examples, and allow students to practice the data analysis techniques.

  - Explain any safety precautions that need to be taken.

- **Encourage an active learning environment.**

  - Call students by name.

  - Discourage students from depending on the teacher as the expert, and instead encourage them to use their own reasoning skills.

  - Have students work in pairs or small groups.

  - Visit individual groups often during the class period and ask probing questions to check for understanding.

  - Before answering a question, ask if any other members of the group have a possible solution. (This encourages groups to become more independent.)

  - Allow students to be creative by designing their own experiments.

Online

- **Promote enthusiasm for the course content.**

  - Have students work in pairs, small groups, or as a whole class on assignments, projects, or case studies.

  - Utilize online discussion forums.

  - Encourage students to engage with the content, such as initiating group discussions, finding and sharing additional web resources, and grading their own homework.

- **Establish a productive online atmosphere.**

  - Post and review with students the course rules, such as web etiquette and communicating concerns to the instructor.

  - Encourage students to express personal characteristics and show interest in others' responses.

  - Facilitate discussions by identifying consensus or acknowledging student contributions.

  - Direct instruction by focusing students on the topic.

  - Present to students the proper methods of effective research techniques, including validating online sources.

- **Communicate regularly with students.**

  - Use a variety of communication techniques, such as voice-mail and e-mail, to personalize the student-instructor relationship.

  - Provide prompt feedback to assignments and questions.

- **Set an example.**

  - Actively participate in the online experience.

  - Demonstrate responsibility by returning graded assignments in a timely manner.

  - Model the ways in which students should communicate with one another online.

For an example of an institutional online program, see "University of Central Florida: online@ucf" at http://online.ucf.edu/.

Active Learning Teaching Techniques

Active learning focuses on what you want students to be able to *do,* as opposed to what information you need to give. The thought process is a shift from, *My role is to teach,* to a new paradigm that states, *My role is help students learn*.

Benefits of Active Learning

- Students become more excited about a subject.

- Students learn how to think about the content, – through talking, writing, reading, and reflecting – as opposed to merely memorizing facts.

- Students are able to retain more information and apply it to a broader range of contexts.

- Instructors spend less time on content-related questions, and more time promoting higher level thinking activities.

Arguments Opposing Active Learning

- **It is not feasible because there is too much information to cover in the courses I teach.**

  - Check with other instructors in your discipline to determine which information is essential. It may be determined that the requirements for future courses is not so much recalling facts as the ability to apply the content in new settings.

  - Research shows students in a lecture setting were inattentive 40% of the time and retained 70% of the information presented in the first 10 minutes, but only 20% in the last 10 minutes. Students questioned four months after taking a psychology course knew only 8% more than students who had not taken the course. (Meyers, C., & Jones, T.B. (1993). Promoting active learning: Strategies for the college classroom. San Francisco: Jossey-Blass.)

- **It is too time consuming.**

  - It may take more time to prepare, but lesson plans can be easily reused and refined for future classes.

- **Some teaching contexts are just not conductive to active learning.**

  - In actuality, active learning applies to any learning situation – even large lecture hall settings.

Active Learning Activities

Class Discussions

The purpose is to help students identify and evaluate both their own and others' positions, apply what they have learned, and to gain new insights into the content.

- Clearly state in the course syllabus that discussion will be a continuous part of the course.

- Clearly define the purpose and develop a strategy for initiating the discussion, such as calling on a particular student or asking for a volunteer.

- Be thoroughly familiar with the content, such as important related facts.

- Present a question or issue to the class through a story, article, demonstration, or film.

- Give students approximately 5 minutes to write an answer or response to the posed question. (This gives them time to think and organize their thoughts.)

- Initiate discussion by asking open-ended questions.

- Be patient while waiting for answers and allow students sufficient time to formulate an answer. (As a rule of thumb, wait at least 10 seconds before rephrasing the question.)

- Listen carefully to students' responses and write them on the board, clustering them as necessary such as in terms of relationships or contradictions.

- Direct the instruction when necessary, but allow it to move in a nonlinear manner as long at the main points are addressed.

- Move around the room, and stand closer to students as they speak.

- Address problems as they arise.

  - Stand close to students who you want to pull into the discussion, and move away from students who are dominating the discussion.

  - Calm the discussion if a conflict arises by reminding students to not interrupt and to address the issues and not the individual.

  - If a debate occurs, ask students to substantiate their arguments and write both sides of the argument on the board.

  - Help students who speak hesitantly by being patient and offering nonverbal encouragement.

  - If a discussion gets off track, ask one student to summarize the topic and suggest how the discussion can be refocused.

- Summarize the important points of the discussion at the conclusion.

Collaboration

This form of learning can be used in any classroom size, but keep in mind the physical limitations of the room (such as desks permanently attached to the floor) when determining group size.

Instructor considerations include: group size (3-4 recommended, but pairs can also be effective), creation of groups (student-determined or instructor-determined), assigning individual roles in the group (determined by instructor or group participants), and group assignments (same groups or rotating groups).

- Explain to students the purpose and value of group work.

- Clearly define the grading criteria.

- Give clear directions for the activity before having students move into their groups.

- Use a variety of activities.

  - **Group problem-solving** – Stop the lecture to have groups solve a problem, do an activity, find important points, state the most confusing points, create and outline, or create a test question.

  - **Think-pair-share** – Have students work individually on a problem for a few minutes, and then ask them to get into pairs to compare, synthesize, and finish the assignment. When the exercise is completed, have students report their results to the class. (This activity can also be done as a pyramid where the first two students pair with two more students, and then they report to the class.)

  - **Debates** – Have debaters present their arguments, while those who are not debating act as judges. Be sure to state clear criteria for the judges to follow, and have them document one point each side should have made but did not.

Another form of collaborative learning is team-based learning. For a thorough description of this type of learning, see "Team-Based Learning Collaborative" at http://www.teambasedlearning.org/.

Listening Activities

Students practice restating in their own words what they have just heard. This activity teaches students how to gain a deeper understanding of the content and helps monitor areas where there may be misconceptions or lack of understanding.

- Randomly assign students to pairs.

- Have one student explain a concept to the other student.

- Ask the listener to paraphrase what the speaker said. He/she can ask for clarification if necessary, but cannot judge, analyze, or lead the discussion.

Writing Activities

- **Submitting questions** - Students submit written questions at the end of class, which are collected by the instructor and then addressed at the beginning of the next class. It encourages listening, and serves as both a measure of student learning and a review of course material before moving forward.

- **Writing a summary** - Students write a 2-3 page summary of an assigned reading, and then exchange papers with another student. Each student writes a 1-paragraph summary of the first student's paper. The pairs then present their summary of a summary to the class.

- **Writing to determine comprehension** – Instructor pauses in the middle of the lecture and asks students to write a short list of everything they know about the topic. The instructor requests a handful of students to share their lists. It encourages students to pay attention and also provides the instructor with immediate feedback on the group's level of understanding.

- **Note taking and revision** – Ask students to exchange their notes with a partner. Each partner fills in the gaps they find in the other's notes. It helps students generate complete notes and also works as a review of the course content.

- **Editing others' work** –Students write a short paper, and then edit each other's work. Be sure to provide clear and specific instructions on how to edit (such as providing a rubric) and provide examples of constructive criticism to show students how to give helpful advice.

Visual Activities

- **Films** – Before showing, provide students with questions to consider while watching. Pause often during long videos to review, discuss, or criticize the content. Have students work in groups to consider specific points. Another option is to have students film their own projects.

- **Overhead projectors and presentation software** – Include questions and activities throughout the presentation. Be sure to not merely post your notes and then read them to the class.

- **Demonstrations** – Encourage students' higher level thinking by asking questions such "What will happen if … ?"

Brainstorming

A useful exercise for stimulating discussion, proposing possible topics for a project, finding topics with which students need assistance, and determining important content for later assessments.

- State a question or propose a topic and have students share their ideas.

- List all student contributions to the discussion on the board.

Peer Teaching

- Choose a topic that is a supplement to the course material and will require students to conduct research outside of the class.

- Show students the different techniques they can use to teach the material.

- Demonstrate exactly what you want them to do.

- Have students teach a small group of 3 to 5 students.

- Ask more effective students to teach the class.

Role Playing

- Adopt a role – Ask students to write a paper while playing the role of another person. Have them consider what that person would do or how that person would feel. When the writing is completed, have students read or perform their writing.

- Understanding the audience – Have students write two drafts of the same paper, where each one addresses a different audience. Discuss the importance of considering the audience when writing a paper or addressing a group.

Problem-based Learning

- Propose a real-world problem to the class that cannot be easily answered without researching and analyzing additional data.

- Have students form collaborative groups that identify the nature of the problem and begin locating resources that address the topic.

- Require the groups to design a plan for solving the problem.

- Encourage students to use their prior knowledge and research abilities to consider the right questions to ask, formulate the problem into concise and easily understandable language, explore alternative approaches, and make an effective decision.

- Have students present their solutions to the class.

Case Studies

- Present a case to the class that relates to the learning objectives.

- Provide students with questions to consider as they review the case.

- Organize a class discussion or divide the class into groups to address the different aspects of the case.

For more information and examples of case studies, see "The National Center for Case Study Teaching In Science" at http://sciencecases.lib.buffalo.edu/cs/.

Managing the Classroom

Getting Small Groups to Work Effectively

- Develop tasks that are specific and concrete.

- Give clear, simple, task-oriented instructions.

- Keep group sizes to 2, 3, or 4 students.

- State the specific amount of time the groups will have to work. (Usually 5 minutes is sufficient).

- Have each group assign one person to record what the group discusses and report the recorded material back to the class.

- Have students share their results with the class. (If alternate answers are presented, consider posting them on the board or on the course website.)

Questioning Techniques

Good questions promote learner-centered teaching, make students more aware of their learning process, and provide feedback on students' knowledge and understanding.

- Be patient and do not rush.

- State clearly and slowly one question at a time.

- Focus questions on the learning objectives.

- Clearly phrase each questions.

- Keep questions in a logical sequence.

- Give students time to formulate an answer.

- Remain patient during the silence when waiting for an answer. (Many instructors do not wait long enough. Wait up to 10 seconds, if necessary.)

- Ask a variety of questions, both higher and lower order questions. (For more ideas, see "Types of Questions based on Bloom's Taxonomy" at http://www2.honolulu.hawaii.edu/facdev/guidebk/teachtip/questype.htm.)

- Avoid rhetorical (or unintentional) questions, such as *Right? Yes? Okay?*

- Direct some questions to the entire class and some questions to individual students.

- Listen carefully to students' answers and provide encouraging feedback.

- Relate students' responses to other responses given in the same lecture to show connections.

Utilizing the Web

- Understand the uses for web resources in your course.

    - Providing course content to students.

        EXAMPLES: Course syllabus, course calendar, assignments, lecture materials, PowerPoint presentations, links to other websites, announcements, and receiving and returning assignments

    - Encouraging course activities outside the classroom.

        EXAMPLES: Discussion boards, group pages, sending and receiving e-mails, and virtual online chats

- Research the web technologies your institution provides, such as Blackboard or Moodle.

- Design a well-organized and easy-to-navigate webpage.

- Ensure that the technology used enhances the learning experience, and avoid using technology simply because it is available.

- Clearly explain to students the expectations regarding their use of the course website.

- Become familiar with all the available web tools before using them in a course.

- Encourage student enthusiasm by actively participating in the assigned online activities and carefully listening to students' feedback.

Handling Difficult Behavior

Here are listed several possible behaviors with suggested solutions for handling them.

- Latecomers – Set an example as the instructor by always starting the class promptly on time.

- Shyness – Stand next to these students as you teach; call on them by name; offer nonverbal encouragement as they speak.

- Dominating discussions – Acknowledge comments and then ask for others' contributions; move away from the student who is dominating and focus your vision on something else.

- Argumentative – Acknowledge the positive points and then redirect to other students.

- Rambling – Refocus by restating the main point; ask the student to clarify; ask the student to summarize; write the student's comments on the board.

- Trying to shoot down the instructor – Admit that you do not know the answer, but that you will research the issue and have an answer by the next class period; redirect the question to others in the class.

- Overt hostility, belligerence, or anger – Remain calm and polite; do not disagree but build around what has been said; maintain eye contact and move closer to the student; allow an opportunity for the student to retreat gracefully from the confrontation; speak to the student privately after class.

- Griping – Listen politely and then ask for suggestions; request the student to visit you after class in order to give more time and attention to the stated concerns.

- Packing up during the last few minutes (before class has ended) – Say something like, "You have five more minutes for which you have paid good money. I promise to end promptly."

Additional Teaching Tips and Suggestions

- Give study questions with each reading assignment.

  NOTE: These questions can be addressed at the beginning of class by giving students 5 minutes to write down their answer, or they can be covered in an online discussion.

- Give students 5 minutes at the beginning of class to write their thoughts on what they have read.

  NOTE: This can serve as a way of taking attendance and verifying that students have completed the required reading.

- Before class, supply students with questions where the answers are to be found in the lecture.

- In a 50-minute lecture, include only three or four major points.

  NOTE: Keep in mind that it is better to thoroughly cover a few points than superficially cover several points.

- Present information that builds on the required readings but does not reiterate the readings.

- Provide an outline of each class period on the course website.

- Provide an outline of the material to be covered at the beginning of class.

- On large assignments, require students to hand a portion of the assignment every few weeks, such as an outline, summary, and references.

- Organize the class period into chunks, such as lecture for 15 minutes, have a 10 minute group activity; lecture again for 15 minutes, have another 10 minute activity. (Keep in mind the average attention span is 15-20 minutes.)

- Move around the room and use hand gestures as you teach.

- Incorporate small group discussions.

- Ask students to share their experiences with institutional services such as writing labs or tutoring.

- Demonstrate good study practices, such as active reading techniques, by showing examples of your own notes related to the assigned readings.

  NOTE: For information about active reading see, "Active Reading Strategies" at http://www.princeton.edu/mcgraw/library/for-students/remember-reading/.

- Use online discussions to supplement class material.

- At the end of class, ask students to create one test question on the topic covered that day.

- Ask students to submit sample test questions before the exam and create a practice exam from these questions.

- Ask students suggest topics they would like to see covered in the course.

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