

Active Learning

Students learn best when learning is active: When they are mentally involved, when they engage in hands-on activities, when they are involved in a process of inquiry, discovery, investigation, and interpretation. Thus, learning is enhanced when students repeat the information in their own words or when they give examples or make use of the information.

When students are passive, their brain doesn't do an especially effective job of processing or retaining the information.

But real learning involves more than memorization. Students need to reflect on their learning. They need to actually do biology or chemistry or literary criticism or sociology.

Students need to undertake inquiries and solve problems and apply what they have learned. One strategy that you might adopt is to present concepts and information as puzzles. Here you will get some concrete advice about how to integrate active learning into your classroom.

Questions:

Q. Is active learning simply fun and games?

A. No. Active learning presents students with problem solving challenges that require hard work.

Q. Doesn't active learning require lots of time?

A. Yes—but its worth it. It gives students opportunities to apply and reflect on what is being learned.

Q. Won't students regard active learning as a waste of time?

A. Some will. Some prefer that you simply deliver relevant information to them. A challenge is to convince them that they will benefit from active learning in the long run.

Injecting Active Learning into Lectures:

According to some recent studies, an instructor generally says 100-200 words a minute and a student only hears 50-100—half. Worse yet, in a typical lecture class, students are attentive just 40 percent of the time.

One study concluded that students retain about 70 of what they hear in the first ten minutes of class—and just 20 percent during the last ten minutes.

In one study of a psychology class, students who took the course performed only 8 percent better than a control group that didn't take the class at all.



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Adding visual aids increased retention from 14-38 percent. A picture may not be worth a thousand words, but it helps.

W.J. McKeachie (1986). *Teaching Tips* (Lexington, Mass.); H.R. Pollio (1984), What students think about and do in college lecture classes (*Teaching-Learning Issue No. 53*. Knoxville: Learning Research Centre, University of Tennessee); H. Rickard, R. Rogers, N. Ellis, and W. Beidelman (1988) Some retention but not enough. *Teaching in Psychology* 15, 151-52; C. Verner and G. Dickinson (1967). The lecture: An analysis and review of research. *Adult Education*, 17, 85-89.

1. Ask pre-planned questions and have students write down their answers.
2. Survey your students: E.g. Raise your hand if you agree....
3. Have your students turn to a partner to discuss a point you just made.
4. Explicate a brief text.
5. Ask your students at the end of the class to summarize the lecture's most important points.
6. Give a brief quiz at the end of class over the factual and conceptual issues you raised.

Inserting Active Learning into Discussions:

1. Use discussion triggers: A film clip, a visual image, or a short reading.
2. Use a questionnaire to survey student attitudes and assumptions.
3. Introduce a case study.
4. Have students role play.
5. Formulate questions that encourage student engagement:
 - Descriptive questions: What did you see? What happened?
 - Definition questions: What does...mean?
 - Procedure questions: What will we have to do to find out...?
 - Prediction questions: What will happen next?
 - Rationale questions: Why?
 - Possibilities: What is another possible explanation?
 - Justification: What evidence led you to conclude?
 - Generalization: What can we generalize from these findings?
6. Foster active participation through:
 - Learning spirals: Have individuals write down their solution, then have them discuss their answers in pairs or trios, and then have them share their findings with the class.
 - Learning circles: Have a series of students who sit next to one another express their point of view on a given topic.
 - Peer teaching: Have students present material to a small group or to the class.

Examples of Active Learning

Statistics:

Statistics involves drawing inferences from data. Among a statistics instructor's goals is to teach students statistical concepts and how to tease information from data. You can make statistics relevant to students by incorporating real-life examples and problems into your classroom.

Statistical Literacy: Are one in 4 young people abused?
Do half of marriages end in divorce?

Correlation: Was there a correlation between level of education and support for withdrawal from Vietnam?
--Did opposition to the war spread from the intelligentsia to the rest of the population?

Linear Regression: Do tall people have higher incomes?
Were Vietnam era draftees taller or shorter than non-draftees?

Probability: How likely is a space shuttle disaster?

Logarithms: How can we best illustrate global population growth?

History:

History involves the interpretation of various kinds of primary source evidence. Bring one or several pieces of evidence into the classroom—an advertisement, a film clip, a map, a painting, a photography, or a political cartoon—and ask students to interpret the evidence.

Ads can illustrate the strategies that marketers use to sell products. They can also illustrate shifting conceptions of masculinity, femininity, beauty, ethnicity, and race.

Films not only contain messages about class, ethnicity, gender, they can record the look and atmosphere of a period, construct historical myths, and shape our view of history.

Maps can illustrate the growth of geographical knowledge; but they can also serve as political or ideological documents.

Photographs can document historical. But photographs are not simply objective reproductions of the external world. It is important to ask why and for whom a picture was taken?

Political cartoons use caricature, symbols, humor, ridicule, and exaggeration to make arguments and comment on political events.

Songs helped laborers to cope with the hardship of their tasks and synchronize their movements. Many social movements, including the labor movement, the women's suffrage movement, and the Civil Rights movement, created a repertoire of protest songs.

Literature:

Almost no student enters college having received explicit instruction in hermeneutics, the principles of literary interpretation. Only vaguely do they know about Marxian, Feminist, or Freudian interpretation, let alone Queer Theory, Postcolonial Theory, or the New Historicism. Nor do students arrive at college knowing much about the conventions of literary genres or the language of interpretation. Have students read a passage from a text, then ask them to:

Describe the political or ideological system of beliefs values and ideas that underlie the text.

Explain why the text tells us about the human condition: about human nature or love or families or growing up.

Analyze how the author uses language, style, tone, and characterization to engage and manipulate the reader.

Explore what a text says about certain cultural assumptions, about femininity or masculinity, whiteness or blackness, civilization or nature, race or class, and whether the texts supports the dominant views of its time or subverts them.

Relate how different readers—male, female, African American, Latino, working-class, gay or lesbian—might read and experience the text.

Sociology

Consider using real life examples to illustrate how sociologists understand social stratification, social interaction, culture and deviance.

Dramaturgy: Have two students stage an interaction and have the other students interpret the performance.

Gender: Examine a couple's household division of labor

Gender Socialization: Examine the toys for sale in an online catalog.

Group Decision Making: Have a group of students make a decision and then analyze the dynamics and the factors that influenced decision-making.

Social Institutions: Compare family budgets at various income levels

Spatial Analysis: Map census data

Stereotypes: Analyze stereotypes about race, ethnicity, or gender orientation a particular visual image

Stratification: Explain why incomes vary among a list of occupations