



Active Learning Series

PART 9: Resources for Students to Actively Engage with Learning

What is Active Learning?

Learning and retaining information requires you to *actively* and *intentionally* engage in your learning (see Driessen et al., 2020 for a list of definitions). This means that you do more than just passively watch lectures or highlight while reading. Instead, mentally engage with your note-taking, reading, and studying. Empirical research shows that learning is a science (for more - watch this [video](#)).

Four specific strategies are described below, with links to short videos to help you understand further:

- **Retrieval practice** involves actively calling information to mind from memory ([video](#)).
- **Interleaving** involves intermixing types of problems, topics, and study ([video](#)).
- **Spacing** involves learning a topic over multiple spaced sessions ([video](#)).
- **Elaborating (or Explanatory Questioning)** involves verbalizing and answering “why” questions or explaining and justifying “why” answers are correct ([video](#)).

Studying and preparing more strategically can help you be more efficient with your time, retain content better, and develop a better conceptual understanding of the material. Below we present some common questions and provide links to resources with tips on how you can actively engage in multiple parts of the learning process. Also, look for the embedded links to more resources in the infographics.

| | |
|--|--|
| | <p>How can I actively read more efficiently and effectively to learn?</p> <ul style="list-style-type: none"> • Chapters and textbooks (infographic) • Academic journal articles (video) (handout) |
| | <p>How can I strategically use all parts of the class to study for quizzes and exams?</p> <ul style="list-style-type: none"> • Traditional quizzes and exams (infographic) • Open-book and alternative assessments (infographic) |
| | <p>How can I actively engage when I'm taking notes?</p> <ul style="list-style-type: none"> • When reading (infographic) • When watching a live lecture (infographic) • When watching a recorded lecture (infographic) |
| | <p>How can I write my papers and cite my sources accurately?</p> <ul style="list-style-type: none"> • Writing and citing accurately (infographic) • Understanding assignments before writing (video) |
| | <p>How can I reflect to learn from mistakes or feedback after my work is returned?</p> <ul style="list-style-type: none"> • Analyze multiple choice tests and quizzes (exam wrapper) • Reflect on the following questions: <ul style="list-style-type: none"> • When you do an assignment or task like this again, what do you want to remember to do differently? • What worked well for you that you should use next time? • To what extent did you successfully accomplish the goals of the task? • To what extent did you use resources available to you? |



Citation

Center for Educational Effectiveness [CEE]. (2022). Active Learning Series. *Just-in-Time Teaching Resources*. Retrieved from <https://cee.ucdavis.edu/JITT>

References

Center for Educational Effectiveness, UC Davis. (January, 2022). *Student Resources*. Keep Teaching website. <https://keep Teaching.ucdavis.edu/>

Driessen, E. P., Knight, J. K., Smith, M. K., & Ballen, C. J. (2020). Demystifying the meaning of active learning in postsecondary biology education. *CBE—Life Sciences Education*, 19 (4), ar52.