

# Case-Based Learning

## 1 What is it?

Case-based learning (CBL) is an instructional strategy centered on learners' consideration of real-world problems presented as stories set in professional contexts (Jonassen & Hernandez-Serrano, 2002). Students are expected to analyze key case elements and apply principles (i.e., established assumptions in their fields) in order to articulate a clear understanding of a problem and potential constraints before developing feasible solutions that address identified problem elements (Ertmer & Stepich, 2005). CBL can be implemented in different formats (e.g., text narrative or video cases) and serve diverse learning goals (e.g., business management, multicultural awareness). Social interactions among peers and with the instructor are key to the CBL process (Koehler et al., 2019). For instance, an instructor may ask her environmental engineering students to consider a case capturing a community's struggle to rebuild after being devastated by a hurricane. As students research key case issues and propose solutions, they can simultaneously work through case problems while considering the diverse perspectives of their peers to improve their original ideas.

## 2 Why is it important?

Research suggests that students participating in CBL experience several benefits: "Deeper comprehension of content and more successful application of skills" (i.e., including the development of problem-solving skills), increased motivation, and "connections among personal experiences, course content, and new situations" (Ertmer & Koehler, 2014, p. 628). Additionally, CBL offers learners the chance to gain professional experience vicariously in a safe environment prior to completing comparable tasks in real-life situations (Jonassen & Hernandez-Serrano, 2002).

## 3 How to do it?

When integrating CBL, several elements should be considered to boost the chances of success.

- **Case selection:** When selecting a case, instructors should use one that focuses on an [ill-structured](#)

[problem](#)—that is, a problem that has many potential solutions, with complexities that must be considered. Additionally, instructors should set specific learning objectives and use these objectives to guide design decisions. Instructors may choose cases from books that offer industry-specific narratives, select stories from news media, or create new cases inspired by professional or other experiences.

- **Case Analyses:** Prior to asking students to participate in collaborative activities, requiring them to complete an individual case analysis is worthwhile. Case analyses help "prime the pump," as after completing them "students come to the discussion having already given these issues some careful consideration" (Ertmer & Koehler, 2014, p. 622). While a case analysis can include different elements, one approach includes asking students to consider the following areas: "(1) identify the key stakeholders in the case and to describe their primary concerns; (2) outline the key design challenges in the case, as well as the specific situational constraints; (3) propose at least two reasonable solutions for the designer in the case; and (4) discuss the pros and cons to each solution/recommendation" (Ertmer & Koehler, 2014, p. 622).
- **Collaborative Discussions:** Effective case discussions include three elements, and in online settings, these are commonly implemented through discussion forums. To begin, initial prompts should be created that focus students' attention on key aspects of the case and leave enough room for diverse responses (Ertmer et al., 2011) (see [Designing Case Study Questions](#)). Using a variety of approaches can help keep the experience engaging (e.g., role playing, debate). Second, an active facilitator is needed to help guide the discussion (Koehler et al., 2019) (see [Discussion Board Facilitation](#)). Facilitators should avoid offering students solutions; instead, help them work through case details by redirecting, asking questions that promote deeper thinking, introducing related resources, and sharing relevant professional experiences. Third, facilitators should bring closure to the discussion. Specific strategies for wrapping up a discussion

include: “(1) Summarize the issues left to be resolved, (2) describe insights gained during the discussion, (3) review unexpected developments or findings, (4) list “best” ideas that emerged during the discussion, and (5) reflect on lessons learned from the case story itself, as well as the subsequent discussion” (Ertmer & Koehler, 2015, p. 71).

- **Reflection:** When reflection is implemented at the end of problem-centered learning experiences, students are able to solidify important details that they can draw lessons from in future situations (Tawfik & Kolodner, 2016) ([Reflection Questions](#) by the Colorado Department of Education). Asking learners to reflect after a case-learning experience by sharing key takeaways and to revisit multiple case analyses over time to note progress, the process, and areas still needing improvement can be meaningful. For example, what could have been a more effective solution but was not possible? Why?

## 4 General Notes

- In asynchronous online discussions, learners can use the unique affordances of this format to have a more productive CBL experience. For instance, in face-to-face environments, conversations can move quickly. In an online setting, individuals have more time and flexibility to contemplate peers’ and instructors’ ideas, can intentionally enter the discussion, and revisit posts multiple times (Putnam et al., 2012; Wu et al., 2013). At the same time, case facilitation can be intimidating for instructors new to this method. The online format offers a great place for novice facilitators to intentionally develop their skills.
- Giving students very specific guidelines when participating in online case discussions is important to create an effective conversation. Instructors should set timelines for when participation is expected, use a rubric for grading participation, and provide clear directions for student activities.
- Sometimes instructors may have reasons for requiring students to write their own cases or to facilitate a CBL experience. These can be meaningful experiences if they are intentionally designed and implemented.

Students as facilitators will need support as they complete this experience.

## 5 Additional Resources

- [What makes a good case](#)
- [Cooking with Betty Crocker: A recipe for case writing](#)
- [The art of writing readable cases](#)
- [Return to Mars: How not to teach a case study](#)
- [Don’t: What not to do when teaching cases](#)
- [Case Studies in Science: A novel method of Science Education](#)
- [National Center for Case Study Teaching in Science \(Free case collection not limited to science\)](#)

## 6 References

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