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Creating Effective Scenarios, Case Studies, and Role Plays

Scenarios, case studies and role plays are examples of active and collaborative teaching techniques that research confirms are effective for the deep learning needed for students to be able to remember and apply concepts once they have finished your course. See Research Findings on University Teaching Methods.

Typically you would use case studies, scenarios and role plays for higher-level learning outcomes that require application, synthesis, and evaluation (see Writing Outcomes or Learning Objectives; scroll down to the table).

Purpose

The point is to increase student interest and involvement, and have them practice application by making choices and receive feedback on them, and refine their understanding of concepts and practice in your discipline.

These types of activities provide the following research-based benefits: (Shaw, 3-5)

- They provide concrete examples of abstract concepts, facilitate the development through practice of analytical skills, procedural experience, and decision making skills through application of course concepts in real life situations. This can result in deep learning and the appreciation of differing perspectives.

- They can result in changed perspectives, increased empathy for others, greater insights into challenges faced by others, and increased civic engagement.

- They tend to increase student motivation and interest, as evidenced by increased rates of attendance, completion of assigned readings, and time spent on course work outside of class time.

- Studies show greater/longer retention of learned materials.

- The result is often better teacher/student relations and a more relaxed environment in which the natural exchange of ideas can take place. Students come to see the instructor in a more positive light.

- They often result in better understanding of complexity of situations. They provide a good forum for a large volume of orderly written analysis and discussion.

There are benefits for instructors as well, such as keeping things fresh and interesting in courses they teach repeatedly; providing good feedback on what students are getting and not getting; and helping in standing and promotion in institutions that value teaching and learning

Outcomes and Learning Activity Alignment

The learning activity should have a clear, specific skills and/or knowledge development purpose that is evident to both instructor and students. Students benefit from knowing the purpose of the exercise, learning outcomes it strives to achieve, and evaluation methods. The example shown in the table below is for a case study, but the focus on demonstration of what students will know and can do, and the alignment with appropriate learning activities to achieve those abilities applies to other learning activities.

Alignment

Learning Goal	Learning Outcome	Assessment	Learning Experience
What will students **learn**?	What will students **know** or be **able to do**?	What will students do to demonstrate they **know** it or are **able to do**?	What activities will students do to learn it?
Students will **understand** the value of analyzing data from multiple sources.	Students will be able to **evaluate** multiple pieces of data to formulate a hypothesis.	**Case Study question:** Students will need to use multiple pieces of data to answer questions and integrate data from multiple professions to formulate a hypothesis about the cause and transmission of an unknown disease.	**Case Study:** Students will work in groups to identify the cause and transmission of a mystery disease in Bangladesh using data and observations from 5 different professions. Students will create an action plan for prevention of the disease.

(Smith, 18)

What's the Difference?

Scenarios

Scenarios are typically short and used to illustrate or apply one main concept. The point is to reinforce concepts and skills as they are taught by providing opportunity to apply them. Scenarios can also be more elaborate, with decision points and further scenario elaboration (multiple storylines), depending on responses. CETL has experience developing scenarios with multiple decision points and branching storylines with UNB faculty using PowerPoint and online educational software.

Case studies

Case studies are typically used to apply several problem-solving concepts and skills to a detailed situation with lots of supporting documentation and data. A case study is usually more complex and detailed than a scenario. It often involves a real-life, well documented situation and the students' solutions are compared to what was done in the actual case. It generally includes dialogue, creates identification or empathy with the main characters, depending on the discipline. They are best if the situations are recent, relevant to students, have a problem or dilemma to solve, and involve principles that apply broadly.

Role plays

Role plays can be short like scenarios or longer and more complex, like case studies, but without a lot of the documentation. The idea is to enable students to experience what it may be like to see a problem or issue from many different perspectives as they assume a role they may not typically take, and see others do the same.

Foundational Considerations

Typically, scenarios, case studies and role plays should focus on real problems, appropriate to the discipline and course level.

They can be "well-structured" or "ill-structured:"

- **Well-structured** case studies, problems and scenarios can be simple or complex or anything in-between, but they have an optimal solution and only relevant information is given, and it is usually labelled or otherwise easily identified.

- **Ill-structured** case studies, problems and scenarios can also be simple or complex, although they tend to be complex. They have relevant and irrelevant information in them, and part of the student's job is to decide what is relevant, how it is relevant, and to devise an evidence-based solution to the problem that is appropriate to the context and that can be defended by argumentation that draws upon the student's knowledge of concepts in the discipline.

Well-structured problems would be used to demonstrate understanding and application. Higher learning levels of analysis, synthesis and evaluation are better demonstrated by ill-structured problems.

Scenarios, case studies and role plays can be *authentic* or *realistic*:

- **Authentic** scenarios are actual events that occurred, usually with personal details altered to maintain anonymity. Since the events actually happened, we know that solutions are grounded in reality, not a fictionalized or idealized or simplified situation. This makes them "low transference" in that, since we are dealing with the real world (although in a low-stakes, training situation, often with much more time to resolve the situation than in real life, and just the one thing to work on at a time), not much after-training adjustment to the real world is necessary.

- By contrast, **realistic** scenarios are often hypothetical situations that may combine aspects of several real-world events, but are artificial in that they are fictionalized and often contain ideal or simplified elements that exist differently in the real world, and some complications are missing. This often means they are easier to solve than real-life issues, and thus are "high transference" in that some after-training adjustment is necessary to deal with the vagaries and complexities of the real world.

Scenarios, case studies and role plays can be *high* or *low fidelity*:

High vs. low fidelity: Fidelity has to do with how much a scenario, case study or role play is like its corresponding real world situation. Simplified, well-structured scenarios or problems are most appropriate for beginners. These are low-fidelity, lacking a lot of the detail that must be struggled with in actual practice. As students gain experience and deeper knowledge, the level of complexity and correspondence to real-world situations can be increased until they can solve high fidelity, ill-structured problems and scenarios.

Further Details for Each

Scenarios
Scenarios can be used in a very wide range of learning and assessment activities. Use in class exercises, seminars, as a content presentation method, exam (e.g., tell students the exam will have four case studies and they have to choose two—this encourages deep studying). Scenarios help instructors reflect on what they are trying to achieve, and modify teaching practice.

For detailed working examples of all types, see pages 7 – 25 of the Psychology Applied Learning Scenarios (PALS) pdf. *[link to PALS.pdf]*

Case studies
The contents of case studies should: (Norton, 6)

- Connect with students' prior knowledge and help build on it.

- Be presented in a real world context that could plausibly be something they would do in the discipline as a practitioner (e.g., be "authentic").

- Provide some structure and direction but not too much, since self-directed learning is the goal. They should contain sufficient detail to make the issues clear, but with enough things left not detailed that students have to make assumptions before proceeding (or explore assumptions to determine which are the best to make). "Be ambiguous enough to force them to provide additional factors that influence their approach" (Norton, 6).

- Should have sufficient cues to encourage students to search for explanations but not so many that a lot of time is spent separating relevant and irrelevant cues. Also, too many storyline changes create unnecessary complexity that makes it unnecessarily difficult to deal with.

- Be interesting and engaging and relevant but focus on the mundane, not the bizarre or exceptional (we want to develop skills that will typically be of use in the discipline, not for exceptional circumstances only). Students will relate to case studies more if the depicted situation connects to personal experiences they've had.

- Help students fill in knowledge gaps.

Role plays

Role plays generally have three types of participants: players, observers, and facilitator(s). They also have three phases, as indicated below:

Briefing phase: This stage provides the warm-up, explanations, and asks participants for input on role play scenario. The role play should be somewhat flexible and customizable to the audience. Good role descriptions are sufficiently detailed to let the average person assume the role but not so detailed that there are so many things to remember that it becomes cumbersome. After role assignments, let participants chat a bit about the scenarios and their roles and ask questions. In assigning roles, consider avoiding having visible minorities playing "bad guy" roles. Ensure everyone is comfortable in their role; encourage students to play it up and even overact their role in order to make the point.

Play phase: The facilitator makes seating arrangements (for players and observers), sets up props, arranges any tech support necessary, and does a short introduction. Players play roles, and the facilitator keeps things running smoothly by interjecting directions, descriptions, comments, and encouraging the participation of all roles until players keep things moving without intervention, then withdraws. The facilitator provides a conclusion if one does not arise naturally from the interaction.

Debriefing phase: Role players talk about their experience to the class, facilitated by the instructor or appointee who draws out the main points. All players should describe how they felt and receive feedback from students and the instructor. If the role play involved heated interaction, the debriefing must reconcile any harsh feelings that may otherwise persist due to the exercise.

Five Cs of Role Playing (AOM, 3)
Control: Role plays often take on a life of their own that moves them in directions other than those intended. Rehearse in your mind a few possible ways this could happen and prepare possible intervention strategies. Perhaps for the first role play you can play a minor role to give you and "in" to exert some control if needed. Once the class has done a few role plays, getting off track becomes less likely. Be sensitive to the possibility that students from different cultures may respond in unforeseen ways to role plays. Perhaps ask students from diverse backgrounds privately in advance for advice on such matters. Perhaps some of these students can assist you as co-moderators or observers.

Controversy: Explain to students that they need to prepare for situations that may provoke them or upset them, and they need to keep their cool and think. Reiterate the learning goals and explain that using this method is worth using because it draws in students more deeply and helps them to feel, not just think, which makes the learning more memorable and more likely to be accessible later. Set up a "safety code word" that students may use at any time to stop the role play and take a break.

Command of details: Students who are more deeply involved may have many more detailed and persistent questions which will require that you have a lot of additional detail about the situation and characters. They may also question the value of role plays as a teaching method, so be prepared with pithy explanations.

Can you help? Students may be concerned about how their acting will affect their grade, and want assistance in determining how to play their assigned character and need time to get into their role. Tell them they will not be marked on their acting. Say there is no single correct way to play a character. Prepare for slow starts, gaps in the action, and awkward moments. If someone really doesn't want to take a role, let them participate by other means—as a recorder, moderator, technical support, observer, props…

Considered reflection: Reflection and discussion are the main ways of learning from role plays. Players should reflect on what they felt, perceived, and learned from the session. Review the key events of the role play and consider what people would do differently and why. Include reflections of observers. Facilitate the discussion, but don't impose your opinions, and play a neutral, background role. Be prepared to start with some of your own feedback if discussion is slow to start.

An Engineering Role Play Adaptation
Boundary objects (e.g., storyboards) have been used in engineering and computer science design projects to facilitate collaboration between specialists from different disciplines (Diaz, 6-80). In one instance, role play was used in a collaborative design workshop as a way of making computer scientist or engineering students play project roles they are not accustomed to thinking about, such as project manager, designer, user design specialist, etc. (Diaz 6-81).

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