

# SCENARIO-BASED LEARNING

## What is scenario-based learning?

Scenario-based learning (SBL) uses interactive scenarios to support active learning strategies such as problem-based or case-based learning. It normally involves students working their way through a storyline, usually based around an ill-structured or complex problem, which they are required to solve. In the process students must apply their subject knowledge, and critical thinking and problem solving skills in a safe, real-world context. SBL is often non-linear, and can provide numerous feedback opportunities to students, based on the decisions they make at each stage in the process.

Scenario-based learning may be self-contained, in that completing the scenario is the entire task, or it may be the first part of a larger assignment requiring the student to complete the scenario, and then provide a written or oral reflection and self-assessment on the process.

## What theory supports SBL?

Scenario-based learning is based on the principles of situated learning theory (Lave & Wenger, 1991), which argues that learning best takes place in the context in which it is going to be used, and situated cognition, the idea that knowledge is best acquired and more fully understood when situated within its context (Kindley, 2002)

## When would I use SBL?

SBL can be used in a wide range of contexts, but it works especially effectively when used to simulate real-world practice, providing opportunities which may be difficult for students to experience within the confines of a course. Successful scenarios have been developed around topics as wide-ranging as structural failure in bridges; pesticide applications for apple orchards, and the nursing management of myocardial infarction. SBL can be used as part of either formative or summative assessment

SBL usually works best when applied to tasks requiring decision-making and critical thinking in complex situations. Tasks that are routine to the students will require little critical thinking or decision-making, and may be better assessed using other methods.

## How can I start creating SBL?

**Identify the learning outcomes:** It is important to identify what it is you want students to achieve on completion of the scenario, and then to work backwards from the learning outcomes to create the situation that will lead to this learning.

**Decide on your format:** Is your scenario going to be delivered in the face-to-face or online environments? What media (photographs, audio, video) and other resources will you need? If you are using an online scenario, will you provide other supporting activities, such as wikis, discussion forums, etc.?

**Choosing a topic:** Remember that non-routine tasks lend themselves to scenario-based learning. Consider using 'critical incidents' and challenging situations that have occurred in your subject area.

**Identify the trigger event or situation:** This will be the starting point of your scenario. As you create the scenario, identify decision points and key areas for feedback and student reflection. Creating a storyboard is an effective way to do this.

**Peer review your scenario:** Ask colleagues to work through the scenario to ensure that it flows in the way you expect, and achieves the outcomes you intended.

## What can I use to create online SBL?

SBLi is an online scenario authoring tool available to all Massey staff. It will help you to create structured scenarios that can be accessed by students via Stream. Other online authoring tools are

available, and range from simply adapting PowerPoint to more complex tools such as Adobe Captivate and Articulate Storyline. The STREAM lesson tool can also be used for developing interactive scenarios. Contact the Centre for Teaching and Learning for more information and advice.

### **A note of caution:**

Depending on the complexity, building an SBL can be time consuming, but the end product can give the student an authentic learning experience which can both challenge and motivate.

### **Checklist: Is SBL the right option? (Clark, 2009)**

- ✓ Are the outcomes based on skills development or problem-solving?
- ✓ Is it difficult or unsafe to provide real-world experience of the skills?
- ✓ Do your students already have some relevant knowledge to aid decision-making?
- ✓ Do you have time and resources to design, develop, and test an SBL approach?
- ✓ Will the content and skills remain relevant for long enough to justify the development of SBL?

### **Next steps**

Find out more about SBL and to access further SBL resources and support, contact:  
Terry Stewart. [t.stewart@massey.ac.nz](mailto:t.stewart@massey.ac.nz)

### **Further reading**

Errington, E.P., (2003). *Developing scenario-based learning: Practical insights for tertiary educators*. Palmerston North, N.Z. : Dunmore Press. 9-20.

Gossman, P., Stewart, T., Jaspers, M., & Chapman, B. (2007). Integrating web-delivered problem- based learning scenarios to the curriculum. *Active Learning In Higher Education*, 8(2), 139-153.

### **References**

Clark, R., (2009). Accelerating expertise with scenario based learning. *Learning Blueprint*. Merrifield, VA: American Society for Teaching and Development.

Kindley, R. W. (2002). Scenario-based e-learning: a step beyond traditional e-learning. *ASTD Magazine*. Retrieved from <http://www.astd.org/>

Savery, John R. (2006) Overview of Problem-based Learning: Definitions and Distinctions, *Interdisciplinary Journal of Problem-based. Learning* 1(1)