

Pedagogy

What is learning?

*"Higher learning is an active, interactive, self-aware process that results in meaningful, long-lasting changes in knowledge, skills, behaviours, beliefs, attitudes... that can **not** be attributed primarily to maturation."*

It is useful to distinguish between deep and surface learning. It is usually deep learning that lecturers aim to foster in their students.

Deep learning involves	Surface learning involves
active thinking analysis critical evaluation making connections more effective retention an ability to apply new learning to different contexts challenging tasks	limited thinking little analysis little critical evaluation learning new material in isolation from context ineffective retention little ability to apply new learning to different contexts relatively easy tasks (sometimes of the 'hunt and peck' variety)

Factors which promote effective learning

Fourteen general research findings about effective learning. In general, students learn more when they:

1. are actively engaged with the work
2. have high but realistic expectations and goals
3. receive regular, timely and specific feedback
4. focus on what's most important
5. are aware of their learning
6. experience a balance of intellectual challenge and academic support
7. are explicitly aware of preconceptions and prior learning and are willing to unlearn when necessary
8. connect new and prior knowledge
9. organise their learning in a meaningful way
10. apply their learning to real-world situations
11. they are assessed appropriately and understand the assessment criteria
12. work regularly and productively with instructors
13. work regularly and productively with other students
14. invest time and make a committed effort.

(Adapted from Angelo, T.A. (1993). A Teacher's Dozen: Fourteen General, Research-Based Principles for Improving Higher Learning in Our Classrooms. *The AAHE Bulletin*, 45(8), pp 3-7 13 & 15.)

(adapted from UQ <http://www.tedi.uq.edu.au/teaching/toolbox/pedagogy.html>)

Characteristics of effective university teachers

Effective university teachers:

1. have a strong knowledge of the field
2. set appropriate assessment tasks
3. demonstrate impartiality overall and specifically in assessing students
4. encourage active learning
5. are clear in their teaching
6. show enthusiasm for teaching in general and their field in particular
7. show sensitivity to and concern with students' progress
8. encourage lecturer-student contact
9. foster cooperation among students
10. respect different talents and learning styles
11. are available and helpful
12. are efficient in course preparation and organisation
13. provide prompt feedback
14. regularly engage in reflective practice

Approach for Developing Learning Materials

Principles

General principles for how the materials might incorporate mediums for best learning should consider students learning styles, backgrounds, and learning through authentic, meaningful engagement and through interaction as part of a learning community.

These principles of learning are strongly influenced by **constructivism** a widely adopted trend in learning theory. It contextualises knowledge within a course and encourages students to actively engage with content through a process of problem defining and solving. In this theory the role of the teacher is to guide and facilitate the students' learning processes, helping them to make meaning of the content.

“By viewing learning as an active process taking students prior knowledge into consideration, building on preconceptions, and eliciting cognitive conflict [by confronting prior conceptions], teachers can design instruction that goes beyond rote learning to meaningful learning that leads to deeper longer lasting understandings” (Jones et al, 2002)

Constructivism emphasises:

- Individuals' prior beliefs and knowledge
- The social context of learning as a community of learners for building and developing ideas
- Knowing as a process rather than knowledge as a product

Problem/project based learning, problem solving, and case studies are all aspects of constructivism. Which particular approach you use will have implications for the way you construct your course and the way you phrase objectives, learning activities and assessment

Instructional strategies such as the learning cycle provide a framework for a constructivist approach.

Sequence of learning activities

(Adapted from CC Ed Resource Centre <http://serc.carleton.edu/introgeo/enviroprojects/what.html>)

Kolb, (1984) defines experiential learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience."

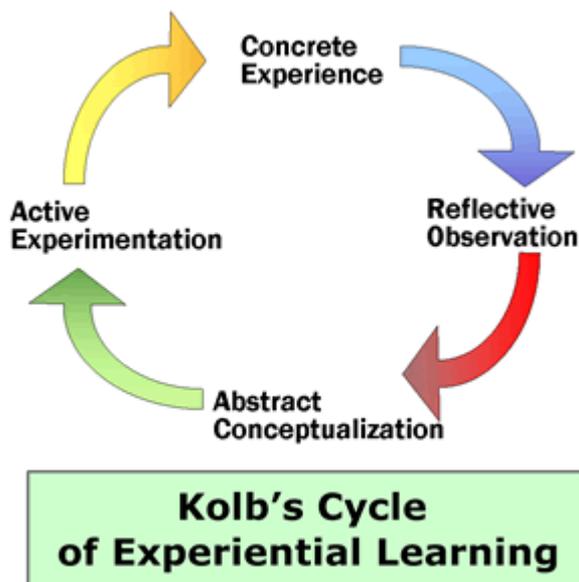


image by Karin Kirk

Kolb's Experiential Learning Theory presents a cycle of four elements

1. Concrete Experience
2. Reflective Observation
3. Abstract Conceptualization
4. Active Experimentation

The cycle begins with an experience that the student has had, followed by an opportunity to reflect on that experience. Then students may conceptualize and draw conclusions about what they experienced and observed, leading to future actions in which the students experiment with different behaviors. This begins the cycle anew as students have new experiences based on their experimentation ([Oxendine, Robinson and Willson, 2004](#)).

Although this continuum is presented as a cycle, the steps may occur in nearly any order. This learning cycle involves both concrete components (steps 1 and 4) and conceptual components (steps 2 and 3), which require a variety of cognitive and affective behaviors.

The Essential Components of Experience-Based Learning

[Andresen, Boud and Choen \(2000\)](#) provide a list of criteria for experience-based learning. The authors state that for a project to be truly experiential, the following attributes are necessary in some combination:

- The goal of experience-based learning involves something personally significant or meaningful to the students.
- Students should be personally engaged.
- Reflective thought and opportunities for students to write or discuss their experiences should be ongoing throughout the process.
- The whole person is involved, meaning not just their intellect but also their senses, their feelings and their personalities.
- Students should be recognized for prior learning they bring into the process.
- Teachers need to establish a sense of trust, respect, openness, and concern for the well-being of the students.

Following this cycle learning activity cycle might include the following examples

1. Concrete Experience

Activitie/s: Introduce concept by stimulating a personal connection with an opening question, image, phrase, sound bite and ask them to reflect on what it means to them.

2. Reflective Observation

Activitie/s: provide information (i.e lecture or text/readings) and pose questions related to this text

3. Abstract Conceptualisation

Activity: Interpret image/music/scenario in relation to information presented in the readings and introduction/post on discussion board

4. Active Experimentation

Activity: This active experimentation phase can be provided through the assignments which incorporate the issues covered in a number of topics. Remember students are learning through their assignments so opportunities for this learning to be scaffolded are essential.

Learning Activities to consider:

Online learning activities at each topic level might develop through the following stages.

1. Introduce subject matter – summarise providing context and for students.
2. Visual stimuli – perhaps two or three striking images to stimulate discussion
3. Discussion forum for students' response – build on this response in ongoing forums
4. Link student to pertinent website (e.g from outside organisation)
5. Ask students to read related reading from book of readings
6. Discuss reading in forum.

Mediums to consider:

- images (NT Library image catalogue an excellent source)
- links to websites/music/ sound bites
- links to lecture notes/ word documents/articles
- instruction to read from the book of readings
- discussion forums
- self test exercises with pop up answers
- quizzes
- blogs
- wimba classrooms

Writing online learning materials

- Avoid too much text.
- Information should fill one screen at a time.
- Keep online readings to a minimum and at an appropriate level.
- Write explanations and instructions in Plain English and in a conversational inclusive voice and keep it short and simple.