Introduction to Pedagogical Training 2.0

Presented by

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Presenters are from the **University of Illinois in Urbana-Champaign**.

Walter Hurley is Professor Emeritus of Animal Sciences, at the University of Illinois in Urbana-Champaign. He has been a member of the Department of Animal Sciences at Illinois for over 35 years. His research focused on lactation and mammary gland biology, particularly in dairy cattle and swine. He taught a number of undergraduate courses, including his long-standing undergraduate course in Lactation Biology. Students in that course were led on a journey of exploration that introduced them to the mammary gland, lactation physiology, milk, and how those topics relate to various animals, as well as to themselves. The course emphasized student participation, problem solving, critical thinking, group work, leadership and communication skills. He developed an introductory Lactation Biology MOOC (massive, open, online course) that is accessible to anyone around the world. Dr. Hurley also had a significant role in the revitalization and redevelopment of the Agricultural Education Program at Illinois as Program Director. His excellence and innovation in teaching have been recognized locally and nationally through a number of honors, including the Land O'Lakes/Purina Teaching Award in Dairy Production, presented by the American Dairy Science Association, numerous College and campus teaching excellence awards, the campus Distinguished Teacher-Scholar Award, teaching awards from the North American Colleges & Teachers of Agriculture, and the Regional Award for Excellence in College and University Teaching in the Food and Agricultural Sciences from the Association of Public & Land-Grant Universities and US Department of Agriculture. Dr. Hurley has visited Sierra Leone several times, presenting curriculum review and pedagogical training workshops.

Cheelan Bo-Linn is the Senior Specialist in Education in the Center for Innovation in Teaching & Learning (CITL) at the University of Illinois in Urbana-Champaign and Lecturer in the Department of Education Policy, Organization, and Leadership. In her position in CITL, she is responsible for the promotion of teaching excellence across campus and academic units in areas such as faculty consultations, programs and retreats. Areas for consultation have included course and curriculum design, learning outcomes and assessment, experiential learning and active learning. She also leads and coordinates the campus faculty development programs, such as the annual Faculty Retreat, the Faculty Seminar Series on Teaching and Learning, and the college Teaching Academies. She has been an educational advisor and has served as a teaching mentor and educational consultant on several NSF, USAID, UKAID, and international Fulbright grants and routinely consults with international visitors about faculty development programs and initiatives. She has been invited to present nationally and internationally, most recently in China, India, Hong Kong, Taiwan, and Sierra Leone. In recognition of her contributions to the University of Illinois campus, she received the Chancellor's Academic Professional Excellence Award. She was instrumental for Illinois' participation in the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) initiatives. Her most frequent workshop presentations have been on student learning teams, inquiry-based learning, formal and informal assessment of teaching and learning, innovative course redesign, and classroom research.

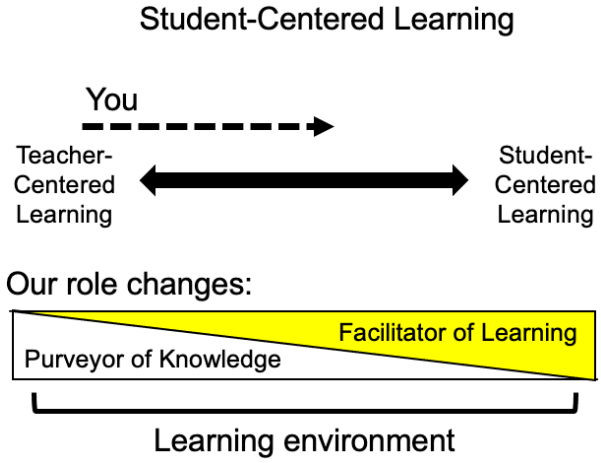
Overview & Review of Pedagogical Training 1.0

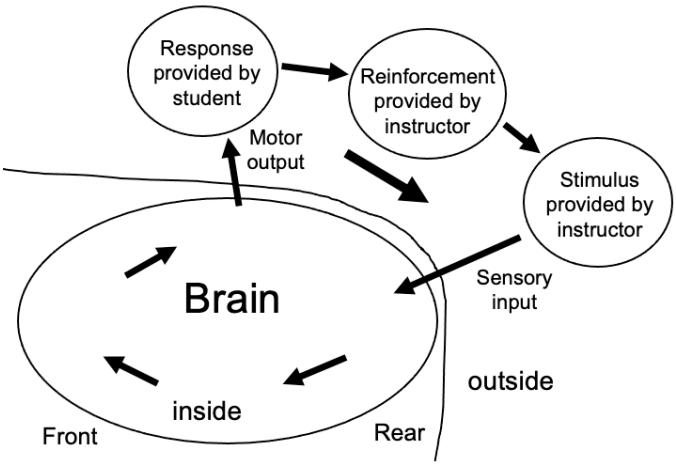
Teacher-Centered vs Student-Centered Learning

Teacher-centered learning, or perhaps more accurately, teacher-centered teaching, has been the norm in higher education for many decades. It primarily is described in the context of lecture-only class sessions, followed by a major, high-stakes examination of the ability of students to remember what was shared in the lectures. Lecturing can be a powerful means of stimulating learning in students. However, it most often falls significantly short of stimulating true learning in our students.

Student-centered learning, or learner-centered learning, places the emphasis on learning by the students, not on teaching by the teacher. Learning experiences and instructional methods are focused on addressing the learning needs, interests, and backgrounds of students. This is achieved by using a wide variety of instructional strategies. These strategies take into account the most effective means of facilitating student learning.

Moving from a teacher-centered approach to a student-centered approach requires a change in mindset by the instructor.





Learning is a cyclic process

Consider the inside the brain vs outside the brain model above (right). We have a great deal of opportunity to impact learning through the sensory inputs that we provide (stimulus provided by instructor), the motor outputs that we solicit (response provided by student), AND IMPORTANTLY, the means by which we encourage and help our students complete the learning cycle and initiate another cycle (reinforcement provided by the instructor). These are three points at which we have significant power to impact our students' learning.

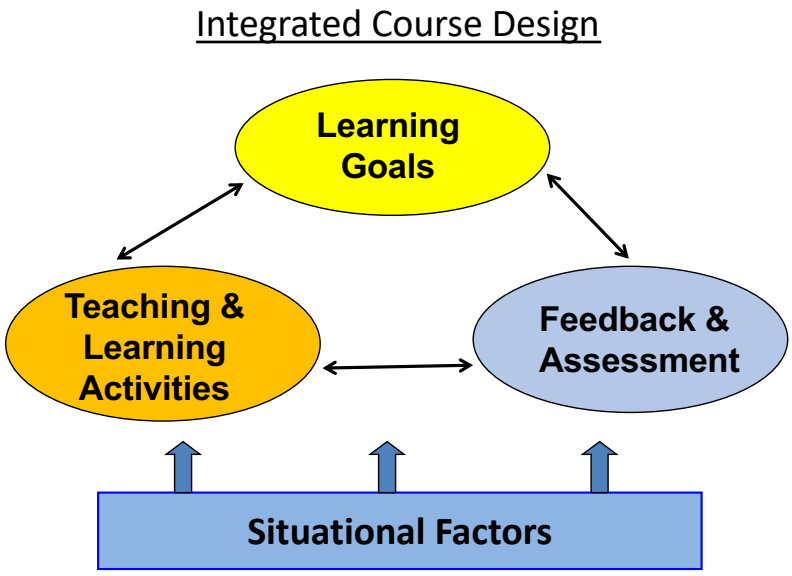
Bloom's Taxonomy of Educational Objectives

A framework for categorizing educational objectives. This taxonomy has been used around the world for test design and curriculum development. The taxonomy describes six levels of the cognitive domain. Fill in the grid below with the six levels of Bloom's Taxonomy and their relationship to levels of thinking and critical thinking.

Bloom's Taxonomy of Educational Objectives (revised)

Integrated Course (Module) Design

This model is called the Integrated Course (Module) Design, which is composed of four components: learning goals, feedback and assessment, teaching and learning activities, and situational factors. The model emphasizes the close inter-relationship of these components.

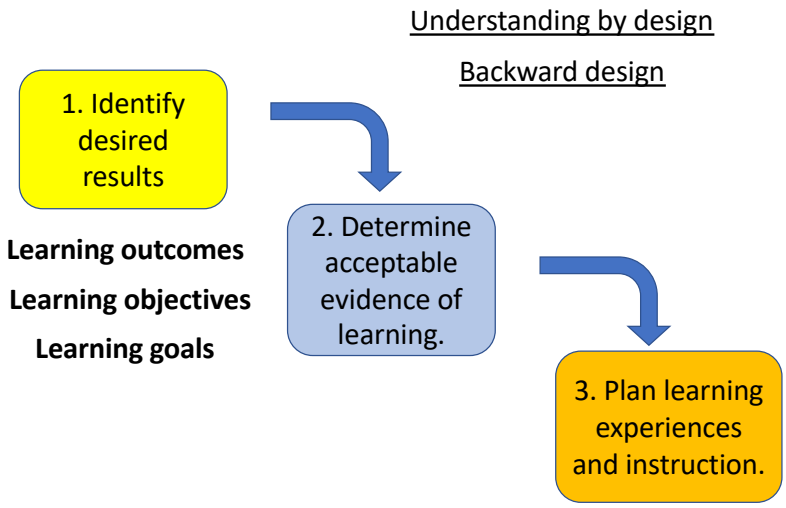


For more detailed information about Dee Fink's Integrated Course Design, see:
https://www.deefinkandassociates.com/GuidetoCourseDesignAug05.pdf

Understanding by Design or Backward Design

Understanding by Design is a model for course design similar to that of Fink's Integrated Course Design model, however, it also provides a nice pathway for the process of thinking how to design a module. The model is also sometimes called Backward Design because

traditionally we most often have designed our modules by identifying the content and instruction methods first, then determining the means of evaluating learning, and then considering the learning goals.



From G.P. Wiggins and J. McTighe, Understanding by Design, 2nd edition (2005, Pearson Education, Inc., New Jersey). https://epdf.pub/understanding-by-design-2nd-edition.html

Assessments of Learning

Bloom's Taxonomy can help us in how we structure and write our assessments of student learning. We need to recognize are two types of assessments, summative and formative.

Feedback and Assessment of Learning

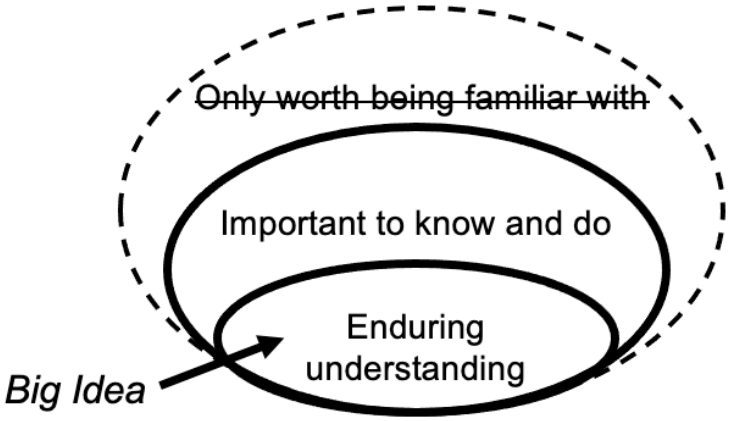
Summative Assessment	Formative Assessment
Evaluate student learning	Monitor student learning
Comes at the end of the learning process	Comes during the learning process
high point value high stakes/high risk	low or no point value low stakes/low risk
Asks: Did you learn?	Asks: What are you learning?
Examples: mid-term exams final exams term papers	Examples: Classroom Assessment Techniques (CATs)

The Big Idea

Our goal as teachers should be to integrate these active learning concepts, the formative assessments, and a student-centered learning mentality into our teaching and our modules. This means that we may not be able to cover all the content that we think should be covered.

How can we gain the in-class time to accomplish this? We can implement the idea of **The Big Idea**. We can do this if we can:

1. Identify the **big or essential ideas** in your field that is the basis for your module.
2. Identify the content that is important to know for addressing these big ideas.
3. Identify those things that are peripheral to the big ideas, the things that may only be worth knowing.
4. Then delete the "Only worth being familiar with" content and use that time to integrate the activities, group assignments, etc.



Successfully implementing the Big Idea approach in our modules will allow students to learn our content not only from our lectures, but also from practicing their career readiness skills while applying our content.

From G.P. Wiggins and J. McTighe, Understanding by Design, 2nd edition (2005, Pearson Education, Inc., New Jersey). https://epdf.pub/understanding-by-design-2nd-edition.html

Activity: [after the video]

1. Sketch what your typical classroom looked like before you participated in the earlier pedagogical training workshops.

2. Now sketch what your current classroom looks like; be sure to incorporate any changes that you have made that would represent a more student-centered classroom. Include what is happening in those classrooms (what are the students doing?).

3. Write a short paragraph describing how your current, more student-centered classroom differs from your previous classroom.

4. Make a list of ideas on how you might turn your typical classroom into something that would accommodate an even more student-centered learning environment.