SPHEIR Pedagogical Trainings 1.0 and 2.0
Manual for Workshops

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SPHEIR

SPHEIR - Strategic Partnerships for Higher Education Innovation and Reform

Higher education has a vital role to play in accelerating development and building inclusive societies. SPHEIR (Strategic Partnerships for Higher Education Innovation and Reform) aims to strengthen higher education in focus countries to better meet the needs of students, employers and societies.

See: https://www.spheir.org.uk

SPHEIR in Sierra Leone - Assuring Quality Higher Education in Sierra Leone

See: https://www.spheir.org.uk/partnership-profiles/assuring-quality-higher-education-sierra-leone

Assuring Quality Higher Education in Sierra Leone is bringing together higher education institutions across Sierra Leone to improve quality management in higher education and support the introduction and implementation of outcome-based education. It aims to bring about a student-centered focus within higher education across the country, leading to a more responsive and capable national workforce.

Sierra Leone's higher education system has been negatively affected by poor financing, limited staff training opportunities, ailing research infrastructure and the lack of an effective quality management system. This has led to teachers at the higher education level being unable to align course content with the needs of the job market and the aspirations of the growing number of students. The SPHEIR-Sierra Leone partnership is creating an enabling environment for the introduction of outcome-based education by establishing a National Qualifications Framework and complementary assurance systems. It is supporting the implementation of outcome-based education by helping to realign curricula, building the capacity of staff and introducing innovative teaching and learning systems across higher education institutions. In this way, the partnership will lay the foundation for introducing innovative teaching and learning systems and ensuring lecturers can utilize emerging IT opportunities to create a rich mix of classroom experiences for students.

The Pedagogical Training Workshops described below are aimed at providing university faculty with fundamental knowledge and understanding of pedagogies that foster student-centered learning.

Being an Effective Session Facilitator

(C. Bo-Linn)

"Workshop facilitation is the act of facilitating or guiding participants through a process of co-creation and active dialogue to help them reach a particular goal together."
(D. Monthan, 2018)

Congratulations! You will be a facilitator for several topics in this training. You may ask "What does it mean to be a facilitator? I have never been one before… or I need a refresher?" One way to start thinking about this role is "How similar is this to being an effective classroom teacher? What skills, knowledge ….and attitude are important in leading a class discussion?"

So, let's begin by thinking of some of the characteristics of ***effective teachers***: they are prepared, knowledgeable of the content, supportive, fair, and enthusiastic and engaging. These traits also describe effective facilitators. Now, you should have had an "ah-hah" experience. Yes! As an ***effective facilitator*** you will demonstrate/role model what we would like to see your faculty colleagues carry back to their own classrooms.

Here is a process which will help you to become a successful facilitator (and effective teacher). Just as you prepare for your own modules, think of the steps as "before, during, and after" the workshops.

Before the workshop:

- Preparation. Read and know the content topic very well so that you are comfortable and confident. There are suggested timelines so that you won't rush or run out of time. Go through the directions and then watch the videos so that you know when to pause for an activity or discussion.
- Set the environment. As mentioned above, knowing the content is critical, but also being supportive and engaging are important components of a successful learning environment. As such, do pay special attention now to two of the topics: "Leading Discussions - Parts A, B, C" and "Engaging Students Through Active Learning – Parts, A, B, C." These two topics begin to create the desired effective learning/workshop environments. The videos on leading discussions will provide critical strategies to keep a rich and inclusive discussion.
- Know the participants. Try to get some information about them; e.g., how long have they been teaching, what are the courses they teach, information about their students, what are they looking forward to learning, what questions they may have.
- (Just before the workshop) Do a final check. Make sure all the technology works, the materials are ready to distribute, and your notes are available. Have extra writing utensils around because many of the workshop sessions will have interactive activities where faculty will need to take notes and prepare responses on the handout packets.

During the workshop:

- Be early. See the "Final check – just before the workshop" bullet above. Greet the faculty and check if there are any questions or comments if there were earlier sessions.
- Set the stage. Provide an introduction to the topic and why it is important. Learning goals are stated in the videos and in the handouts. Highlight those learning goals.
- Role model. Demonstrate the critical skills discussed in the section above on effective facilitation.
- Be inclusive. As often as possible, use the names of the faculty, provide praise and constructive feedback, and create the time and space where faculty can speak. Be aware that there may be some who volunteer or comments more often than others. Try to have as many "voices" as reasonable while maintaining some control of the discussions. Also, a rich, inclusive conversation involves a diversity of opinions, perspectives, experiences, and strategies. Be aware of the different voices and manage how to acknowledge them (i.e., it doesn't mean that you agree, but you recognize their input).
- Build in interactivity and engagement. The activities are opportunities for faculty to be reflective and for you and them to check their knowledge. Maximize those times for "active learning." We desire the faculty participants to experience the variety of strategies, acknowledge their value, enjoy the activities and discussions – all outcomes which greatly enhances the probability that the faculty can implement these approaches in their own teaching.
- Be flexible. Unexpected events can occur or perhaps you saw that it may be important to explore an area more deeply. Be open and flexible and try to manage those times. Remember that D. Monthan (author of the quote at the beginning of this section) suggests you to be open, honest, and authentic.
- Conclude and preview. Return to the learning outcomes for the session; they are built-in the videos. Were the learning outcomes mastered? Are there further questions? Then prepare a transition and preview for the next topic. Remind the faculty if there are post-session homework and assign them a pre-session reading. Then provide positive feedback as you conclude the session.

After the workshop:

- Relax and reflect. Take some time to take a deep breath. Then think back and take notes: what were the most successful and less successful times? What happened and why. Think broadly about: what to keep doing, what to stop doing, and what to start doing. Write those thoughts down and share with your fellow facilitators.
- Ask for feedback. You can monitor during the training, but you can also do quick checks with the faculty participants. Ask them what were the most important points, what areas would they like to know more. You can quickly do these checks as one-minute papers (see the topic on "Engaging Students through Active Learning". For the final feedback of the training module, think of areas that you would like to assess: what went well, what to be aware of/stop, and what to add.

Congratulations … Again!

If you follow these steps, you are on your way to being a successful facilitator and role-model of teaching excellence. [C. Bo-Linn]

Introducing the University of Illinois Presenters

University of Illinois in Urbana-Champaign, USA.

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.

Organization and Components of Video Workshops

The SPHEIR Pedagogical Trainings are organized into two multi-day workshops, one workshop each for Pedagogical Training 1.0 and 2.0. Each training is designed for a two to three day workshop. Each training has a set of the following:

Workshop Outline: Each workshop includes an outline of the videos and activities for use by the workshop facilitator. The outline indicates the order of the videos and activities. The outline also provides length of the videos and estimates of time that should be allotted to the respective activities and discussions.

Instructional Videos: Videos are organized into topical **sections**. Videos are meant to be shown to participants in the order described in this manual. Videos are numbered as 1.X.Y, with the 1 for the Pedagogical Training 1.0, X is for the workshop section number, and Y is the number of the video within that section. Similarly for the Pedagogical Training 2.0, videos are numbered as 2.X.Y. The 2 is for the Pedagogical Training 2.0, X is for the workshop section number, and Y is the number of the video within that section.

Handouts: Copies of handout packets should be printed PRIOR to the start of the workshop. Handouts for the respective sections of the workshops should be made separately (separately stapled; do not staple all the handouts for a workshop together into one packet). DO NOT give participants a full set of all handouts at the beginning of the workshop. Handouts for a section within a workshop should be provided to the participants only at the START of the respective video section. Handout packets are aligned with the respective content section set of videos and contain many of the activities associated with those videos. Handouts are numbered as 1.X, with the 1 for the Pedagogical Training 1.0, X is for the workshop section number. Similarly for the Pedagogical Training 2.0, handouts are numbered as 2.X. The 2 is for the Pedagogical Training 2.0, X is for the workshop section number.

Activities: Some videos include in-video activities and some have end-of-video activities. Activities are embedded in the handouts that align with the respective content sections. Most activities can be used as times for sharing and discussion.

Take Home Thoughts: Some sections have a set of Take Home Thoughts that can be shared with the participants at the end of the respective session. These could be shared on a PowerPoint slide and used as a means of generating any final discussion about the section topics.

Discussion: Discussion is a key part of these workshops. Discussions between the workshop facilitators and the participants and among the participants can be best focused around the post-video activities. Suggested time apportioned for each activity is provided in this manual as a guideline. The workshop facilitator should decide on the amount of time allotted to each activity as suits the circumstances of the workshop.

SPHEIR Pedagogical Training 1.0
Manual for Workshop

Workshop Overview

Content Sections: Pedagogical Training 1.0 is divided into 9 content sections.

Section	Number of videos	Suggested session length (min)	Total video length (min)	In-video activities	Post-video activities
1.1 Introduction to Pedagogical Training 1.0 (Hurley)	3	45-50	32	no	yes
Handout: *1.1 Introduction to Pedagogical Training 1.0 (Hurley) HO*					
1.2 Learning (Hurley)	3	30	21	yes	yes
Handout: *1.2 Learning (Hurley) HO*					
1.3 Educational Objectives & Learning (Hurley)	3	45-50	20	yes	yes
Handouts: *1.3a Educational Objectives (Hurley) HO* *1.3a Educational Objectives (Hurley) HO*					
1.4 Formal Assessment of Learning (Bo-Linn)	3	90	43	yes	no
Handout: *1.4 Formal Evaluation of Learning (Bo-Linn) HO*					
1.5 Module Design (Hurley)	4	45-50	28	yes	yes
Handout: *1.5 Module Design (Hurley) HO*					
1.6 Classroom Assessment Techniques (CATs) (Hurley)	5	110	45	no	yes
Handouts: *1.6a CATs (Hurley) HO* *1.6b Concept Map 1.0 (Hurley) HO*					
1.7 Informal Early Feedback (Bo-Linn)	3	90	32	yes	no
Handout: *1.7 Informal Early Feedback (Bo-Linn) HO*					
1.8 Syllabus & Lesson Plans (Hurley)	2	40-45	21	yes	yes
Handout: *1.8 Syllabus & Lesson Plans (Hurley) HO*					
1.9 Review and Wrap-up (Hurley)	1	35-40	15	no	yes
total	27	9.2 hr	4.3 hr		

Section 1.1 Introduction to Pedagogical Training 1.0

Handout for this section: *1.1 Introduction to Pedagogical Training 1.0 HO.pdf*

Notes to Facilitator: This section is about 45 minutes long, including the activities. There are three videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of the second video. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

Overview & Review of Videos

The Skills Gap [From the summary of the DFIF – SPHEIR project: Quality Higher Education in Sierra Leone.]
In an effort to better understand where improvement was needed in preparing college graduates for the workforce, stakeholders were surveyed as part of the SPHEIR project. Deficiencies in several skills were identified, including:

- Communication, including writing, speaking (especially English), and presentation
- Teamwork and collaboration
- Ability to work independently
- Critical thinking and problem-solving
- Computer literacy
- Data collection and analytical

Sierra Leone is not unique in the importance placed on these skills by employers and other stakeholders, nor unique in the recognition of gaps in the proficiency of college graduates in these skills. For example, in the US, the National Association of Colleges and Employers (NACE) conducts an annual survey of colleges and employers, asking about what they call Career Readiness Competencies. Another name used for these competencies is professional competencies. The name "soft skills" is sometimes used to distinguish these skills from more physically based skills. The table below indicates the importance that US employers place on these competencies.

Employers Rate the Essential Need of the Career Readiness Competencies

Competency	Average Rating* (max. = 5.0)
Critical Thinking/Problem Solving	4.62
Teamwork/Collaboration	4.56
Professionalism/Work Ethic	4.46
Oral/Written Communications	4.30
Leadership	3.82
Digital Technology	3.73
Career Management	3.46
Global/Multi-Cultural Fluency	3.01

Source: ***Job Outlook 2018*, National Association of Colleges and Employers**.
*5-point scale, where 1=Not essential, 2=Not very essential, 3=Somewhat essential, 4=essential, 5=Absolutely essential.

What are these skills? [from Career Readiness for the New College Graduate, A Definition and Competencies. NACE, 2018]

- **Critical Thinking/Problem Solving:** Exercise sound reasoning to analyze issues, make decisions, and overcome problems. The individual is able to obtain, interpret, and use knowledge, facts, and data in this process, and may demonstrate originality and inventiveness.
- **Oral/Written Communications:** Articulate thoughts and ideas clearly and effectively in written and oral forms to persons inside and outside of the organization. The individual has public speaking skills; is able to express ideas to others; and can write/edit memos, letters, and complex technical reports clearly and effectively.
- **Teamwork/Collaboration:** Build collaborative relationships with colleagues and customers representing diverse cultures, races, ages, genders, religions, lifestyles, and viewpoints. The individual is able to work within a team structure and can negotiate and manage conflict.
- **Information Technology Application:** Select and use appropriate technology to accomplish a given task. The individual is also able to apply computing skills to solve problems.
- **Leadership:** Leverage the strengths of others to achieve common goals and use interpersonal skills to coach and develop others. The individual is able to assess and manage his/her emotions and those of others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.
- **Professionalism/Work Ethic:** Demonstrate personal accountability and effective work habits, e.g., punctuality, working productively with others, and time workload management, and understand the impact of non-verbal communication on professional work image. The individual demonstrates integrity and ethical behavior, acts responsibly with the interests of the larger community in mind, and is able to learn from his/her mistakes.
- **Career Management:** Identify and articulate one's skills, strengths, knowledge, and experiences relevant to the position desired and career goals and identify areas necessary for professional growth. The individual is able to navigate and explore job options, understands and can take the steps necessary to pursue opportunities, and understands how to self-advocate for opportunities in the workplace.

Integration of Skills Practice with Content Learning

The definitions of these competencies provide for development of strategies and tactics that will close the gap between higher education and the world of work. They lay the foundation for the work necessary to prepare college students for successful entry into the work force by:

- Providing a common vocabulary and framework to use when discussing career readiness metrics on campus, within employing organizations, and as part of national public policy.
- Providing defined competencies as guidelines when educating and advising students.
- Providing defined competencies to identify and assess when hiring the college educated.

As a teacher, we already have our semester schedule loaded with content that we feel is important for our students to know. Asking us to include development of these career readiness competencies into our module may suggest that we are being asked to significantly increase content related to those competencies, at the expense of teaching less of our original

planned content. A more appropriate way to think about this is to recognize that we should be challenging our students to practice those competencies while learning our content. Students are challenged to think critically about that content., solve problems related to the content, communicate about the content orally and in writing. Collaborate with other students in efforts to solve problems related to the content, and, so on. The challenge is to teach using the competencies as a means for our students to learn, not to just to add more lectures about the competencies. Some thoughts on how to make time in class for allowing students to practice these competencies is provided below in The Big Idea video (Section 1.6).

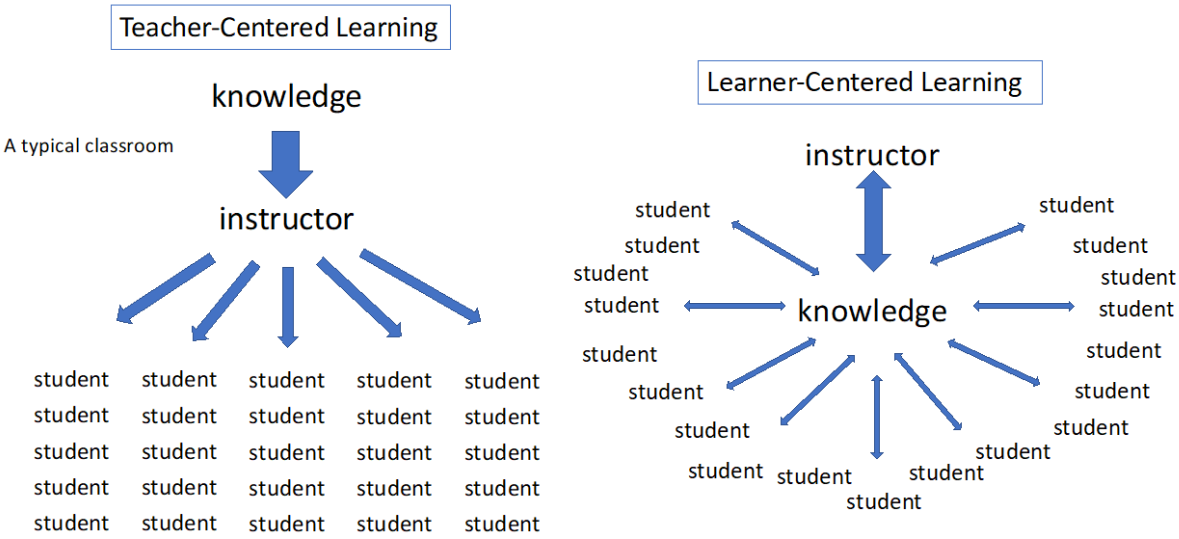
Teacher-Centered vs Student-Centered Learning

A key goal of this pedagogical training video series is to get the workshop participants thinking about their teaching in a more student-centered manner. This requires a shift in their mindset about the relationship between the instructor, the knowledge and the student. Such a shift in mindset can be quite challenging for some participants, especially as they grapple with the implications of how they may need to change in order to move to a more student-centered learning environment. As a start, consider these brief explanations of teacher-centered vs student-centered learning.

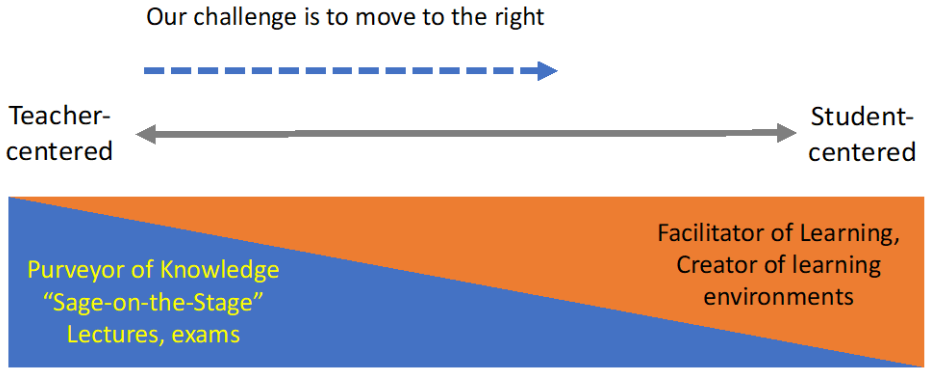
Teacher-centered learning, or perhaps more accurately, teacher-centered teaching, has been the norm in higher education for many decades. It is described primarily in the context of lecture-only class sessions, followed by a major, high-stakes examination of the ability of students to remember what was 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.

Put simply, the teacher is the focal point of the teacher-centered classroom. The knowledge and learning the knowledge are the focal point of the student/learner-centered classroom.



Moving from a teacher-centered approach to a student-centered approach requires a change in mindset by the instructor. The role of the instructor in the classroom also changes. The instructor is the sole conduit for the transfer of knowledge in a traditional teacher-centered classroom that is primarily lecture-based. In the student-centered classroom, knowledge and learning are occurring through a variety of means and the instructor takes on the role of facilitator of learning. In this role as facilitator, the instructor partners with the students in the **process of learning**, making sure that each student is successfully working toward and achieving the learning objectives set out for that lesson and for the entire module.



Characteristics of Teacher-Centered vs Student Centered Learning

	Teacher-Centered	Student-Centered
Student participation	passive	active
Role of instructor	leader, authority	facilitator, partner
Assessment of learning	summative only	formative and summative
Student prior knowledge	not taken into account	taken into account
Learning environment	individualistic, competitive	collaborative, supportive
Student contributions	none	positive

Summative – evaluating student learning
Formative – monitoring student learning

Handout for this section: *1.1 Introduction to Pedagogical Training 1.0 HO.pdf*

Video number: 1	Session title: Introduction
Video length: 12:44	Video file name: 1.1.1 SPHEIR 1.0 Introduction.mp4
Description: (Hurley) Welcome and introduction to Hurley and Bo-Linn; discussion of Skills Gaps and NACE survey; overview of workshop content topics and videos.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Video number: 2	Session title: Student Centered Learning
Video length: 9:38	Video file name: 1.1.2 Student Centered Learning.mp4
Description: (Hurley) Introduction to teacher centered learning vs student centered learning; changing roles; requires change in mindset.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~15 min for this activity

On a piece of paper:
1. Sketch out what the typical classroom looks like when you are teaching.
2. Now sketch out what you envision a student centered classroom looks like; include what is happening in those classrooms.
3. Make a list of how the student centered classrooms differs from your typical classroom.
4. Make a list of ideas on how you might tun your typical classroom into a student centered classroom into something that would accommodate a student centered classroom.
5. Keep sketches and lists for later in the workshop.

Participants should share and discuss their sketches in small groups and with entire group.

Video number: 3	Session title: Georgiana Allie Interview on SPHEIR
Video length: 9:38	Video file name: 1.1.3 Georgiana Allie Interview.mp4
Description: Georgiana Allie describes her experiences with the SPHEIR curriculum and pedagogical trainings and the impact of those trainings on her and her department.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap-up]

- Our students may have significant technical knowledge, however, they are often deficient in other important skills often referred to as Career Readiness Competencies or Professional Competencies.

- Moving from a teacher-centered to a more student-centered learning environment requires a change in our mindset about teaching and learning, as well as a change in the understanding of our role in the learning environment.

Section 1.2 Learning

Handout for this section: *1.2 Learning HO.pdf*

Notes to Facilitator: This section is about 30 minutes long, including the activities. There are three videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

Some Perspectives on Learning

If we go online and look up definitions of learning, we will get these types of responses:

- Learning is a process, not a product. This process takes place in the mind.
- Learning involves change in knowledge, beliefs, behaviors, or attitudes. This change unfolds over time; it is not fleeting, but rather has a lasting impact.
- Learning is not something done to us, but rather something we ourselves do. It is a direct result of how we interpret and respond to our experiences.

It is clear from these definitions that learning is a **process**, and that the result of learning is a **lasting change** in **behavior**. As we think about the concept of student-centered learning, then the emphasis becomes on the process by which students learn, not on the product of that learning (the exam). Similarly, we focus on the process of changing the students' knowledge, beliefs, behaviors, and attitudes, not on whether the students get the correct answer to each question that we pose to them.

In this set of videos, we look at a couple of models that expand on the process of learning. A key conclusion should be that learning is a **cyclic process**. Once we understand the cyclic nature of the learning process, then we need to consider at what point(s) in that cycle we, as instructors, can have real impact on the student's learning process. That impact can occur at three points in the cycle, the stimulus that we provide, what we ask the student to do in response to that stimulus, and how we reenforce the learning process by making sure the student initiates additional cycles of learning. We invest a lot of effort into figuring out how to relay our content to the students (the stimulus we provide; the sensory input), however, we invest much less time in considering what response we ask of the student and how we reenforce their learning cycle. 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.

Kolb's Cycle of Experiential Learning

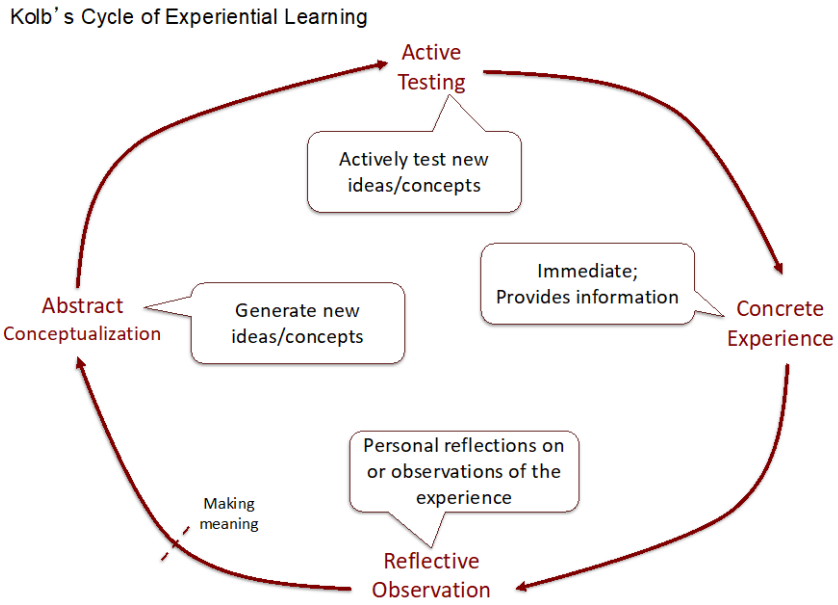
Can we describe this process of learning? One approach is that provided by the Kolb's Cycle of Learning, also sometimes called **Kolb's Cycle of Experiential Learning**. Although the concept of a cycle means that we can start the cycle at any point, we will start here with the Concrete Experience stage.

Concrete experience: This is where we have an active experience which is immediate, personal, and provides the information and basis for the next stage, reflective observation.

Reflective Observation: This is when we consciously reflect on the experience, which in turn leads to the formation of abstract concepts based on the reflection.

Abstract Conceptualization: This is where we attempt to conceptualize a theory or model of what was observed and develop a plan. This results in new concepts or ways of modifying the next experience that can be actively tested. This is also the stage at which we make meaning of the experience at a personal level.

Active Testing or Experimentation: This is where we take action on our plan. The result of our action is a new concrete experience, starting the cycle again.



Kolb, D.A. 1984. *Experiential Learning*: Experience as the source of learning and development. Prentice Hall, Eaglewood Cliffs, NJ.

A summary of Kolb's Cycle: http://www.learningandteaching.info/learning/experience.htm

Handout for this section: *1.2 Learning HO.pdf*

Video number: 4	Session title: Learning and Kolb's Cycle of Learning
Video length: 6:51	Video file name: 1.2.1 Learning and Kolb's Cycle of Learning.mp4
Description: (Hurley) Definitions of learning; brief introduction to active learning; discussion of Kolb's Cycle of Learning	
In-Video Activities: Drawing the parts of the Kolb's Cycle of Learning (See handout 1.2 Learning HO.pdf)	

Post-Video Activities/Assignment: none

How the Brain Learns

Leaning and remembering depend upon **enduring changes** in the brain cortex. At the level of the cortex of the brain, the process of learning is the result of the induction of making new synaptic connections between neurons. Short-term memory may result from temporary synaptic electrical and chemical changes at the synapse, while long-term memory may depend on changes in the physical and chemical structure of the neurons themselves.

Here is a look at how the brain learns. The mechanisms by which learning occurs in the brain is far more complex than presented here, however, this model can help us help us better understand the process. This is adapted from the book by J.E. Zull, *The Art of Changing the Brain* (2002, Stylus Publishing, LLC, Sterling, Virginia). There are four components to this model of brain learning:

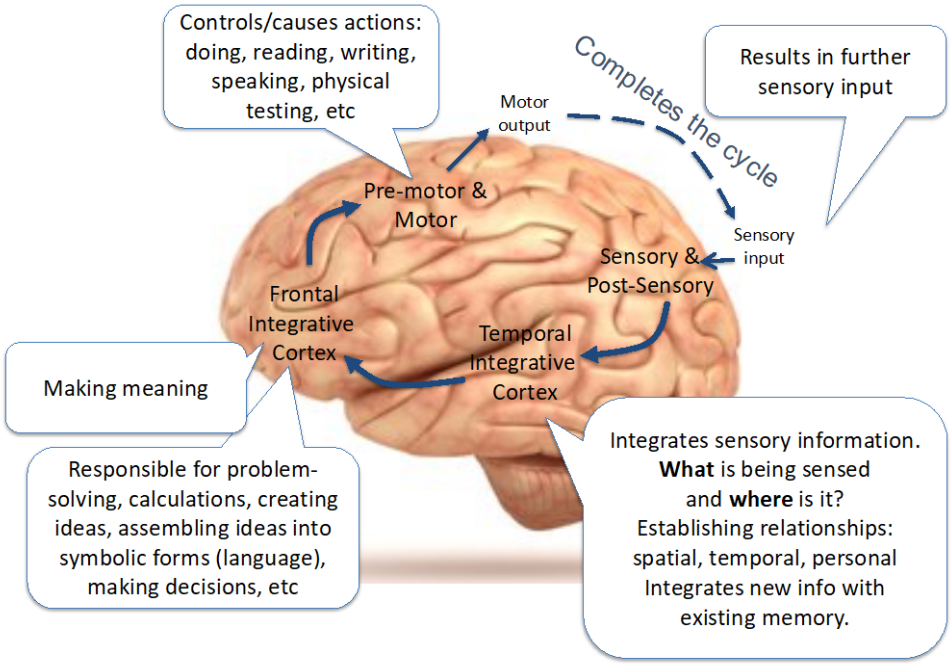
Sensory and Post-Sensory Cortex: An interaction with the environment causes sensory glands to fire (eyes, ears, taste, feel, smell). The sensory and post-sensory regions of the cerebral cortex (back of the brain) receive and compile those neural signals. What is perceived externally is physically mapped on this region of the cortex. Note, these parts of brain do not make any interpretation of the sensory signals. The compiled sensory information is then passed on to the Temporal Integrative Cortex at the sides of the brain.

Temporal Integrative Cortex: This region takes the information from the sensory and post-sensory cortex and begins the process of integration of that information. A key function of this region is to identify "what and where." That is, what is being sensed and where is it? This region also is responsible for establishing relationships, such as spatial, temporal, personal, where the thing is in a story, degrees of where (such as is it a friend, family, stranger, enemy, etc). The region integrates the new information with existing memories. This is the start of comprehension of the experience. This region then passes this processed information on to the Frontal Integrative Cortex at the front of the brain.

Frontal Integrative Cortex: This region is responsible for problem solving, calculations, creating ideas, assembling ideas into symbolic forms (such as language), making decisions, monitoring its own progress, and creating knowledge. The region has the working memory. This is also where we "make meaning" of our learning, that is, it becomes our personal thoughts, plans, etc. This region then passes the processed information on to the Pre-Motor and Motor Cortex at the top of the brain.

Pre-motor and Motor Cortex: This brain region controls and causes actions based on the integrative cortex functions. Actions may include doing, reading, writing, speaking, physical testing, and others. The result of these actions is another sensory input., initiating another cycle of learning.

It is clear that the mechanism by which the brain learns is cyclic. This cycle aligns well with Kolb's Cycle of Experiential Learning.

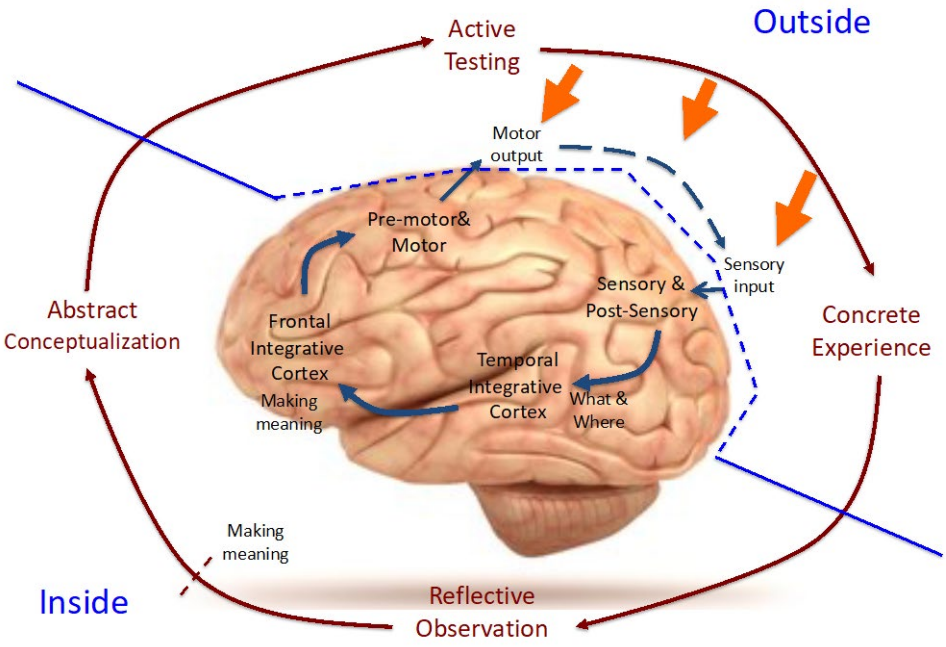


Video number: 5	Session title: The Brain and Learning
Video length: 6:16	Video file name: 1.2.2 The Brain and Learning.mp4
Description: (Hurley) How the brain learns; learning is a cyclic process	
In-Video Activities: Drawing the parts of the brain cycle (See handout 1.2 Learning HO.pdf)	

Post-Video Activities/Assignment: none

How does this relate to teaching?

Consider the inside the brain vs outside the brain model below (which includes the alignment with Kolb's Cycle). We are unable to reach inside of our students' brains and directly manipulate their learning process. On the other hand, we do have a great deal of opportunity to impact learning through the sensory inputs that we provide, the motor outputs that we solicit from the students, AND IMPORTANTLY, the means by which we encourage and help our students complete the learning cycle and initiate another cycle. These are three points at which we have significant power to impact our students' learning (indicated by the three arrows in the model below).



How can we move toward a more student-centered learning approach that is based on these concepts? We need to start with how we design our modules.

Video number: 6	Session title: Learning and Teaching
Video length: 8:46	Video file name: 1.2.3 Learning and Teaching.mp4
Description: (Hurley) Relating the learning models to teaching; where in the learning cycles teachers can have the greatest impact on learning	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~8 min for this activity

1. Before the next video (#7); allow time to do this activity; can do individually or as a collaboration in groups.
2. NOTE: indicate to anyone that already knows what this is that they should not tell the others at this time.
3. Copy the words – "analyze, apply, create, evaluate, remember, understand" on paper (or use the handout).
4. Rank those as to their level of cognition (thinking), 1 = lowest level, 6 = highest level. The participants should end up with a 1, 2, 3, 4, 5 and 6, each corresponding to one pf the words above.

Section 1.3 Educational Objectives

Handout for this section: *1.3a Educational Objectives HO.pdf*
1.3b Educational Objectives HO.pdf

Notes to Facilitator: This section is about 50 minutes long, including the activities. There are three videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to review the content.

We all have the goal of having our students learn our content, learn the information we are sharing with them. However, that is an extremely vague goal. It can be challenging to more explicitly describe what we want our students to do other than just to "know stuff" about our content. How can we more definitively express to our students and ourselves the learning goals that we have for our students? Bloom's Taxonomy of Educational Objectives provides a framework for categorizing educational objectives. The taxonomy describes six levels of the cognitive domain. Accompanying the basic Bloom's Taxonomy are sets of verbs that are explicitly used to write out and express learning objectives. These levels of Bloom's Taxonomy also help us understand how we need to frame our teaching in order to be sure the students are meeting the learning goals that we set.

Bloom's Taxonomy of Educational Objectives

In 1956, a group of educators gathered to come up with a framework for categorizing educational objectives. This was published as *The Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook 1: Cognitive Domain*. It became known as Bloom's Taxonomy of Educational Objectives or Bloom's Taxonomy for short. This taxonomy has been used around the world for test design and curriculum development. In 2001, another group of educators, including one of the original editors of the Bloom's Taxonomy (D.R. Krathwohl) gathered to reassess the original Taxonomy. That reassessment can be found in the book *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives* (Anderson, Krathwohl, et al., editors, 2001, Longman publishers, New York). Their reassessment and revision of the original Bloom's Taxonomy was based on over 40 years of research and usage of the Taxonomy. The result of that reassessment is what is called the Revised Bloom's Taxonomy, and is the one presented here. The findings of that group indicated that the original Bloom's Taxonomy had stood the test of time. Only relatively minor revisions were made to the original Taxonomy.

Four knowledge dimensions were identified as part of the original Bloom's Taxonomy:

The Knowledge Dimension

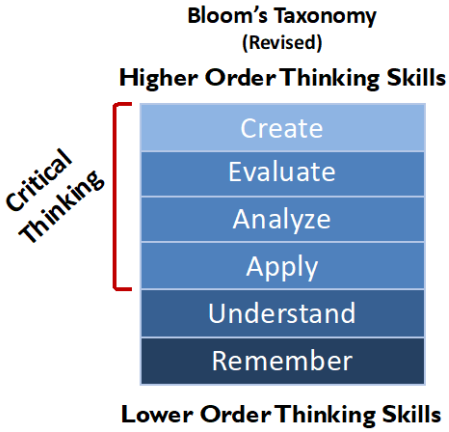
- **Factual:** Basic elements students must know to be acquainted with a discipline or solve problems in the discipline.
- **Conceptual:** Interrelationship among basic elements within a larger structure that enables students to function together
- **Procedural:** How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods
- **Metacognitive:** Knowledge of cognition in general, as well as awareness and knowledge of one's own cognition

Three domains were identified, the:

Cognitive Domain: About knowing (the domain that is represented in the Taxonomy)
Affective Domain: About attitudes, feelings
Psychomotor Domain: About doing

The Cognitive Domain (revised version) was described by the six levels of the Taxonomy, from lowest cognitive level to highest level:

Remember: To retrieve relevant knowledge from long-term memory
Understand: To construct meaning by connecting new to prior knowledge
Apply: To use a procedure to preform exercises or solve problems
Analyze: To break material into its constituent parts and relate the parts to the whole
Evaluate: To make judgements based on criteria or standards
Create: To put elements together to form a coherent whole



There are several things to note about Bloom's Taxonomy.

1. Each level is described by action. That is, **to do something** (retrieve, construct, use a procedure, break material into parts, make judgements, put elements together). A learning objective such as "to know about ____" does not show up in any of the levels. Students are expected "to retrieve relevant knowledge", "to construct meaning", "to use a procedure", etc. Learning objectives are devised and written using action verbs that are clearly associated with the level of the Taxonomy that is the basis for the objective. For lists of verbs associated with the levels of the Taxonomy, simply search online for "Bloom's Taxonomy verbs". Also, see the handout (1.3 Educational Objectives Hob).

2. The **remember** and **understand** levels of the Taxonomy require memory and basic understanding. The upper levels of the Taxonomy, including **apply, analyze, evaluate and create**, are challenging the student to **think critically** about the subject. That is, one way to consider whether students are thinking critically is to have them work at those upper levels of the Taxonomy.

3. Some courses will focus primarily on the lower levels of the Taxonomy, while other courses may have students working mostly at the upper levels. However, it is important that our students are proficient at working at all levels of the Taxonomy. Therefore, components of the Taxonomy should be interspersed throughout the entire curriculum or learning program of the student. Students need to practice the skills associated with the

Taxonomy often and in a variety of settings and content material. Offering one module in which students are asked to think critically or solve problems will not achieve the long-term goal of making them proficient at all levels of the Taxonomy.

4. Learning objectives, learning assessments, and learning activities must be integrated according to the integrated course design model. That means that if we expect our students to be able to analyze something as part of our course, then me must purposefully teach them how to analyze, not just assume that they are able to figure that out on their own. If we only teach at the remember-understand levels, it is not then appropriate to assess their leaning by expecting them to apply, analyze, evaluate or create based on what we taught them. Likewise, if we are teaching them to analyze something, then including assessment questions where they only need to remember-understand is not providing an assessment of what they have learned.

Handout for this section: *1.3a Educational Objectives HO.pdf*
1.3b Educational Objectives HO.pdf

Video number: 7	Session title: Bloom's Taxonomy
Video length: 8:19	Video file name: 1.3.1 Bloom's Taxonomy.mp4
Description: (Hurley) Introduction to Bloom's taxonomy; relationship to levels of cognition; relationship to critical thinking.	
In-Video Activities: will need something to draw/write on during the video Will need to draw a grid with 6 rows to insert Bloom's taxonomy words and definitions	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Have participants go back to their rankings of the Bloom's taxonomy terms.
2. Discuss whether they got it right or wrong and why.

Video number: 8	Session title: Bloom's and the Verbs
Video length: 5:38	Video file name: 1.3.2 Bloom's and the Verbs.mp4
Description: (Hurley) Introduction to the verbs associated with Bloom's taxonomy; how to use the verbs in specifying learning objectives.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~15 min for this activity

1. Choose one of the modules that you teach; write out three learning objectives for that module using the format – Students will be able to verb noun phrase.
2. Share and discuss their learning objectives within their groups.

Video number: 9	Session title: Learning Goals and the Curriculum
Video length: 6:30	Video file name: 1.3.3 Learning Goals and the Curriculum (Cooke).mp4
Description: (Cooke) Richard Cooke discusses how the University of Ngala, Dept of Agricultural engineering has been using Bloom's Taxonomy in revising their curriculum.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Section 1.4 Formal Evaluation of Student Learning

Handout for this section: *1.4 Formal Evaluation of Learning HO.pdf*

Note to Facilitator: This section is 90 minutes long, including the activities. There are 3 videos: Parts A, B, C which will guide you through the content. There is also a handout for the participants with critical information: brief description, learning outcomes, key points to remember, space for taking notes, and space for workshop activities.

Facilitator: Here is the introduction and rationale for the beginning of this topic for you to provide (included in videos and handout packet).

- Start on time and distribute the handout packet
- Introduction and rationale (also provided in the video and page 1 of the handout packet).
  "The task of assessing and grading student learning is one of the most complex and stressful responsibilities of the faculty member, and, at the same time, most important. It is critical that the grading process is fair, reliable, valid, and relevant so that the resulting grade is an accurate representation of a student's achievement. When done properly, the grade and accompanying feedback are additional teaching opportunities where students can improve their learning. What are some of your thoughts about grading student work?"
- **Learning Objectives:** Upon successful completion of this session, you will be able to:
  - Define the difference between subjective and objective items
  - Describe the advantages and limitations of both types of items
  - Link stated learning goals to appropriate test items
  - Construct a valid, effective exam for both diagnostic and learning purposes
  - Create a rubric for fair grading

SCHEDULE ~ 90 – 95 minutes

Handout for this section: *1.4 Formal Evaluation of Learning HO.pdf*

Video number: 10	Session title: Formal Evaluation of Student Learning - Part A		
Video length: 17:08	Video file name: 1.4.1 Formal Evaluation of Student Learning Part A.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part A			
~ 10 min	0:00 – 5:50	- Introduction & rationale - Learning outcomes - Opening activity	* Stop video at 5:50. Handout, p. 2 - do "**ACTIVITY:** Test Item Exam: True or False", First time line. (2 minutes)
~ 6 min	5:50 – 11:00	- Kinds of test items: Objective & Subjective - Advantages & Limitations of each	Participants take notes during video in Handout, p.2 - **NOTES:** "Kinds of Test Items" * Stop video
~ 15 min	11:00 – 17:08	- analyze sample test items to determine what is wrong	**Thinking Together** - have faculty work together on this activity "An Exam about Exam Items." After each example, spend 1 minute for participants to say what they think is wrong with each item. Cheelan will then give the correct analysis of each item in the video. Total time for this activity is ~ 15 minutes.
Total time = ~ 30 minutes			

Post-Video Activities/Assignment: none

Video number: 11	Session title: Formal Evaluation of Student Learning - Part B		
Video length: 9:14	Video file name: 1.4.2 Formal Evaluation of Student Learning Part B.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part B			
~ 7 minutes	0.00 – 6:47	Review what is a learning objective, backward design, Bloom's Taxonomy.	**QUESTION –"What is the difference? @ 2:51 in video.** Just let them think and answer silently. Not necessary to stop video. - Note: the Bloom's Taxonomy is on p.3 in the

			handout. Have the faculty look at this table. Also, see 1.3 Educational Objectives HOb
~ 10 minutes	6:47 – 8:00		- Stop video at 7:16 to do **Activity in video: "Learning Objective: Link stated learning goals to appropriate test items."** Let them think for 5 minutes and then discuss for the next 5 minutes as a large group.
~ 15 minutes	8:00 – 8:31 8:31 – 9:13		**-** Stop video @ 8:26 to do **ACTIVITY – see handout, p.3 "Remember the topic you chose for one of your classes?).** Give the faculty about 5 minutes to complete this activity and then spend another 10 minutes to share in the large group. Conclusion
Total time = ~ 37 minutes			

Post-Video Activities/Assignment: none

Video number: 12	Session title: Formal Evaluation of Student Learning - Part C		
Video length: 17:20	Video file name: 1.4.3 Formal Evaluation of Student Learning Part C.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part C			
~ 5 minutes	0.00 – 4:49	- Review and introduce the remaining learning objectives. - Principles of making an effective exam	**NOTES – REMIND** faculty to take notes in the space provided on the handout, p.4 regarding "Creating an Effective, Fair Test." Faculty will need to take notes because the content in this section is essential information for creating tests/exams.
~ 4 minutes	4:49 – 6:25	- Table of Specification – learning the content	Stop video at 6:20 – to check with faculty if they understand the video example of filling out the Table of Specification. It is important to check their

			knowledge because they will be creating their own Table of Specification in the next activity.
~ 18 minutes	6:25 – 7:08 7:08 – 7:34	- Table of Specification – doing it.	- Stop video at 7:08 to do in handout, p.4 to do **ACTIVITY – "Create a Table of Specification for Your Class (using your identified learning objectives).** Work alone for 8 minutes. **-** Have faculty in small groups to review and provide feedback to each other about their Table of Specification. Share and discuss in small groups for 10 minutes.
~ 2 minutes	7:36 – 9:45	- How do I assemble the test.	- Remind faculty to take notes
~ 6 minutes	9:45 – 15:00	- Rubrics & Providing helpful feedback	
~ 4 minutes	15:00 – 17:20	- Closing Activity and Conclusion	- **ACTIVITY** stop video @ 15:25. Have faculty go back to Part A, in the handout, p.2 to do **Test Item Exam for the second time.** Allow 1 minute to do this T/F a second time.
Total time = ~ 42 minutes		Check for any comments or questions	
Total time for this topic: 109 minutes.		This goes beyond the usual 90 minutes. If you find that you don't have enough time, you can skip the review of the learning outcomes that are in Part B and Part C videos.	

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap up]

- There are different types of exam items. The instructor should consider the advantages and limitations of each type when designing an exam.
- Evaluation of students learning must be tied to the identified learning outcomes/objectives in the syllabus and for each lesson. Exam questions must be written to align with the stated learning outcomes/objectives.
- Instructors must be purposeful in designing and structuring valid, effective exams.
- Rubrics should be developed for major evaluations such as exams, term papers, and projects. Rubrics should be shared with the students and used in the grading process.

Section 1.5 Module Design

Handout for this section: *1.5 Module Design HO.docx*

Notes to Facilitator: This section is about 50 minutes long, including the activities. There are four videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

When developing or revising a module, we often focus primarily on finding and organizing relevant information so that we can share as much knowledge as possible about our topic area. Our learning goal is that students should know everything that we try to teach. This approach is one of sharing large amounts of information, with the result that the students genuinely learn only a fraction of that information. The more effective approach is to first identify the specific learning objectives or learning outcomes that we want our students to achieve. Then we need to develop avenues of assessment of the student learning based on those learning objectives. And finally, then we decide on what information is necessary for students to achieve those learning objectives and how we will provide the most effective instruction. This section introduces two models to help us understand how to accomplish this module development or revision effectively. The Integrated Course (Module) Design model provides a framework for what the module will look like when it is developed, with the emphasis on each component being integrated with the other components (learning goals, feedback and assessment, and teaching and learning activities). The other model is called Understanding by Design, or commonly called Backward Design. This model gives us a look at the process or steps of actually designing the module.

Part of these models is the concept of assessment of learning. There are two types of assessment of learning, summative assessment (or summative evaluation) and formative assessment. A key to this concept is that the summative assessment of learning (or summative evaluation of learning) comes at the **end** of the learning process, while the formative learning assessment comes **during** the learning process. Formative learning activities are used to help the students work through multiple cycles of their learning process. The Classroom Assessment Techniques summarized in the next section (Section 1.5) are examples of formative assessments of learning.

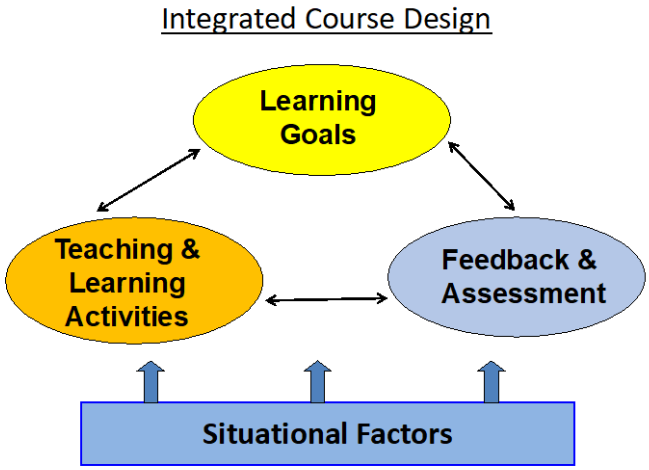
Course (Module) Design

There are two resources that we want to use in helping us think about how to design or redesign our courses. One is called **Integrated Course Design**. This comes from L. Dee Fink's book, *Creating Significant Learning Experiences* (2003, Jossey-Bass Publisher, San Francisco, California). Integrated Course Design gives us a picture of how a course should look once it has been designed. The other resource is sometimes called Backward Design. This comes from the book by Grant Wiggins and Jay McTighe, *Understanding by Design*, 2nd edition (2005, Pearson Education, Inc., New Jersey). Backward design gives us a practical roadmap on how to design a course and how to end up with an integrated design. These course design concepts are considered here.

Integrated Course (Module) Design

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

The model presented in the Integrated Course Design 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.



Learning Goals: What do you want students to learn by the end of the module, that will still be with them several years later? Think expansively, beyond "understand and remember" kinds of learning.

Feedback & Assessment: What will the students have to do, to demonstrate that they have achieved the learning goals? Think about what you can do that will help students learn, as well as give you a basis for issuing a module grade.

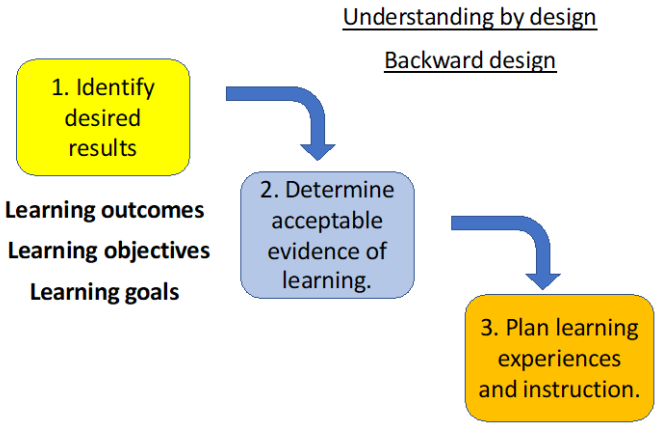
Teaching & Learning Activities: What would have to happen during the module for students to do well on the Feedback & Assessment activities? Think creatively for ways of involving students that will support your more expansive learning goals.

Situational Factors: What is the special instructional challenge of this particular module? What is expected of the module by students, the department, the institution, the profession, and society at large? How does this module fit into the larger curricular context?

Make sure that each of these four components is consistent with and supporting of each of the other components.

Understanding by Design or Backward Design [from Wiggins and McTighe, 2005]

Understanding by Design is a model for module design similar to that of Fink's Integrated Course Design model, with similar components. It provides a nice pathway for the process of thinking about design of a module. This 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.



Stage 1 is to **identify the desired results**. These are called by various names, including learning outcomes, learning objectives, and learning goals. Here, we need to identify what the students should know, understand, and be able to do. What content is worthy of understanding? What ***enduring*** understandings are desired?

Stage 2 is to **determine acceptable evidence** that the desired results have been achieved. How will we know if students have achieved the desired results? What will we accept as evidence of student understanding and proficiency? We need to think about a module in terms of what learning assessment evidence we need to document and validate. This is different from simply thinking about the module as a lot of content to be covered or as a series of learning activities.

NOTE: This evidence of learning includes all formative and summative assessments (discussed below), not just the big exams or end-of-unit or mid-term exams.

Stage 3 is to **plan learning experiences and instruction**. What are the most appropriate methods, strategies, and activities for teaching that will result in students being able to provide the acceptable evidence that they have achieved the desired learning objectives? Clearly, the important first step in developing a course by the backward design is to carefully identify the learning outcomes, objectives, goals. Fortunately, we have an exceptional resource to help us in how to develop those objectives. It is called Bloom's Taxonomy.

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.

Summative Assessment (Summative Evaluation): These are assessments that take place usually at the end of a learning process. Their purpose is to evaluate student learning. These are usually high stakes assessments for the student (high point value, high percentage of the total grade). Examples are exams (midterm, finals), term papers, and senior recitals or theses.

Formative Assessment: These are assessments that take place during the learning process. Their purpose is to monitor student learning. These are low stakes assessments (low point value or no point value). Examples are developing concept maps, writing minute papers, and turning in papers for early feedback. The book *Classroom Assessment Techniques* or CATs (Tomas A. Angelo and K. Patricia Cross, 2nd edition, 1993, Jossey-Bass publishers, San Francisco, CA) identifies 50 formative assessments.

A similar set of CATs can be found online at:
https://docs.google.com/document/d/1QMZC9igdgPggg1SC-NbOuAB05WnG3ujAtJ1zNEHssx4/edit

Some CATs specifically designed for large group instruction can be found at:
https://cei.umn.edu/sites/cei.umn.edu/files/active_learning_-_larger_classes.pdf

NOTE: The facilitator should share the following with the participants. Hurley uses the terms Summative Assessment and Formative Assessment. Bo-Linn uses Summative Evaluation and Formative Assessment. Either assessment or evaluation is appropriate for Summative, and both terms are used. However, Formative Assessment is not an evaluation of learning, therefore, the appropriate term is Formative Assessment.

Handout for this section: *1.5 Module Design HO.docx*

Video number: 13	Session title: Module Design 1: Learning Objectives
Video length: 9:43	Video file name: 1.5.1 Learning Objectives.mp4
Description: (Hurley) Introduction to Integrated Course (module) design; introduction to Backward design; introduction to learning objectives; application of Bloom's Taxonomy to developing learning objectives.	
In-Video Activities: Have them review the learning objectives that they previously developed and make any changes; be sure they are using the format – Students will be able to verb noun phrase.	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Have them review the learning objectives that they previously developed and make any changes; be sure they are using the format – Students will be able to verb noun phrase.

2. This activity is best done individually, but you can have them share the changes that they made to their learning objectives in groups.

Video number: 14	Session title: Module Design 2: Assessment of Learning
Video length: 8:07	Video file name: 1.5.2 Assessment of Learning.mp4
Description: (Hurley) Continuation of discussion Backward design with respect to learning assessments; introduction to summative and formative assessments; application of Bloom's Taxonomy to developing learning assessments; introduction to classroom assessment techniques (CATs).	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Ask the participants to complete the Assessments of Learning Activity Table in the handout. They may do this independently or in pairs or small groups.
2. Then discuss the differences between formative and summative assessments.

Video number: 15	Session title: Bloom's Across the Curriculum (Cooke)
Video length: 5:43	Video file name: 1.5.3 Blooms Across the Curriculum (Cooke).mp4
Description: (Cooke) Richard Cooke discusses how the University of Njala, Dept of Agricultural engineering has been using Bloom's Taxonomy in developing departmental learning objectives.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Video number: 16	Session title: Learning Assessment and the Curriculum (Cooke)
Video length: 4:11	Video file name: 1.5.4 Learning Assessment and the Curriculum Cooke.mp4
Description: (Cooke) Richard Cooke discusses how the Njala Dept of Agricultural engineering has been reexamining their learning assessments to align with the departmental learning objectives and with levels of Bloom's Taxonomy	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Section 1.6 Classroom Assessment Techniques (CATs)

Handout for this section: *1.6a CATs HO.pdf*
1.6b Concept Map 1.0 (Hurley) HO.pdf (**1 copy per group**)

Notes to Facilitator: This section is about 110 minutes long, including the activities. There are five videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

Classroom Assessment Techniques (CATs)

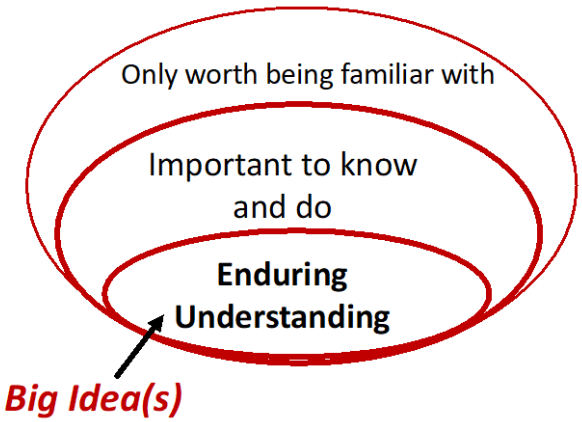
In the earlier video sections, we have considered the concept that learning is a cyclic process and that assessments of learning include not only formal evaluations or summative assessments (such as exams and tests), but also formative assessments of learning. What are these formative assessments of learning and how might we use those to help students bridge the gap between the sensory input by the instructor (such as a lecture) and a motor output (such as an activity). What are some types of activities that might be used to informally assessment student learning, as well as help our students along with their learning process? This video series provides a few examples of formative assessment techniques. These range from those that are asking the student to work at the level of remember and understand of Bloom's Taxonomy, up to those asking the student to work with the information at the higher levels of Bloom's Taxonomy.

Perhaps you can come up with additional examples of formative assessments of learning that you can share with the workshop participants. Or, after viewing the videos and working on the activities, ask the participants to come up with additional examples and then work with the participants to evaluate the potential effectiveness of their ideas.

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. Sometimes we might say to ourselves that the module is the only time that my students will have a formal educational opportunity to learn about my topic, therefore, I must teach them everything that I possibly can during the semester. This is exactly the wrong approach to take in designing a module. Students will learn, genuinely learn, only a small fraction of all the information that we could pass on to them during a semester. Is there a better approach?

If we step back and look at all the content that we stuff into the limited time of a semester, we should be able to partition that content into three subsets: that which provides enduring understanding of the topic/field (called the "big or essential ideas"), that which is important to know and do, and that which is only worth being familiar with. This is illustrated below.



The concept of the Big or Essential Ideas is from G.P. Wiggins and J. McTighe, Understanding by Design, 2nd edition (2005, Pearson Education, Inc., New Jersey). It is available online at: https://epdf.pub/understanding-by-design-2nd-edition.html

Step one is to identify the **big or essential ideas** in your field that is the basis for your module. These might be overarching concepts, themes, issues, challenges, processes, theories, paradoxes, assumptions, or perspectives that are at the heart of your topic/field. For example, the big ideas of a human nutrition course might be the food groups, what is a balanced diet, the safety and effectiveness of various diets, the lure of fast foods, how diet affects longevity, a healthy diet may be good for one but unhealthy for another, and/or whether the food pyramid defines healthy eating. We have to step back from the details of our intended module in order to identify these big or essential ideas. Nevertheless, it is a necessary process, and will help us in identifying our learning goals.

The next step is to identify the content that is important to know for addressing these big ideas. These are the things that help the students understand the big ideas. They are the supporting information. They are also the content basis for the active learning, formative assessments, etc that we will use in our student-centered instructional approaches.

Finally, we need to identify those things that are peripheral to the big ideas, the things that may only be worth knowing. These may be things that we have a personal interest in from our field but are not essential to the module's big ideas. These are the things that we stop teaching, thereby freeing up in-class time for the various active learning strategies such as the CATs and other formative assessments of learning.

Recall that the active part of the active learning strategies addresses those skills that we discussed above, such as communication (writing, speaking, presenting), working collaboratively, critical thinking, problem solving, leadership, etc. Carefully identifying the "only worth being familiar with" content and deleting that content from our lesson plans frees up time to move our classrooms further toward the student-centered learning paradigm, time for students to practice the professional competency skills, and time to enhance the learning outcomes of our students.

Note: In addition to the examples provided, try to come up with your own example(s) based on your own experience or the experiences of some of your colleagues. Remember, we are experts in our field. We naturally think that all the content that we teach is important. It is difficult for most of us to make hard decisions about what not to teach. It is critical that the participants understand that by teaching less content, but doing a more effective job at helping the students during the learning process (stimulating multiple learning cycles), they are ultimately gaining a more lasting and meaningful body of knowledge about the topics.

Handout for this section: *1.6a CATs HO.pdf*
1.6b Concept Map 1.0 (Hurley) HO.pdf (**1 copy per group**)

Video number: 17	Session title: A Practice Puzzle
Video length: 6:32	Video file name: 1.6.1 A Practice Puzzle.mp4
Description: (Hurley) Introduction to a crossword puzzle as one type of classroom assessment technique	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~5 min for this activity

- Handout the video crossword puzzle; they can either start that now, at the next break, leave it as a homework assignment or other

Video number: 18	Session title: CATs - Examples
Video length: 11:00	Video file name: 1.6.2 CATs - Examples.mp4
Description: (Hurley) Introduction to novice vs expert thinking; introduction to several classroom assessment techniques including memory matrix, categorizing grid, minute thesis and defining features matrix.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~5 min for this activity

1. Ask the participants to complete the Characteristics of Teacher-Centered Learning and Student-Centered Learning handout. They may do this independently or in pairs or small groups.
2. Then discuss the differences between Teacher-Centered Learning and Student-Centered Learning, as well as this type of activity.

Video number: 19	Session title: The Concept Map
Video length: 8:49	Video file name: 1.6.3 The Concept Map.mp4
Description: (Hurley) Introduction to concept maps as a classroom assessment technique, and how to do a map.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~30 min for this activity

- Allow them to cut out the words and construct their concept map individually or preferably in groups; allow them to add words as they think appropriate.

NOTE: To save some time, consider cutting out the words before the workshop; put each set in a small plastic bag; also, if they loosely tape down the words then you can have them revisit these maps later in the workshop and that allows them to move the words around again.

Video number: 20	Session title: CATs - Overview
Video length: 8:15	Video file name: 1.6.4 CATs - Overview.mp4
Description: (Hurley) Review of CATs; how they fit with other earlier video topics; what is going on in the classroom when doing a CATs activity; when to use a CATs activity (anytime).	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Have them revisit the sketches and lists that they made at the end of the student centered learning video; make changes as they think best
2. They should choose 2 of the CATs discussed in the videos or in the handout; design them for one or more components of their own course; determine how and when they would administer those CATs activities (individually, groups, need worksheets, etc?), how they would assess the activity (graded or not graded, etc), and how they would provide feedback on the students' work.

Video number: 21	Session title: The Big Idea
Video length: 10:16	Video file name: 1.6.5 The Big Idea.mp4
Description: (Hurley) Introduction to the concept of the big idea, enduing understanding, how to segregate their content so they can make judgements on what to eliminate to free up time to integrate CATs, etc.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~20 min for this activity

1. Identify the Big Idea(s) for your module; Use the handout as a start
2. Make a list of the topics that you include in your current module
3. For each, identify whether they are: Directly related to the Big Idea; Important to know and do; Only worth being familiar with
4. How much time do you think that you gained in the semester by deleting the 'Only worth being familiar with' content?
5. Now, how are you going to use that time?

Section 1.7 Informal Early Feedback to Enhance Teaching & Learning

Handout for this section: *1.7 Informal Early Feedback HO.pdf*

Notes to Facilitator: This section is 90 minutes long, including the activities. There are 3 videos: Part A, B, C which will guide you through the content. There is also a handout for the participants with critical information: brief description, learning outcomes, key points to remember, space for taking notes, and space for workshop activities.

Facilitator: Here is the introduction and rationale for the beginning of this topic for you to provide (included in videos and handout packet).

- Start on time and distribute the handout packet
- Introduction and rationale (also provided in the video and p.1 of the handout packet).
  " 'Have you wondered about what worked and what you should have stopped or changed during the semester?' or have you asked yourself 'What and how well are my students learning?' Many universities use a formal student ratings at the end of the semester; but because it is at the end of the semester, you are not receiving valuable information about the current semester.

  By using an Informal Early Feedback (IEF) form early in this semester, you can receive timely feedback to immediately implement. You'll get important information right now about what is successful and not as successful on both the teaching and learning. In this session, we will share with you how to maximize gathering and analyzing informal early student feedback."

- **Learning Objectives:** Upon successful completion of this session, you will be able to:
  - Describe the difference between formative assessment and summative evaluation
  - Create appropriate items for gathering feedback
  - Interpret the feedback to assess the teaching and learning in your class
  - Debrief the results with your class

SCHEDULE ~ 90 minutes

Handout for this section: *1.7 Informal Early Feedback HO.pdf*

Video number: 22	Session title: Informal Early Feedback - Part A		
Video length: 9:50	Video file name: 1.7.1 Informal Early Feedback Part A.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part A			
~ 7 minutes	0.00 – 6:40	- introduction and description of Informal Early Feedback (IEF) and assessment vs evaluation	- Remind faculty to take notes in the handout packet.
~ 20 minutes	6:40 – 8:20		- Stop the video @ 6:40 for the **ACTIVITY: "Characteristics of Effective Teachers"** in the handout packet, p.2. Have faculty individually put in descriptive verbs what that characteristic looks like. * Remind the faculty

			that the bullet points must be observable, concrete. Refer to Cheelan's example of Enthusiasm is seen by the faculty moving around, using arms, smiling, no monotone voice. (allow 5 minutes to do this). To be more efficient, you can have the group define 2 characteristics and the other half, the remaining 2 characteristics. Then have faculty share each of the characteristics. Allow about 10 minutes to share. Suggested responses will be shown in video.
~ 2 minutes	8:20 – 9:49		- Stop the video at 8:35 for faculty to complete **ACTIVITY: In-Class Check Your Knowledge** in the handout packet, p.2. Allow about 1 minute.
Total time = ~ 29 minutes			

Post-Video Activities/Assignment: none

NOTE: Cheelan speaks about "office" hours" in the next video. Consider talking about that concept before starting video 1.7.1

Video number: 23	Session title: Informal Early Feedback - Part B		
Video length: 12:45	Video file name: 1.7.2 Informal Early Feedback Part B.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part B			
~ 6 minutes	0.00 – 5:17	- Review the purpose of IEF and the characteristics of effective teachers as apply to the participants - it is important the faculty create an IEF that seeks feedback on both the teaching and learning.	- Stop the video at @ 4:00 in the NOTES section of Part B in the handout packet, p.3 have the faculty identify which out of the 9 characteristics would they like to get feedback on.
~ 10 minutes	5:17 – 6:00		- Stop the video @ 5:18 to do **Activity: "What do you want to know about…? Write in the boxes below some areas that you would like to get feedback on." -** - This is where faculty become more specific and focused; e.g., regarding "Preparation" – are the examples (or videos) helpful? "Grading" – do the students know

			why they got the grade they received? - The faculty may not be clear here, so allow about 1 minute to get them started, but then start the video from 5:21 – 6:00. Stop the video and let them complete the activity. Allow about ~ 8 minutes.
~ 6 minutes	6:01- 12:24	- Begin writing the IEF items. - Analyze sample IEF forms	- No need to stop the video.
~10 minutes	12:24 – 12:45	- begin building the IEF form	- Run the video to the end. Then do the **Activity: Develop Your Individualized Informal Early Feedback (IEF). NOTE: See the sample IEF on the following pages**, in handout, p.4&5. **- T**his is an important activity because this is where the faculty will actually begin creating their own IEF form. They can, also, circle those items of the IEF examples in the handout packet, p.4&5. Allow about 10 minutes.
Total time = ~ 32 minutes			

Post-Video Activities/Assignment: none

Video number: 24	Session title: Informal Early Feedback - Part C		
Video length: 9:20	Video file name: 1.7.3 Informal Early Feedback Part C.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part C			
~ 10 minutes	0:00 – 5:24	- to describe the difference between the summative (end-of-semester) and formative (early part of the semester) student feedback - begin to analyze results of an IEF form to determine changes to implement.	- Have the faculty look at handout packet, p.6 "Sample Informal Early Feedback results. No need to stop the video, let the participants look at this page and follow along with the video. - Stop the video at 5:24 and discuss the "**ACTIVITY: A Conversation with Your Students"** have the faculty share possible actions that this faculty could do or stop doing. Allow about 10 minutes for discussion.
~ 15 minutes	5:24 – 8:24	- Here are two crucial steps for the faculty to master:	- Stop the video at 6:47 and look at the handout packet, p.7 for the

		- to objectively and critically analyze the student feedback - to acknowledge and debrief the results of the IEF with possible changes/enhancements where appropriate.	**Activity: Analyze the following open-ended sample student comments. What should this instructor keep-stop-start.** Have the faculty - Work individually for about 4 minutes, -Then break them into small group of 3 – 4 people and let them share their analysis. Allow about 4 minutes. - Walk around and listen to the groups discussion. - Select one faculty to pretend that this IEF results belong to them. The faculty will then give a brief no longer than 5 – 6 minutes to simulate sharing with the students the results of the class. ***Format of this simulation:*** - Smile -Thank the class for the feedback - Identify 1 -2 things that are working well - Identify 1 – 2 things that the faculty can change or implement to enhance the teaching and learning - Thank the students again.
~ 3 minutes	8:25 – 9:19	Summary and conclusion	- **ACTIVITY: In-Class Check Your Knowledge T/F** in the handout packet, p.7. was not repeated in this video Part C. As final activity read the following 3 questions, give them a minute to write, and then share. **In-Class Check Your Knowledge** 1) Informal Early Feedback is a summative assessment tool. True False 2) The IEF is a valuable method for getting timely feedback about teaching and learning. True False 3) Formative assessment provides information on what and how to improve. True False - Here are the correct answers: 1) false 2) true 3) true
Total time = ~ 28 minutes		Check for any comments or questions. Strongly recommend that they do implement an Informal Early Feedback in their teaching.	
Total time for this topic ~ 90 minutes			

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Formative assessment is about monitoring student learning during the learning process. Summative evaluation (or summative assessment) is about evaluating student learning at the end of the learning process.
- Receiving timely, effective feedback about your teaching and the students' learning allows you to make meaningful changes, and can positively impact your students' learning for the remainder of the semester.
- You can create your own personalized informal early feedback form to solicit the feedback you want to improve your teaching.
- It is important to know how to analyze the student feedback. It is also important to debrief with your students about the outcomes of their feedback.

Section 1.8 Syllabus & Lesson Plans

Handout for this section: *1.8 Syllabus & Lesson Plans HO.pdf*

Notes to Facilitator: This section is about 45 minutes long, including the activities. There are two videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

The Syllabus

The syllabus for a module is a critical tool that we must provide to the student so that they can successfully traverse the semester and accomplish the goals of the module. A syllabus is a document that communicates information about your module and defines the expectations and responsibilities of the students and the instructor. Some refer to the module's syllabus as a contract between you and your students. Another way to consider a syllabus is to ask yourself "What am I saying to my students with the syllabus?" Consider making a promise to your students, such as "As a result of this module, students will be able to _____." That sounds very much like the learning objectives for the module. This is as opposed to emphasizing what the students cannot do or how they might be punished if they do not do something (losing points, failing module assignments). There are many examples of syllabi online. A useful website that talks about the syllabus is from the Stanford Teaching Commons:
https://teachingcommons.stanford.edu/resources/course-preparation-resources/creating-syllabus

A syllabus should include:

- Module name and number
- Semester, year (as appropriate)
- Module units or credit hours
- Instructor name and contact information
- Office hours (how and when would you be accessible to your students?)
- Module prerequisites (are there other courses that the students need to have completed before taking yours?)
- Module overview and description (a paragraph that describes your course, the content and how the course will be taught)
- Module learning objectives (Using Bloom's Taxonomy)
- Required readings and resources
- Optional or recommended readings and other learning resources
- Assignments and grading
- Letter grade (how will a grade be determined by point value or percentage)
- Major assignments (briefly describe these assignments)
- Extra credit policy (do you give extra credit, how can students get extra credit?)
- Participation policy (what constitutes class participation and how will that be assessed?)
- Attendance policy and in-class expectations (turning up late for class, turning in assignments late, respect for other students, use of technology in class time, etc)
- Other policies (student conduct, plagiarism, academic dishonesty, exam policies, etc; these need to align with university policies if available)
- Module schedule (day-to-day schedule including exam dates, assignment due dates, other class events)
- You are welcome to add other items, as well. For example, perhaps you want to provide a brief paragraph on your teaching philosophy.

How do you make sure students have read the syllabus? Some ideas:

- Point out important parts of the syllabus in the initial class session
- Let the students know where they can find a backup copy (online)
- Keep mentioning the syllabus in class
- Give them a low-stakes quiz based on the syllabus
- Ask several students to briefly relate and discuss individual parts of the syllabus in the next class – make it into an activity
- Make the syllabus matter throughout the semester, not just on day one

Lesson plans

When we only deliver a lecture, we can have an outline or lecture notes to use as a guide for what we do during class time. However, when we are integrating student activities into the class time, it is important to have a detailed plan of what we will do in class, when it should happen, and what we need to do to be sure it is a successful activity. The lesson plan is a detailed step-by-step guide for what the teacher will do and what the students will accomplish (the learning goals of the session) during a class session. The instructor should develop a lesson plan for each class meeting. Let the workshop participants know that after developing the initial several lesson plans, the other plans become easier. Many lesson plans will be similar from one class session to the next. Nevertheless, it is important to have the full

semester's set of lesson plans. These are helpful for the semester that the module is taught, but also helpful when teaching the same or a similar module in subsequent semesters. In addition, having the set of lesson plans is helpful if for some reason someone else has to take over the module.

After completing this series of videos, consider having the participants go online at find examples of syllabi and example lesson plans. Have them share those with their group/table members. Ask them to evaluate what is good and not so good about those documents.

What should be included in the lesson plan?
Module name and number
Instructor name
Lesson day/date
Lesson title
Lesson duration
Lesson learning objectives and related tasks (remember Bloom's Taxonomy)
Materials and equipment
References
Take-home tasks

This might include a table indicating the time, activity and recourses needed for the activity.

Time	Activity	Resources

Handout for this section: *1.8 Syllabus & Lesson Plans HO.pdf*

Video number: 25	Session title: The Syllabus
Video length: 13:36	Video file name: 1.8.1 The Syllabus.mp4
Description: (Hurley) Introduction to the syllabus, the value of having a syllabus; what is to be in the syllabus.	
In-Video Activities: Discuss ways to encourage students to read and remember the syllabus.	

Post-Video Activities/Assignment: Allow ~10 min for this activity

- They should start filling in the syllabus template in the handout.

Video number: 26	Session title: The Lesson Plan
Video length: 7:16	Video file name: 1.8.2 The Lesson Plan.mp4
Description: (Hurley) Introduction to the lesson plan, the value of having lesson plans; what is to be in the lesson plans.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~10 min for this activity

- They should start filling in the lesson plan template in the handout

Section 1.9 Review & Wrap-Up

Handout for this section: No handout

Notes to Facilitator: This section is about 40 minutes long, including the activities. There is one video. This section does not have a handout. Participants should have sheets of paper to take their own notes and complete any remaining activities.

Video number: 27	Session title: Review & Wrap-Up
Video length: 15:26	Video file name: 1.9.1 Review and Wrap-Up.mp4
Description: (Hurley) An overview of the topics discussed in the video series; how these things fit together; how the concepts introduced in the video series relate to the skills gaps identified at the start of the video series.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~20 min for this activity

- Use this time to encourage further discussion and to address any further questions.

SPHEIR Pedagogical Training 2.0
Manual for Workshop

Workshop Overview: Pedagogical Training 2.0 is divided into 7 content sections.

Section	Number of videos	Suggested session length (min)	Total video length (min)	In-video activities	Post-video activities
2.1 Introduction to Pedagogical Training 2.0 (Hurley)	2	60	41	yes	yes
Handout: *2.1 Review PT 1.0 (Hurley) HO*					
2.2 More About Learning (Hurley)	6 (7 with optional Inquiry Process)	110 (135 with optional Inquiry Process)	59 (79 with optional Inquiry Process)	yes	yes
Handout: *2.2a More About Learning (Hurley) HO.pdf* *2.2b Crossword puzzle 2.0 (Hurley) HO.pdf*					
2.3 Engaging Students Through Active Learning (Bo-Linn)	3	90	40	yes	no
Handout: *2.3 Active Learning (Bo-Linn) HO*					
2.4 Leading Effective Discussions (Bo-Linn)	3	90	39	yes	no
Handout: *2.4a Effective Discussions (Bo-Linn) HO*					
2.5 Effective Team Projects and Student Teams (Bo-Linn)	2	90	40	yes	no
Handout: *2.5 Effective Teams (Bo-Linn) HO*					
2.6 Students Learning Collaboratively (Hurley)	6 (7 with optional Transparency in Classroom)	130 (140 with optional Transparency in Classroom)	76 (86 with optional Transparency in Classroom)	no	yes
Handout: *2.6a Students Learning Collaboratively (Hurley) HO.pdf* *2.6b Concept Map 2.0 (Hurley) HO.pdf* (**1 copy per group**)					
2.7 Review and Wrap-up (Hurley)	1	30-35	12	no	yes
total	25	~10 hr (10.5 hr with optional)	~4.2 hr (~5.4 hr with optional)		

A Reminder: Discussion is a key part of this workshop. Discussions with the workshop facilitators and the participants and among the participants can be best focused around the post-video activities. Suggested time apportioned for each activity are provided here as a guideline. The workshop presenter should decide on the amount of time allotted to each activity as suits the circumstances of the workshop.

Section 2.1 Introduction to Pedagogical Training 2.0

Handout for this section: *2.1 Review PT 1.0 (Hurley) HO.pdf*

Notes to Facilitator: This section is about 60 minutes long, including the activities. There are two videos. There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos.

See the introductory text for the SPHEIR Pedagogical Training 1.0 [Introduction] above for a discussion of the Skills Gaps identified by the initial SPHEIR Survey and the Career Readiness Competencies survey by the US National Association of Colleges and Employers (NACE).

Handout for this section: *2.1 Review PT 1.0 (Hurley) HO.pdf*

Video number: 1	Session title: SPHEIR Pedagogical Training 2.0: An Introduction
Video length: 11:32	Video file name: 2.1.1 SPHEIR 2.0 Introduction.mp4
Description: (Hurley) Welcome and introduction to Hurley and Bo-Linn; discussion of Skills Gaps and NACE survey; overview of workshop content topics and videos	
In-Video Activities: none	

Post-Video Activities/Assignment: none

This video provides a review of some of the major concepts presented in the SPHEIR Pedagogical Training 1.0 video series.

Video number: 2	Session title: Overview & Review of Pedagogical Training 1.0
Video length: 29:36	Video file name: 2.1.2 Overview & Review- Pedagogical Training 1.0.mp4
Description: (Hurley) A review of Pedagogical Training 1.0	
In-Video Activities: 7:15 Complete the Bloom's taxonomy grid	

Post-Video Activities/Assignment: Allow ~15 min for this activity

1. Sketch what your typical classroom looked like before you participated in the earlier pedagogical training workshop.
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.
5. Participants should share and discuss their sketches in small groups and with the entire group. Participants might share changes they have made to their modules since PT 1.0.

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Moving from a teacher-centered to a more student-centered learning environment requires a change in our mindset about teaching and learning, as well as a change in the understanding of our role in the learning environment.

- Learning is a cyclic process. We must progress through several cycles of the learning process in order for true learning to occur. Our role as educators is to help our students navigate through their learning process.

Section 2.2 More About Learning

Handouts for this section: *2.2a More About Learning (Hurley) HO.pdf*
2.2b Crossword puzzle 2.0 (Hurley) HO.pdf

Notes to Facilitator: This section is about 80 minutes long (110 with the optional video), including the activities. There are five videos (six with the optional video). There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

A Taxonomy of Significant Learning

The concepts of Bloom's Taxonomy were discussed in the SPHEIR Pedagogical Training 1.0 video series. In this section, we introduce another taxonomy, the Taxonomy of Significant Learning (From: L. Dee Fink, 2003. Creating Significant Learning Experiences. An Integrated Approach to Designing College Courses. Jossey-Bass, San Francisco, CA, USA). This is an expanded taxonomy that encompasses six taxa, including:

Foundational Knowledge - Remembering and understanding information and ideas
Application - Thinking: critical, creative, and practical skills, managing projects
Integration - Connecting ideas, people, realms of life
Human Dimension - Learning about oneself and others
Caring - Developing new feelings, interests, values
Learning How to Learn - Becoming a better student, inquiring about a subject, self-directed learners

NOTE: The initial two taxa (Foundational Knowledge and Application) are similar to Bloom's Taxonomy. Fink has expanded on the elements that constitute significant learning.

Memory

Memory comes into play in the process of learning. Several types of memory are discussed, including sensory memory, short term memory, working memory, and long term memory. The relationship among these types of memory is similar to the process of learning that has been discussed with respect to how the brain learns. This occurs through the passage of information through several steps: attention (receiving of sensory input; sensory memory), encoding (transfer of information from short term to long term memory), storage (information is in long term memory), retrieval (information must be retrieved from long term memory and used), leading to initiation of another cycle with new attention and sensory input. The limitations of working memory can be bypassed by using the resources of the long term memory. That is, but having repeated recall of information from long term memory. We can help our students solidify their knowledge by repeatedly helping them retrieve those resources from their long term memory.

Forgetting, the Forgetting Curve & Teaching

Another aspect of memory is forgetting. Ebbinghaus' Forgetting Curve is introduced to show how quickly information is lost over time when there is no attempt to retain it. Strategies are discussed to help combat the forgetting curve through repeated reviews. In addition, the "spacing effect" shows that learning is greater when studying is spread out over time, as opposed to the same amount of content review in a single session. These "reviews" can take the form of the formative assessments of learning activities discussed in the Pedagogical Training 1.0, as well as in later videos in this 2.0 series. These include the classroom assessment techniques (CATs) and active learning activities. Workshop participants should be reminded that using the concept of The Big Idea (from Pedagogical Training 1.0) can help the instructor decide how to gain the time and opportunities to integrate these learning activities into their modules, without sacrificing the most important components of their content.

Learning Styles

Learning occurs in the brain. The brain of each person is different from every other person. Another element of learning is the recognition that everyone learns in a different way. We all have our preferences in how we perceive, gather, process and understand information. There have been many attempts to categorize the learning styles or learning preferences of people. The Felder-Silverman's Index of Learning Styles and the VARK (visual, auditory, reading/writing, kinesthetic) learning styles indicator are discussed as examples in this section. The key point is that we need to recognize that the students in our classrooms represent a range of learning styles. Our approaches to teaching must also address a range of learning styles. It is not as important to know the learning style of each individual student as it is to make sure we are addressing the needs of a broad range of learning styles within our class sessions. We do that by incorporating a range of activities into our modules. In contrast, if we only lecture, then we are only accommodating the learning styles of those students with primary learning preferences of auditory and perhaps visual (if we use images in our lectures).

The Inquiry Process [this video is optional depending on available time]

Finally, the inquiry process is presented. This is a more formalized, organized representation of the process of asking and answering questions. The inquiry process is cyclic, as is the learning process. Completion of a cycle of inquiry should lead to the generation of additional questions that form the initial step of further cycles. The inquiry process can provide a template for helping students understand how to go about learning about a topic. Helping students understand and apply the inquiry process provides them with an important tool in their efforts to become a life-long learner (as in the Taxonomy of Significant Learning, Learning How to Learn).

Handouts for this section: *2.2a More About Learning (Hurley) HO.pdf*
2.2b Crossword puzzle 2.0 (Hurley) HO.pdf

Video number: 3	Session title: A Taxonomy of Significant Learning
Video length: 13:28	Video file name: 2.2.1 A Taxonomy of Significant Learning.mp4
Description: (Hurley) Overview of Dee Fink's Taxonomy of Significant Learning	
In-Video Activities: 3:07 Filling out Taxonomy of Significant Learning template worksheet	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Choose one lesson that you teach, and in which you are comfortable presenting. You should already have the Foundational Knowledge and Application components of the Significant Learning Taxonomy.

2. Now choose two of the other components of the Significant Learning Taxonomy.
Integration Caring Human Dimension Learning How to Learn

3. Write down how you might integrate or strengthen each of those two components as part of your lesson.

Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Video number: 4	Session title: Memory & Learning - Memory
Video length: 7:57	Video file name: 2.2.2 Memory & Learning- Memory.mp4
Description: (Hurley) Overview of types of memory and how memory works	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Video number: 5	Session title: Memory & Learning - Forgetting
Video length: 5:15	Video file name: 2.2.3 Memory & Learning- Forgetting .mp4
Description: (Hurley) Introduction to Ebbinghaus' Forgetting Curve	
In-Video Activities: 1:54 Filling out the Ebbinghaus' Forgetting Curve template worksheet	

Post-Video Activities/Assignment: none

Video number: 6	Session title: Memory & Learning – Forgetting Curve & Teaching
Video length: 9:44	Video file name: 2.2.4 Memory & Learning- Forgetting Curve & Teaching.mp4
Description: (Hurley) Relationship between Ebbinghaus' Forgetting Curve, reviewing and the concept of spacing	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Choose a lesson from one of the modules that you teach; a lesson that you feel is a critical one for that module.
2. Consider the most important component of that lesson. The most important thing the students should know/remember.
3. Design a series of 2 or 3 brief (5-10 minute) review activities that you could offer at intervals after the initial lesson.
4. How would you spread those review activities out over the time from the initial lesson to the next learning evaluation?
5. Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Video number: 7	Session title: Learning Styles – An Introduction
Video length: 14:23	Video file name: 2.2.5 Learning Styles An Introduction.mp4
Description: (Hurley) Overview of learning styles	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~10 min for this activity

1. Choose one lesson that you teach; a lesson that you feel is a critical one for student learning.
2. Identify the most important point of that lesson, the thing students should know/remember.
3. Design separate 3-4 min long lessons about some aspect of that most important point, one lesson for each of the four VARK learning styles.
   Visual ***Auditory*** ***Reading/Writing*** ***Kinesthetic***

4. Combine those short lessons into one 10-15 min lesson that includes each of the elements of VARK.
5. Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

NOTE: The Inquiry Process video is **optional**. It should be shown, along with the activity, if time permits.
Do show the crossword puzzle video and activity (2.2.7 Crossword Puzzle for 2.0.mp4)

Video number: 8	Session title: The Inquiry Process
Video length: 19:56	Video file name: 2.2.6 Inquiry Process.mp4
Description: (Hurley) Overview of types of memory and how memory works	
In-Video Activities: Filling out the Inquiry Process template worksheet	

Post-Video Activities/Assignment: Allow ~5 min for this activity

1. Consider some major assignment that you already give your students – a term paper, project, etc.
2. How would you modify that assignment or project in a way that helps the students focus on the **process** of inquiry and that explicitly incorporates the steps of the inquiry process?
3. Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Video number: 9	Session title: The Crossword Puzzle
Video length: 8:18	Video file name: 2.2.7 Crossword Puzzle for 2.0.mp4
Description: (Hurley) Review of how to do a crossword puzzle.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~20 min to start this activity

1. Work on the crossword puzzle. They can finish the puzzle later if not completed within the time allotted.
2. NOTE: This may be done in groups or participants may work on the puzzle individually. They may not be able to complete the puzzle until the end of the workshop.
3. Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Significant learning extends beyond the hierarchical elements of Bloom's taxonomy. Fink's Taxonomy of Significant Learning includes learning goals such as foundational knowledge, application, integration, the human dimension, caring and learning to learn.

- Learned knowledge is stored in long-term memory. However, periodic retrieval of knowledge from long-term memory is necessary for the knowledge to be rapidly available for use in working memory.

- We forget things quickly. Spacing out multiple brief reviews of key concepts or information helps the students counteract the forgetting curve.

- Engaging students in learning through strategies such as active learning, discussions and collaborative learning allows us to reach and accommodate a broader range of learning styles of our students than does a classic lecture.

Section 2.3 Engaging Students Through Active Learning

Handout for this section: *2.3 Active Learning (Bo-Linn) HO.pdf*

Notes to Facilitator: This section is 1.5 hours long, including the activities. There are 3 videos: Part A, B, C which will guide you through the content. There is also a handout for the participants with critical information: brief description, learning outcomes, key points to remember, space for taking notes, and space for workshop activities.

Facilitator: Here is the introduction and rationale for the beginning of this topic for you to provide (included in videos and handout packet).

- Start on time and distribute the handout packet
- Introduction and rationale (also provided in the video and p.1 of the handout packet). "Learning is not a spectator sport (Chickering & Gamson). Students must be cognitively, physically, and affectively engaged for deeper learning and retention to occur. Yet, we have to admit, there are many distractions and the attention span of our students can be relatively short. How do we manage the amount of content that we should teach while providing opportunities for our students to be engaged in active learning, especially as we are teaching and learning remotely?"

  We'll explore and practice several active learning strategies, beginning with those that can be easily implemented and are of low risk. Also, we'll learn about Classroom Assessment Techniques (CATs), active learning strategies that are ungraded and provide important information about how well our students are learning."
- **Learning Objectives:** Upon successful completion of this session, you will be able to:
  - Define active learning and three types of student engagement
  - Discuss issues about active learning
  - Analyze the best approaches for implementing active learning
  - Incorporate active learning strategies in your module

SCHEDULE ~ 90 minutes

Handout for this section: *2.3 Active Learning (Bo-Linn) HO.pdf*

Video number: 10	Session title: Engaging Students Through Active Learning – Part A
Video length: 13:09	Video file name: 2.3.1 Engaging Students Through Active Learning Part A.mp4

Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part A			
~3 minutes	0:00 – 3:03	- Introduction to the pedagogy of active learning. Possible reasons for student non-engagement	- @ 2:08, have faculty raise their hands for the **POLL – Active Learning?** no need to stop video. - Remind faculty to take notes in the space provided in the handout.
~ 4 minutes	3:03 – 4:45	- quiz to be taken 2 times – beginning of this session and at the end.	- Stop video @ 4:18 for faculty to do **ACTIVITY – Unannounced/Ungraded In-Class activity (true or false)** in handout, p.2. Do the "first time" line. Allow about 2 minutes for this activity. Reassure the faculty that it is not expected that they will get the correct responses. This is just an activity to get them thinking about the pedagogy of active learning.
~ 8 minutes	4:45 – 12:27	- Kinds of Engagement - Research on student engagement and learning	@ 6:37 starts the **ACTIVITY about "research of student engagement in traditional lecture classes."** No need to stop video or write responses. Faculty can just think about this activity and the answers.
~ 4 minutes	12:27 – 13:08	- Activity of Hitting Pause for purpose of reflection and summarizing. - conclusion	The **Activity of "Hitting Pause"** can be done at the end of this part A or as homework. Allow faculty to write for 2 minutes, and if have time, have a couple of them share what they wrote.
Total time = ~ 20 minutes			

Post-Video Activities/Assignment: none

Video number: 11	Session title: Engaging Students Through Active Learning – Part B
Video length: 13:23	Video file name: 2.3.2 Engaging Students Through Active Learning Part B.mp4

Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part B			
~ 9 minutes	0:00 – 5:17	- review of active learning and its pedagogy. - reflect upon what they have learned thus far.	- At beginning of this part, if you haven't already share what the participants wrote in responses to the previous activity "Hitting Pause." It is important to continuously reinforce what students/participants/faculty have learned and why. - Stop the video @ 2:38 to do the **ACTIVITY: "What innovative strategies have you experienced thus far?"** Take about 2 minute for faculty to write down on the handout, Part B, on p.2. If have time, ask for 1-2 faculty volunteer responses.
~ 4 minutes	5:17 – 9:19	- definition of active learning - benefits of active learning for the faculty and students	- No need to stop, have faculty just take notes on the handout
~ 25 minutes	9:19 – 13:22	- to be proactive and think about possible hurdles - to use critical thinking skills to identify possible solutions - to assess the possible solutions	This is very important activity for the participants to do… it starts the faculty to think about why they embrace the concept of engagement and active learning. Here are the steps: turn to the handout, p.2 **ACTIVITY: Possible hurdles and solutions regarding active learning.** 1) have the faculty copy hurdle 1 and the possible solutions 1-a and 1-b in the appropriate boxes. 2) stop the video at 11:39 and have them silently think about possible solutions and write in the appropriate space.

			3) for the next part – break them into small groups. Have the groups generate two more hurdles and write them in space 3 and 4. Make sure their names are on the sheet so the handout packet can be returned to them. (allow 5 minutes here) 4) Pass one group's packets to another group. Each group should have a different group's packets. Each group should read the hurdles 3 and 4 and then put in possible solutions to those hurdles. They can be discussed and written as a group. (allow about 10 minutes) 4) Return the packets to the original owners. Each faculty read the hurdlers and think about the possible solutions. (allow about 5 minutes)
Total time = ~ 40 minutes			

Post-Video Activities/Assignment: none

Video number: 12	Session title: Engaging Students Through Active Learning – Part C		
Video length: 13:24	Video file name: 2.3.3 Engaging Students Through Active Learning Part C.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part C			
~ 8 minutes	0:00 – 6:39 Stop video at 5:27 for faculty to answer question	- introduce the remaining two learning objectives for this topic - to analyze what and when which learning activities strategies/assignments to implement	- Continue the video until 5:27, and have faculty turn to the **Chart – "Classification of Instructional Activities According to Levels of Risk and Student Activity"** in handout, Part C, p.3 - **stop video @ 5:27 t**o **ANSWER Question regarding Questioning and Answer as to which quadrant A, B, C, D that strategy belongs.** (allow about 1 minute for them to say which quadrant).

~ 5 minutes	6:39 – 7:43	- to think about the active learning strategies they have experienced and could implement	- Stop the video at @ 6:48 for faculty to do in the handout, p.3 **ACTIVITY: What (innovative) active learning strategies have you experienced thus far? (**Allow about 5 minutes)
~ 10 minutes	7:43 – 10:43	- to be familiar with Classroom Assessment Techniques (CATs) - to select active learning strategies/assignments and/or CATs to implement in their teaching.	Stop video @ 10:28 for faculty in handout packet, p.3 to do **ACTIVITY – what active learning strategies or CATs will you implement in your daily class?** (allow about 10 minute)
~ 3 minutes.	10:43 – 13:23	- to assess what and how well they remember the key principles of engaging students through active learning	- Stop video @ 11:00. have faculty go back to the beginning of the handout in Part A, p.2 **ACTIVITY: Unannounced/Ungraded In-class Activity (T/F), second time.** (allow about 3 minutes). - stop video to get the answers.
Total time = ~ 26 minutes	Check for any comments or questions		
Total time for this topic ~ 86 minutes			

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Active Learning – students are **doing** something with their knowledge AND thinking/reflecting on what they are doing.
- Having students actively engaged in the learning process can have a powerful impact on outcomes of the learning.
- Understanding what, when, and how to use active learning strategies in your classroom is important to have maximum impact on your students' learning.

Section 2.4 Leading Effective Discussions

Handouts for this section: *2.4 Effective Discussions (Bo-Linn) HO.pdf*

Note to Facilitator: This section is 1.5 hours long, including the activities. There are 3 videos: Part A, B, C which will guide you through the content. There is also a handout for the participants with critical information: brief description, learning outcomes, key points to remember, space for taking notes, and space for workshop activities.

Facilitator: Here is the introduction and rationale for the beginning of this topic for you to provide (included in videos and handout packet).

- Start on time and distribute the handout packet
- Introduction and rationale (also provided in the video and p.1 of the handout packet).

  "We all know the importance of including questions in our teaching. Questions serve to motivate students, to assess students' understanding, and to engage them in a thought-provoking discussion. Effective questioning skills require us to plan carefully not only the type of questions, but also the timing and sequencing".

- **Learning Objectives:** Upon successful completion of this session, you will be able to:
  - Define the benefits of effective classroom discussion
  - Describe a learning environment that encourages student participation in discussions
  - Classify and create different types of questions
  - Implement effective questioning strategies such as scripting, wait time, and prompts
  - Differentiate between the different types of non-verbal communication to enhance student questions and answers

SCHEDULE ~ 90 minutes.

Handouts for this section: *2.4 Effective Discussions (Bo-Linn) HO.pdf*

Video number: 13	Session title: Leading Effective Discussions – Part A		
Video length: 11:10	Video file name: 2.4.1 Leading Effective Discussions Part A.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part A			
~ 12 minutes	0:00 – 8:31	- overview of the learning objectives which are the critical skills in leading effective discussions. - reinforce the importance of discussions in enhancing learning. - taking note of whether students are paying attention or doing civil attention.	- Make sure that the participants have their handout packet so they can take notes and complete the activities. - stop @ 2:41 for faculty to answer in the handout, p.2 left-side box in **ACTIVITY: "What do you see and hear when the discussion is going well?"** Allow 1 minute for them to write and another 1 minute for them to share in the large group.
~ 10 minutes	8:31 – 11:09	- brainstorm ways to set the stage for effective discussions for faculty and students	- stop the video at 10:40 for faculty to add ideas in the handout, p.2 for **ACTIVITY: What can we do to set the stage?"** Allow about 2 minutes

			for faculty to think of ways. Then share in large group for about 2 minutes.
Total time = ~ 22 minutes			

Post-Video Activities/Assignment: none

Video number: 14	Session title: Leading Effective Discussions – Part B		
Video length: 13:58	Video file name: 2.4.2 Leading Effective Discussions Part B.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part B			
~ 10 minutes	0:00 – 3:09	- review important points from Part A and the learning outcomes for this topic. - There are 3 important strategy types in this video: a) what types of question to ask, b) when and whom to ask, and c) how to respond to student questions and responses.	- Remind faculty to take notes because, we describe the types and purposes of different kinds of questions. This is important so faculty will know what kind and when to implement a certain type of question. - Stop the video @ 2:16 and ask the **Question:** "Why were the two example opening questions that Cheelan provided effective? Allow about 5 minutes for discussion.
~ 18 minutes	3:09 – 6:00	- addresses the types of questions - practice writing the different types of questions	- At 3:09, faculty should be taking notes in Part B in the Handouts, p.2 to prepare for the activity. - Stop the video at 5:03 to complete in the handout, p.2 the **ACTIVITY: Strategy 1 – what types of questions to ask at the beginning of class.** You can break the group into small groups of 4 – 5 or have the faculty work alone for this activity. Do have them share with each other and in the large group to receive feedback. Allow about 5 minutes to create the questions and another 10 minutes to share. **NOTE:** in the handout on p.4 there are resources on effective questioning. You can point out to the faculty the **RESOURCE: "Three Beginning Questions to Start the Discussion"**

~ 4 minutes	6:00 – 9:40	- introduction and how to use Bloom's Taxonomy	- Have faculty turn in the handout to pp.3&4 for the **TABLE: Bloom's Taxonomy of Educational Objectives"**
~ 8 minutes	9:40 – 11:45	- to analyze and apply Bloom's t\Taxonomy when creating questions	- Stop the video @ 10:19 to do the activity shown in the video. **ACTIVITY: "Can you identify the cognitive levels?"** Depending on the time you can either have them share aloud the level of the questions (whether high or low and which specific level) or write their responses individually on a piece of paper. Having the faculty just respond as a group is the faster method – allow about 5 minutes for this. Cheelan will provide the correct responses @ 10:30 in the video.
~ 8 minutes	11:45 – 13:57	- use Bloom's Taxonomy to write low and high level questions - use "scripting" as a daily practice to prepare for class.	- Stop the video@ 12:04 for faculty to complete in the handout, p.2 at the beginning part of Part B the **ACTIVITY: Write a low and high level question for the class they chose.** Allow about 5 minutes to write and discuss.
Total time = ~ 48 minutes		This Part B is a longer segment. You may be able to save some time because the Part A is shorter. If pressed for time, you can skip the learning objectives presented in Part B and Part C at the end of those video vignettes.	

Post-Video Activities/Assignment: none

Video number: 15	Session title: Leading Effective Discussions – Part C		
Video length: 13:34	Video file name: 2.4.3 Leading Effective Discussions Part C.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part C			
~15 minutes	0:00 – 9:21	- introducing higher level of questioning through the Socratic Method - we will focus on the strategies of b) when and whom to ask, and c) how to respond to student questions and responses.	- It is important that the faculty take notes in Part C in the handout p.5 regarding these remaining strategies; such as in "When and Whom do you ask?" - You will be ***starting and stopping the video starting @ 6:08*** for each of the situations, listed in the handout on p.5 **ACTIVITY: "How will you respond to the following questions?"**

~ 4 minutes	9:21 – 13:34	- these a great wrap-up and summary at the end for faculty to check with the notes that they should have been taking while watching the video.	You can play this video to the end without stopping.
Total time = ~ 20 minutes		Check for any comments or questions	
Total time for this topic ~ 90 minutes			

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Effective classroom discussion requires planning of the questions. This should be part of your lesson plan developed before walking into class.

- Integrating effective questioning and discussion into your classroom requires an understanding of the types and levels of questions, as well as when and how to respond.

- Instructors need to consider elements of effective questioning, including scripting of the question (lesson plan), how much wait time to allow for responses, prompts and non-verbal communication that may help stimulate responses and encourage discussion.

Note: Pass out the crossword puzzle handout (*2.4b Crossword puzzle 2.0 (Hurley) HO.pdf*) after this section. Participants can work on that individually or in groups during breaks or lunch.

Section 2.5 Effective Team Projects and Student Teams

Handouts for this section: *2.5 Effective Teams (Bo-Linn) HO.pdf*

Notes to Facilitator: This section is 1.5 hours long, including the activities. There are 2 videos, Part A and B which will guide you through the content. There is also a handout for the participants with critical information: brief description, learning outcomes, key points to remember, space for taking notes, and space for workshop activities.

Facilitator: Here is the introduction and rationale for the beginning of this topic for you to provide (included in videos and handout packet).

- Start on time and distribute the handout packet
- Introduction and rationale (also provided in the video and p.1 of the handout packet). "With the increased demand for students to work effectively in teams, many instructors have implemented short-term and semester-long team projects in their modules. There are many benefits derived from this type of cooperative learning strategy if key issues are addressed.

  Here are some key issues we will address:
  - What are some of the considerations for making this a valuable learning experience?
  - What are important team skills that students should learn?
  - What makes a good team assignment?"

- **Learning Objectives:** Upon successful completion of this session, you will be able to:
  - Recognize group vs team characteristics and dynamics
  - Identify how to effectively use teamwork in a course
  - Teach your students how to be effective team members
  - Create and assess team projects and processes

SCHEDULE ~ 90 minutes.

Handouts for this section: *2.5 Effective Teams (Bo-Linn) HO.pdf*

Video number: 16	Session title: Effective Team Projects and Student Teams – Part A		
Video length: 16:38	Video file name: 2.5.1 Effective Team Projects and Student Teams Part A.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part A			
~15 minutes	0:00 – 7:40	This is an introduction to team-based learning.	- Distribute the handout packet and remind faculty to take notes on it because principles and strategies are presented there. - Stop the video @ 3:39 and have the faculty describe/define what a team is, especially as it is different from a group. Allow about 2 minutes for faculty to say 1 – 2 words as responses. - Stop the video @ 4:40. Draw on a flipchart paper or on a blackboard two columns (see video). Have faculty say 3 – 4 bullet points under "because" (positive reasons) and "however" (possible problems) why have team assignments. Allow about 5 minutes.
~1 minute	7:40 – 8:33	Definition of an effective team	Play video without stopping
~ 2 minutes	8:33 – 10:30	Part 1 – A small number of people	Play video without stopping
~ 15 minutes	10:30 – 16:38	Part 2 - Complementary skills	- Stop video @ 12:16 for **Activity: How do I assemble the teams?** In handout, Part A, p.2. Have the faculty imagine

			that will implement a team project. What are the essential technical and interpersonal skills that are needed to do this team project successfully. Remind them there were some suggestions in the video. They do not need to address the "Problem-Solving" skill. Allow about 7 minutes to write and additional 3 to share. - In the video, Cheelan asks how can you the instructor and the team members know about each other. You can refer to the **Sample Information Sheet"** in Part A in the handout.
Total time = ~ 33 minutes			

Post-Video Activities/Assignment: none

Video number: 17	Session title: Effective Team Projects and Student Teams – Part B		
Video length: 24:00	Video file name: 2.5.2 Effective Team Projects and Student Teams Part B.mp4		
Topic timing	***Video Time Stamp***	***Purpose and Content***	***Handout & Workshop Activity Directions***
Part B			
~ 12 minutes	0:00 – 11:38	In this Part B, we will finish part 3 and 4 of the definition of an effective team	- It is important that the faculty take notes (p.3) in Part B because here are the directions and strategies on how to create an appropriate team assignment.
~ 25 minutes	11:38 – 14:38	In this part, we will begin training the students to collaboratively define the key goals for effective teams; e.g., attendance, timeliness…	**-** Have the faculty turn to p.4 in the handout "**SAMPLE: Self and Peer Feedback Form."** You can point out that here are the 6 team attributes or skills that all members should do well in. - Stop the video at 13:49 and break the large group into teams of 3 – 5 members. Have them work together to define what "timeliness" means, keeping in mind the "comb"

			test. Have them write their definitions on a piece of paper, which they can share with the other teams for feedback. Allow about 10 minutes for the teams to define "Timeliness" (refer to Cheelan's elaboration and examples in the video). And have the teams share with each other. Allow about 10 minutes.
~ 1 minute	14:38 – 15:08	Example of a team contract or as this professor says "a team charter."	Play video without stopping
~ 9 minutes (especially if you stop the video to ask if there are any questions about this section on grading)	15:08 – 21:50	Here is the 4th part of defining an effective team – being mutually accountable.	- @ 16:33, have the faculty look at p.4 in the handout "**SAMPLE: Self and Peer Feedback Form."** - @ 17:55, have the faculty look at pp.6&7 in the handout **"SAMPLE: Team Member Evaluation Form"** - @ 19:44, the content is regarding grading the team project and how to incorporate team feedback as part of the team project grade. (This is a very important strategy to reinforce. ***NOTE: You* may have to stop the video and ask if they understand this procedure.**
~ 2 minutes	21:50 – 23:53	Here are specific suggestions (and reminders) for the faculty.	Play video until the end.
Total time = ~ 49 minutes			
Total time for this topic ~ 90 minutes			

Post-Video Activities/Assignment: none

Section 2.6 Students Learning Collaboratively

Handouts for this section: *2.6a Students Learning Collaboratively (Hurley) HO.pdf*
2.6b Concept Map 2.0 (Hurley) HO.pdf (**1 copy per group**)

Notes to Facilitator: This section is about 90 minutes long (100 minutes with the optional video), including the activities. There are five videos (six with the optional video). There is also a handout for the participants with information related to the video topics. Participants should have sheets of paper to take their own notes and complete the activity at the end of some of the videos. An overview and review of video content is provided here. Take some time before the workshop to re-familiarize yourself with the content.

Many of the concepts that have been introduced in the Pedagogical Trainings 1.0 and 2.0 can be applied in effective ways by having students work together collaboratively through the implementation of groups and teams introduced in the previous video section. Group activities provide an excellent framework for conducting effective discussions (section 2.4). These approaches are a powerful means of establishing active learning environments in the classroom (section 2.3). They are the in-class means of providing formative assessments of learning such as the Classroom Assessment Techniques (CATs) and other activities (sections 1.4 , 1.5, and 2.3). This section provides some thoughts and approaches for implementing these concepts of collaborative learning into your modules.

The initial video outlines underlying concepts in using groups and teams in the classroom. The Think-Pair-Share activity is a protocol for implementing a basic form active learning and initiating effective discussion. [NOTE: the facilitator should consider using this method to initiate one or more of discussions, thereby providing more examples of this strategy.] Tuckman and Jensen's Group Development Model illustrates the stages through which every group or team will progress to reach their goals. This developmental model is also important for instructors to understand as they plan and implement group and team activities. The concept map is a specific group activity that is easy to develop and implement. It requires students to work at multiple levels of Bloom's Taxonomy, and allows students to physically express their vision of the topic and concepts of the map. The success of group and team activities in the classroom is dependent on the progression of students through a series of steps. These steps start with individual attention to the topic, question or task, and progress to some form of sharing of group learning products and debriefing by the instructor. Two additional videos provide some practical thoughts on students working in groups and teams in the classroom and the concept of transparency in the classroom.

The Concept Map activity provides a break from watching the videos. That activity directly illustrates many of these concepts such as formative assessments of learning, active learning, working collaboratively, effective discussions and others.

Handouts for this section: *2.6a Students Learning Collaboratively (Hurley) HO.pdf*
2.6b Concept Map 2.0 (Hurley) HO.pdf (**1 copy per group**)

Video number: 18	Session title: Why Use Groups & Teams: An Introduction
Video length: 9:08	Video file name: 2.6.1 Why Use Groups & Teams.mp4
Description: (Hurley) An introduction to groups & teams.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Video number: 19	Session title: The Think-Pair-Share Activity
Video length: 16:47	Video file name: 2.6.2 Think Pair Share Activity.mp4
Description: (Hurley) Presenting the think-pair-share activity	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~20 min for this activity

Part A
Pick one of your favorite lectures that you teach. Pick a topic within that lecture that you are comfortable teaching. Develop a plan for a Think-Pair-Share activity as a means of introducing that topic. Write this up as if it is a part of your lesson plan for that lecture.
Include in your plan: Your question
The timing of thinking and sharing
How you will organize the pairings
How you will manage the sharing
How you will debrief

Part B
Pick one of your **least** favorite lectures that you teach. Pick a topic within that lecture that you are **least** comfortable teaching. Develop a plan for a Think-Pair-Share activity as a means of introducing that topic. Write this up as if it is a part of your lesson plan for that lecture.
Include in your plan: Your question
The timing of thinking and sharing
How you will organize the pairings
How you will manage the sharing
How you will debrief

How might you use this strategy to enhance both your enjoyment of that lesson and the understanding of the students?

Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Video number: 20	Session title: Tuckman & Jensen's Group Development Model
Video length: 12:51	Video file name: 2.6.3 Tuckman & Jensen's Group Development Model.mp4
Description: (Hurley) Introduction to Tuckman & Jensen's Group Development Model	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Resources needed for the Concept Map activity:
scissors, large paper (flipchart paper), tape

Video number: 21	Session title: The Concept Map
Video length: 9:00	Video file name: 2.6.4 Concept Map for 2.0.mp4
Description: (Hurley) Review of concept maps and how to conduct the activity.	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~30 min for this activity

1. Handout *2.6b Concept Map for PT 2.0 (Hurley) HO.pdf* (**one per group**)
2. Work on the concept map
3. NOTE: This should be done in groups. Participants should do the best they can, even though some words/concepts may have not been discussed at this point in the workshop.
4. Participants should share and discuss the results of their activity in small groups and with entire group. Workshop leader should debrief and draw some overall observations of the outcomes of the discussion.

Video number: 22	Session title: Steps for Successful Group Activities
Video length: 10:34	Video file name: 2.6.5 Steps for Successful Group Activities.mp4
Description: (Hurley) Discussion of steps in conducting group activities	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Video number: 23	Session title: Walt's Practical Thoughts on Students Working in Groups & Teams
Video length: 17:11	Video file name: 2.6.6 Practical Thoughts on Groups & Teams
Description: (Hurley) Hurley's additional thoughts on managing groups & teams in the classroom	
In-Video Activities: none	

Post-Video Activities/Assignment: none

NOTE: The Transparency in the Classroom video is **optional**. It should be shown if time permits.

Video number: 24	Session title: Transparency in the Classroom
Video length: 10:27	Video file name: 2.6.7 Transparency in the Classroom.mp4
Description: (Hurley) Discussion of being transparent about the learning process and why we do the things we do in class.	
In-Video Activities: none	

Post-Video Activities/Assignment: none

Take Home Thoughts [share these with the participants as part of a section wrap up]

- Getting students to work collaboratively on activities provides the learning environment where they can practice many of their professional competency skills.
- Even a relatively simple in class activity such as think-pair-share requires pre-planning and careful management of the activity.
- In-class management of a well-designed group activity allows students to enter the activity prepared, collaborate with group members efficiently, and share the group's activity product.
- In designing a team project, the instructor should carefully plan how to put the teams together (process) and the construction of the project (product).
- Students will proceed through a series of stages when entering into a group activity, including the forming, storming, norming, performing and adjourning stages.
- It is important to prepare students on how to work effectively within a group or team and how to maximize the group's productivity. Insisting that students sit in a circle while working on an in-class group activity is just one fundamental component for establishing a productive collaborative environment.
- The instructor should implement frequent check-ins (both formally and informally) on the student teams process (how well the students are working together) and product (the actual project outcome).

Section 2.7 Workshop Wrap Up & Overview

Handout for this section: none

Notes to Facilitator: This section is about 35 minutes long, including the activities. There is one video. This section does not have a handout. Participants should have sheets of paper to take their own notes and complete any remaining activities.

Develop Communities of Learners: Just like our students, we must be life-long learners about teaching and learning. We must always recognize that we can be ever more effective in helping our students be successful in their learning. This is an excellent time to spend a few minutes having the participants discuss possibilities for developing **Communities of Learners** about teaching and learning. We can learn much from these trainings and from online resources. We can also learn much from our colleagues who are actively teaching in the classroom. Encourage the participants to establish these local communities of learners so that they can test ideas for broader, more intensive and more organized gatherings.

Participants in these workshops should consider instigating or encouraging future teaching/learning gatherings to help establish the community of learners. These could be informal gatherings such as:

- Monthly lunch-time gatherings within a department where instructors share their experiences in implementing some of the pedagogical concepts from these trainings.
- Monthly gatherings on the university campus where participants from around the campus share their experiences in teaching and learning.

Or, the gatherings may be more formally organized such as:

- Monthly on-campus, hour-long teaching seminars where one or two speakers address specific topics relative to pedagogy and teaching and learning.
- On-campus teaching workshops with a specific agenda and invited presenters or workshop facilitators.
- Develop an annual on-campus teaching retreat day where the entire day is devoted to learning more about teaching and learning, as well as sharing experiences with colleagues.

Or, develop an annual country-wide teaching retreat in Freetown or another city where teachers of excellence talk about their pedagogy and the things they have learned about teaching and learning.

Video number: 25	Session title: Workshop Wrap-Up
Video length: 11:42	Video file name: 2.7.1 Workshop Wrap-Up.mp4
Description: (Hurley) Wrap up of PT 2.0	
In-Video Activities: none	

Post-Video Activities/Assignment: Allow ~20 min for this activity

- Use this time to encourage further discussion and to address any further questions.

Appendices

Appendix I - Teaching Resources for Faculty

Key and Easy Web Sources of Teaching Information **[open access, no charge for these]**

1. ***Center for Innovation in Teaching & Learning*** – University of Illinois
https://citl.illinois.edu/
2. ***Faculty Focus: Higher Ed Teaching Strategies*** from Magna Publications
https://www.facultyfocus.com/
3. ***Tomorrow's Professor***, a short article or excerpt from an article arrives by email weekly.
SUBSCRIBE by going to: http://cgi.stanford.edu/~dept-ctl/tomprof/postings.php

Suggested Book List for College Instructors

Ambrose, S.A., Bridges, M.W., DiPietro, M., Lovett, M.C., & Norman, M.K. (2010). *How learning works: Seven research-based principles for smart teaching*. San Francisco: J. Wiley & Sons

Anderson, L. W., Krathwohl, D. R., et al. (2001). *A Taxonomy for Learning, Teaching and Assessing. A revision of Bloom's Taxonomy of Educational Objectives. New York:* Longman.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers.* San Francisco: Jossey-Bass.

Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University Press.

Barkley, E. F. (2010). *Student engagement techniques: A handbook for college faculty.* San Francisco: Jossey-Bass.

Barkley, E. F., Cross, K. P., & Major, C. H. (2004*). Collaborative learning techniques: A handbook for college faculty.* San Francisco: Jossey-Bass.

Bean, J. C. (1996). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom.* San Francisco: Jossey-Bass.

Brookfield, S. D., & Preskill, S. (2005). *Discussion as a way of teaching: Tools and techniques for democratic classrooms.* San Francisco: Jossey-Bass.

Brown, S., & Race, P. (2002). *Lecturing: A practical guide*. London: Kogan Page.

Duch, B. J., et al. (Eds.). (2001). *The power of problem-based learning*. Sterling, VA: Stylus.

Filene, P. (2005). *The joy of teaching: A practical guide for new college instructors.* Chapel Hill: University of North Carolina Press.

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses.* San Francisco: Jossey-Bass.

Finkel, D. L. (2000). *Teaching with your mouth shut.* Portsmouth, NH: Boynton/Cook.

Hanstedt, P. (2018). *Creating wicked students: Designing courses for a complex world.* Sterling, VA: Stylus

Kolb, D.A. 1984. *Experiential Learning*: Experience as the source of learning and development. Prentice Hall, Eaglewood Cliffs, NJ.

Lang, J. M. (2016). *Small teaching: Everyday lessons from the science of learning.* San Francisco: Jossey-Bass

Mayer, R.E. (2001). *Multi-media learning.* Cambridge: Cambridge University Press.

McKeachie, W. J., & Svinicki, M. (2014). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers (14th ed.).* Boston: Houghton Mifflin.

McGuire, S.Y. (2015). *Teaching students how to learn: Strategies you can incorporate into any course to improve student motivation, study skills, and motivation.* Sterling, VA: Stylus.

Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors (4th ed.).* San Francisco: Jossey-Bass.

Nilson, L. B. & Goodson, L. A. (2018). *Online teaching at its best: Merging instructional design with teaching and learning Research* (1st ed.). San Francisco: Jossey-Bass.

Svinicki, M. D. & McKeachie, W. J. (2014). *McKeachie's Teaching tips: Strategies, research, and theory for college and university teachers* (14th ed). Belmont, CA: Wadsworth

Svinicki, M. D. (2004). *Learning and motivation in the postsecondary classroom.* Bolton, MA: Ankar.

Weimer, M. (2010). *Inspired college teaching: A career-long resource for professional growth.* San Francisco: Jossey-Bass.

Wiggins, G. & McTighe, J. (2005) *Understanding by Design*. 2nd edition, Pearson Education, Inc., New Jersey

Also see: https://epdf.pub/understanding-by-design-2nd-edition.html

Zull, J. E. (2002) *The Art of Changing the Brain*. Stylus Publishing, LLC, Sterling, Virginia

Other Resources:

A summary of Kolb's Cycle: http://www.learningandteaching.info/learning/experience.htm

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

The New Bloom's Taxonomy overview: https://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy/

CATs - A set of CATs can be found online at: https://docs.google.com/document/d/1QMZC9igdgPggg1SC-NbOuAB05WnG3ujAtJ1zNEHssx4/edit

Some CATs specifically designed for large group instruction can be found at: https://cei.umn.edu/sites/cei.umn.edu/files/active_learning_-_larger_classes.pdf

A useful website that talks about the syllabus is from the Stanford Teaching Commons: https://teachingcommons.stanford.edu/resources/course-preparation-resources/creating-syllabus

Microteaching: https://ctl.columbia.edu/support/microteaching/

Appendix II – Microteaching Activity

The microteaching activity is meant to provide teachers with the opportunity to safely practice their teaching skills. Teachers are asked to develop a simple, single-concept lesson on any subject and deliver the lesson in a short time (usually several minutes) to their peer teachers. Microteaching helps teachers improve their content and teaching methods. They also can practice teaching skills such as questioning, using examples and artifacts in their lessons, techniques in reinforcement of learning, and effective introduction and closing of lessons. Fellow participants provide immediate, constructive feedback and encouragement in an anonymous manner, thereby providing the opportunity to make improvements as an outcome of the training session.

Below are the instructions to facilitators of the microteaching activity, instructions to be given to the microteaching participants when they are given the task of developing their topic, and a sample feedback form to be used by the participants during the microteaching activity.

Facilitator Instructions

Below are instructions for the facilitators of the microteaching activity.

Participants are to:
Prepare and present a short instruction, 8 minutes max.
They should be cut off at 8 minutes
The lesson should be aimed at a freshmen level course
They can use flipchart; no technology
They can ask one of the others to video their presentation on the instructor's own phone

Provide instructions to the participants a above (8 minutes max, flipchart only, etc)
Brief the participants on the nature of providing constructive feedback on:

- Presentation/Delivery: appropriate pace; clear, audible voice; eye contact; readable handwriting
- Organization of Content: states purpose, objectives; logical sequence; clear explanations; transitions; summary
- Engages Students: builds rapport; enthusiastic; interesting examples; active learning; asks questions

Providing Feedback:
Encourage the participants that this is an opportunity to gain experience along with some feedback from their peers. Everyone is in the same situation here. No matter how they feel about their performance, they will receive valuable insights and hear about strengths of which they may be unaware.

Encourage them to be themselves when listening to another participant. delivering their instruction. Just be a learner. Do not role-play the part of being an undergraduate.

They can jot brief notes on the back of the feedback form during the sample to help you provide specific feedback afterwards.

They should stay engaged in learning as much as possible, even as they note observations about instructional technique.

Remember to note what helps them learn, as well as what hinders them from learning.

From the feedback form:
What did the instructor do well in this lesson?
What would make this lesson more effective?
Other comments or suggestions:

Some examples of wording feedback:

Begin observations with "I" rather than "You".
Ex: *I had a hard time reading the text on your slides while you were talking, rather than You don't provide enough time to read through text on your slides or You shouldn't use so much text on your slides.*

Similarly, avoid sweeping characterizations, and keep focused on your experience.
Ex: *I was encouraged to respond to your question when you smiled at me, rather than You seem like a really approachable teacher.*

Resist the temptation to problem-solve. There is no time in this session for this type of feedback. They can do this after the session.

After each presenter:
Invite he next presenter up to start writing on the flipchart, if appropriate.
Pick up the feedback sheets – do not pass them out until the end of the session.

While picking up the feedback sheets, try to make a couple of positive comments about the previous speaker or other helpful observations.

We want to try to complete the microteaching session within **2 hours maximum**.

Below are the instructions to be shared with the participants at least one day prior to the giving their microteaching presentation. Participants must read these instructions before developing and giving their microteaching presentation.

Microteaching

Microteaching provides an opportunity for you to rehearse your teaching practice and get direct feedback and support from your peer teachers. Microteaching sessions are conducted among several of your peers and a facilitator. Participants take turns delivering short samples of instruction and offering each other structured feedback. This feedback focuses on organization, clarity, engagement of learners, and any other specific aspect of teaching on which the instructor would like feedback.

The process

Each participant prepares a short sample of instruction (**no longer than eight minutes**). Each participant also provides feedback to other peers in the microteaching session. Ability to both give and receive constructive feedback is essential for success of a microteaching session.

Instruction

Preparing your sample instruction

Your sample instruction should be appropriate for a freshman (first year) student. You will only have 8 minutes, so you will need to be careful of the amount of content and the way you are teaching. You will not be allowed to use technology other than a chalkboard of flip chart. Your job is to engage the other participants and help them really understand the point(s) you are making. They want to learn from you.

You may ask one of the other participants to video your session on your own cell phone, is available.

Your peers will be making observations about your sample instruction's delivery, organization, and student engagement. Specifically:

- Presentation/Delivery: appropriate pace; clear, audible voice; eye contact; readable handwriting
- Organization of Content: states purpose, objectives; logical sequence; clear explanations; transitions; summary
- Engages Students: builds rapport; enthusiastic; interesting examples; active learning; asks questions

Receiving feedback

It is impossible to fail during a microteaching session! All of your peers in the session are in the same situation as you for this exercise. No matter how you feel about your performance, you will receive valuable insight and hear about strengths of which you may be unaware.

You will receive a lot of feedback, and some of it may be contradictory. Don't worry about responding to every point. Instead, get as much of a sense as you can of people's experiences learning from you.

Feedback

Learning and observing during sample instruction

When you are listening to another participant delivering their instruction, just be yourself as a learner. Do not role-play the part of being an undergraduate.

Jot brief notes on the back of the feedback form during the sample to help you provide specific feedback afterwards.

Stay engaged in learning as much as possible, even as you note observations about instructional technique.

Remember to note what helps you learn, as well as what hinders you from learning. We can be very self-critical and blind to aspects of our teaching that should actually be celebrated and further developed.

From the feedback form:
What did the instructor do well in this lesson?
What would make this lesson more effective?
Other comments or suggestions:

Providing feedback after sample instruction

When writing out you feedback, focus on your subjective experience as a learner.

Begin observations with "I" rather than "You".
Ex: *I had a hard time reading the text on your slides while you were talking, rather than You don't provide enough time to read through text on your slides or You shouldn't use so much text on your slides.*

Similarly, avoid sweeping characterizations, and keep focused on your experience.
Ex: *I was encouraged to respond to your question when you smiled at me, rather than You seem like a really approachable teacher.*

Resist the temptation to problem-solve. Microteaching sessions raise issues that take reflection and practice to really address. Do not offer solutions or advice for improvement unless the instructor specifically asks you to. Reflection takes time.

After the microteaching session

The session facilitator will provide you with the feedback forms at the end of the microteaching session. Be sure to read the forms carefully right away, and take what is written as constructive feedback, not criticism. Practice followed up by immediate and structured feedback is a proven driver of skill development.

Adapted from: Columbia University, Center for Teaching & learning.
https://ctl.columbia.edu/support/microteaching/

Below is the feedback form provided to the participants. Each participant should receive enough copies of this form to provide a feedback assessment of every other member of their presentation group.

Microteaching Feedback Form

Instructor's name _____

Please keep in mind: **Presentation/Delivery** Appropriate pace Clear, audible voice Eye contact Readable handwriting **Organization of Content** States purpose, objectives Logical sequence Clear explanations Transitions Summary **Engages Students** Builds rapport Enthusiastic Interesting examples Active learning Asks questions	a. What did the instructor do well in this lesson? b. What would make this lesson more effective? c. Other comments or suggestions:

Appendix III - Other Activities

Seven-Fingered Hand Activity

Sometimes we are looking for some sort of activity to engage our students or colleagues, as in the classroom or a workshop. We would like an activity that stimulates thoughtful consideration, action, and discussion among the participants. Here is one type of fun activity that can achieve those goals. Call it the **Seven-Fingered Hand Activity**. Below is described how to conduct the activity.

Also see: https://blog.creativethink.com/2007/10/seven-fingered-.html

1. Ask the students or workshop participants to take out a piece of paper, or provide them with a handout that has the following:

2. Provide the following instructions: [this part is to be done individually]
[give them ~7-8 minutes to complete this step]

Consider the following – What if we had seven fingers on each hand?

How would that look? Draw it below:

[leave space to draw the outline of their seven-fingered hand]
[there will be a wide range of configurations of the fingers]

How would that change your life? List at least 3 to 4 ways that having seven fingers on each hand would change our lives:

[leave space for the participants to write out their list]

3. Have the students/participants gather in groups of 3 or 4. Ask them to share their drawings with their group members, as well as why they chose that particular configuration of the seven fingers, and what items they have on their list of changes to their lives. This will generate a lot of discussion, laughter and energy in the room. [give them about 10 minutes to have this discussion]

4. Ask the groups to come up with 3 or 4 ways in which people's lives would be changed if we had seven fingers on each hand. Ask each group to concisely present their list to the rest of the class. Also, have them briefly share the most inventive drawing of the seven-fingered hand and why that person chose that configuration of the fingers. Record their list responses on the board or on a piece of paper. There will often be similar items among the lists of the various groups.

Some items that you may encounter on the lists:
More fingers to wear jewelry, easier to grasp things, easier to open a jar, would need gloves with 7 fingers, change how we play the piano and other musical instruments, change the computer keyboard, change how we text on our phones, etc.

5. Debrief with the class or workshop participants. Talk about your own observations of their activity, their lists and their drawings. Use this opportunity to point out how this activity got them thinking, talking and sharing their ideas. For a workshop activity, this also is an opportunity to have the participants discuss how they felt doing the activity and how they might integrate this or similar activities into their own modules.

6. The activity can be developed further depending on the specific topic of the module or the class. A few examples are shared below. Each example could easily be extrapolated to even more complex challenges and questions. Can you think of other questions where you could use this activity as a springboard to discussion and thinking about a topic related to your own module content?

- How would the students go about redesigning one or more items that they had on the list of changes to our lives? For example, how would gloves, the keyboard, the cell phone, etc. need to be redesigned? Perhaps use several different seven-fingered drawings to add to that challenge.

- Would alternative materials be needed to make the redesigns?

- Would having seven fingers on each hand change the way we play some sports or participate in other types of activities (shaking hands, dancing, etc)?

- Would our numerical system be based on base 14 or base 7 rather than base 10? How would that change counting, our currency, our lives?

- Assume everyone born from now on had seven fingers on each hand. How would that alter the interactions of the younger generation with the older five-fingered generation?

- Assume only some people born from now on had seven fingers on each hand. How would that alter their interactions with the five-fingered people?

- Would we expect if we had seven fingers on each hand that we would also have seven toes on each foot? How would that change our lives?

Draw [your module content]

Students are in our modules because they do not have the knowledge that we will be teaching them. However, our students do have preconceptions about the topic or field in which we will teach them. This activity is aimed at having the students visualize the field or topic and draw out what that looks like to them. The activity may be good for the first or second day of semester, but also may be used at other times when introducing a new topic during the semester.

Below is described how to conduct the activity. NOTE: The example given below is for my semester long module about the Biology of Lactation.

1. Ask the students or workshop participants to take out a piece of paper, or provide them with a handout that has the following:

2. Provide the following instructions: [this part is to be done individually]
[give them ~8-10 minutes to complete this step]

Draw an image that represents LACTATION to you. Use the space below. Do not use words or diagrams. Do not use pictures from the internet or other sources. Use only hand-drawn imagery to express **your vision of lactation**. Your drawing should be appropriate for sharing with others in the class. Your artistic abilities are NOT important – just do the best that you can.

[leave space for their drawing]

3. Have the students/participants gather in groups of 3 or 4. Ask them to share their drawings with their group members, as well as why they chose that particular way of expressing their vision of the topic. This will generate a lot of discussion, laughter and energy in the room. An alternative step here is to ask them to sit in a circle and pass their drawing to the person on their left, and have that person try to explain what their drawing represents. [give them about 10 minutes to have this discussion]

4. Ask the groups to come up a group drawing that represents their collective vision of the topic. This can be a composite of ideas form the individual drawings or based on one drawing that effectively captures their collective vision. This will require a large piece of paper. Ask them to draw large because they will be sharing their drawing with the rest of the class.

5. Take each drawing and walk around the room with it so that the rest of the class can see the drawings. At the same time, ask the group to briefly explain what their drawing represents.

5. Debrief with the class or workshop participants. Talk about your own observations of their activity and their drawings. Typically there will be a lot of consistency in how the students perceive the topic at the beginning of the semester. Take the opportunity to point out similarities and differences among the collective visions (the drawings) of the module topic. Address any apparent misconceptions that show up in the drawings. Use this opportunity to point out how this activity got them thinking, talking and sharing their ideas. For a workshop activity, this also is an opportunity to have the participants discuss how they felt doing the activity and how they might integrate this or similar activities into their own modules.

The Mosaic Presentation

A mosaic is defined as a picture or pattern produced by arranging together small colored pieces of material (stone, tile, glass, etc). In this case the pieces to be assembled are images that represent some component of a topic in which the students are expected to provide a presentation to the class. Rather than writing paper of just standing in front of the class and talking, the students develop a set or series of images/pictures that collectively illustrate what they have learned about the topic. For example, when providing students with a case study assignment, consider asking them to draw images that represent parts of their solution to the case. They may also assemble images from the internet. For example, a case involving a disease in a herd of dairy cattle might be addressed in this way. Students are instructed to not use words or only a word or two in their drawings. They are asked to address the following parts in the presentation of their solution to the case:

1. Briefly describe the case. What is the major complain by the farmer?
2. What are the predisposing or risk factors that make this herd susceptible to the disease?
3. What type of disease is this and why did you come to that conclusion?
4. What is the most likely pathogen causing the disease in this herd?
5. What are your recommendations to fix this problem and what control measures would you implement to be sure this does not happen again?

This can be done by asking the groups of students to make drawings that represent each of the five components of their solution. The drawings can be taped on the wall of the room and each group asked to stand by their drawings and explain their results to the rest of the class. The right image is an example where several groups were addressing the same case.

Alternatively, if technology allows, the students may search for images online that represent how they visualize the components of their solution. These can be printed out or projected to the class as a whole. Each group is then asked to explain their results to the rest of the class.