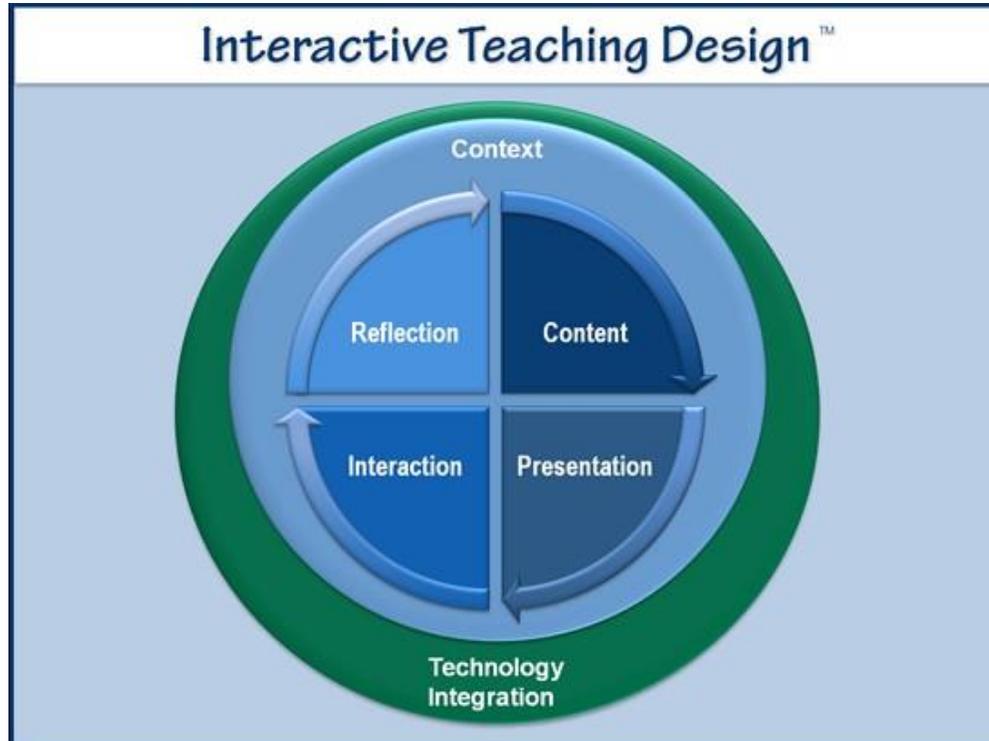


## Conceptual Framework

Teaching is a major responsibility for most faculty members. Some faculty members love this aspect of their positions, while others undertake it grudgingly. In many cases, faculty members are forced to rely on their own experience to inform their approach to teaching. Unless they have adopted teaching as an avocation and explored the subject deeply, he or she may have little knowledge or exposure to teaching and learning best practices. Teaching becomes even more of a challenge as faculty members are increasingly being asked to teach online and to continue to adopt to new technologies.

As technology continues to impact how faculty members teach, it becomes important to continually update our views and perspectives on the teaching and the learning experience. Fundamentally, learning is an interactive experience, and instructors are the designers of that experience. Like other types of interactions, the experience is based on who is engaged, what is being presented, and how it is presented. **Interactive Teaching Design (ITD)** is a conceptual framework that combines key elements from teaching and learning with principles from interaction design. It can be applied universally, but it is especially useful for designing learning experiences facilitated using online environments.



Teaching, like learning, is a process. It is ongoing and cyclical. The key activities of ITD include:

- **Understanding the Context**  
Learning experiences are influenced by environmental, cultural, social, and personal factors. Understanding the impact of these factors can improve your teaching.
- **Planning the Content**  
The content is what is being taught, and effective teaching requires adequate planning.
- **Preparing the Presentation**  
The options for presenting materials continues to grow, and the type of presentation chosen can have a dramatic impact on the quality of the learning experience.
- **Facilitating the Interaction**  
The interaction of the student with the content, the instructor, other students, and the community lies at the heart of the learning experience.
- **Reflecting on the Results**  
Reflection is essential for the student to fully understand what they have they learned, and for the instructor to fully understand how well they have presented the material.
- **Empowering through Technology Integration**  
In today's world, technology integration is an essential ingredient to creating a dynamic, engaging learning experience for students.

## Understanding the Context

Learning is a specialized form of interaction. Like all interactions, the learning experience is influenced by environmental, cultural, social, and personal factors. Understanding how these factors can influence your students as they learn can improve your skills as a teacher and an instructor. Learning does not occur in a vacuum. It happens within the context of the student's past experiences and his or her relationship to others and to the world. Examples of contextual factors are listed below.

### Environmental Factors

- Will teaching and learning take place in a classroom or online?
- How does the course fit within the goals of the university, the department, and the student's program?

### Cultural Factors

- Are the students graduates or undergraduates?
- Do students come from several different ethnic backgrounds?

### Social Factors

- Do the students represent a range of socio-economic classes?
- Is the course structured to support interaction with the student at all levels:
  - Personal reflection
  - With the instructor
  - With other students
  - With the community?



### Personal Factors

- Do any of your students require special accommodations?
- Do all students have the necessary skills and access to appropriate or required technology?

### Accessibility

- How will I need to develop my materials to make them accessible by everyone?

## Planning the Content

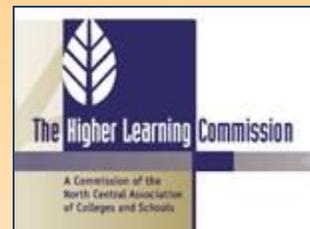
The content is what is being taught. It includes all the ideas, concepts, information, knowledge, processes, and procedures being conveyed and presented to students. When designing a learning experience, it is important to take time to explicitly identify what will be taught as well as search for appropriate source materials.

### Identify What Will Be Taught

#### Outcomes

Learning outcomes or goals are defined at many levels. When designing a course, learning activities should be incorporated that address the desired outcomes from each of these levels as illustrated in the examples below.

- **University**
  - Learning goals to achieve university mission and vision.
  - Institutional requirements for higher education accreditation.
  - General education requirements.
- **Department/School**
  - Learning objectives to achieve department or school goals.
  - Requirements for industry accreditation.
- **Program**
  - Degree requirements.
  - Licensing requirements.
- **Course**
  - Requirements as established based on course's role in program.
  - Instructor's instructional goals and objectives.



#### Big Ideas

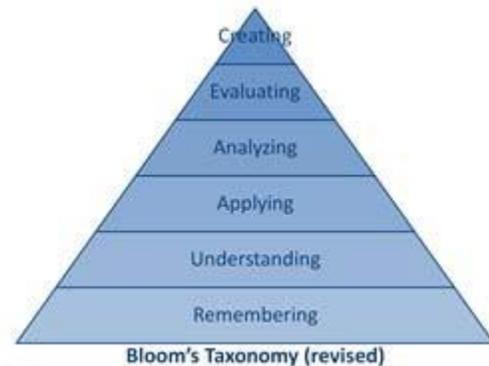
Ten years from now, what do you want your students to remember? These are the big ideas for the course and can be used to frame and focus the content for the course.

## Unit/Lesson Planning

Ideally, content is presented in a logical way to clearly guide students through the ideas, concepts, and inter-relationships. Organizing concepts into units, and learning activities into lessons can help achieve all of the desired learning outcomes.

## Bloom's Taxonomy

Bloom's Taxonomy is a model of learning that illustrates how at the lowest level students simply acquire facts or knowledge, but as learning is deepened, students move up to higher order levels of thinking. Well-designed learning activities guide students through the complete learning acquisition process.



## Identify Sources for the Content

### Traditional

Education is very resistant to change, and some sources for learning have been around for centuries.

- Textbooks
- Lectures
- Library materials

### Online

Technology is expanding the repertoire of materials that are available to students.

- Course Packs and other supplemental materials provided by textbook publishers
- Learning Objects
- eBooks
- Databases and Repositories
- Online journals
- Videos
- Simulations or other interactions
- Web Sites



### **Instructor Developed**

Custom developed materials allow an instructor to illustrate and expand on ideas not covered in other materials.

- Recorded lectures or mini-presentations
- Handouts
- Interactive illustrations

### **Student Generated**

The traditional approach to teaching has been teacher-centered with information flowing from the instructor to a group of passive students. More modern approaches adopt strategies where students are actively involved and are given opportunities to first develop their own instructional materials and to then share their results with others.

## **Determine Appropriate Use**

### **Copyright: TEACH Act and Fair Use Guidelines**

Whenever materials are presented in a class, it is appropriate to determine how they can be used legally under the applicable copyright laws. In the United States, the TEACH Act and Fair Use Guidelines provide guidance on how instructors may use copyrighted materials for educational use within a classroom. The policies are based on the media format and different conventions apply for materials that are presented in a face-to-face classroom versus in an online setting. The laws and their interpretation are always changing, so it is advisable to stay current with your institution's published policy.

## Preparing the Presentation

The presentation defines how the content is delivered to students. The presentation should be optimized for the mode, medium, and platform chosen for delivery.

### Modes of Presentation

#### Static

A static presentation is the same for everyone and does not vary. Examples include:

- Reading a textbook
- Listening to a lecture
- Responding to a survey
- Completing an exam



#### Dynamic

A dynamic presentation provides real-time interaction between the student with the material. Examples include:

- Classroom discussion
- Online discussion forums and blogs
- Viewing or use of online materials

#### Adaptable

Adaptable presentations can be customized to meet the individual needs and wants of the students. Examples include:

- Systems for personalized or individualized instruction
- One-on-one interaction with instructor
- Release of materials based on student performance

## Medium of Presentation

There is a wide range of different mediums from which to choose when preparing content for delivery. Each has its own strengths and weaknesses, and most require learning special skills to use them effectively.

- Written
- Lecture
- Easel, chalk or whiteboard
- Electronic whiteboard
- Slideshow presentation
- Video
- Audio, Podcast
- Graphics, illustrations
- Software application
- Social Media
- Demonstration
- Virtual Classroom



## Platform

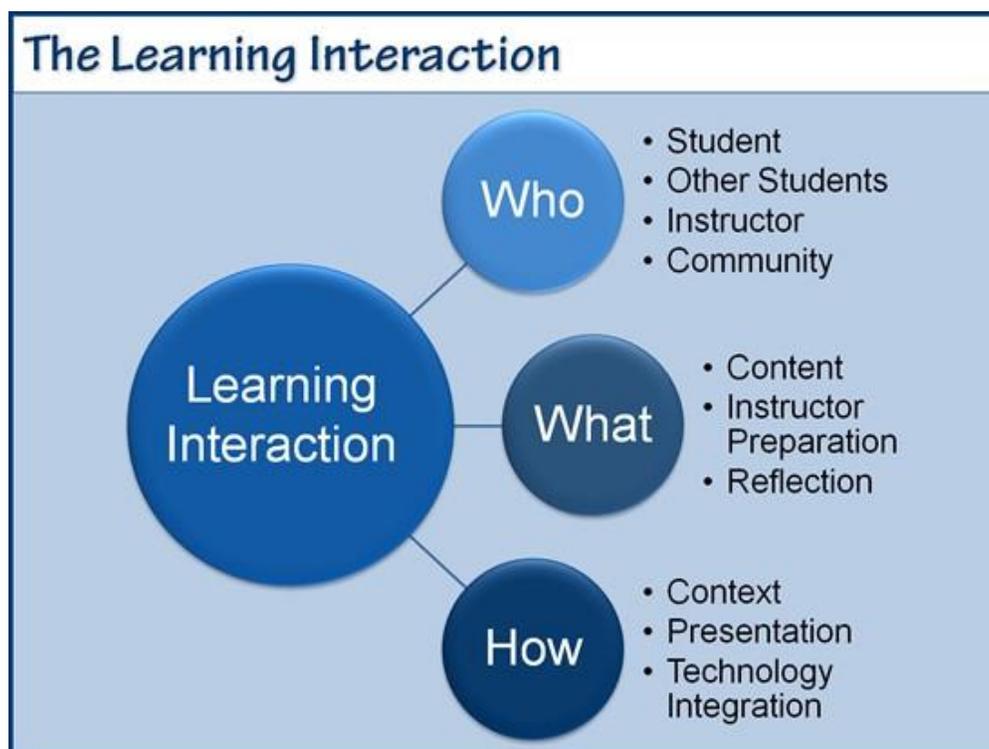
New technology continues to influence how learning content is presented, and the choice of platform targeted is strongly influenced by the technology most commonly used by students.

- Learning Management System
- Internet
- CD-ROM or DVD
- mp3/mp4 Player
- Smart Phone
- Tablet



## Facilitating the Interaction

The **Learning Interaction** is the complex interplay between **who** is engaged, **what** is being presented, and **how** it is presented. Each element of the interaction can be active or have an impact in a range from low to high. Dynamic and engaging learning experiences can be designed by creating learning activities where all elements of the learning interaction are highly active or have a high impact..



### Who

#### Student

The student is always at the center of the learning interaction. However, in some learning activities they are passive learners, while in others they are actively creating knowledge or leading others.



### **Other Students**

Many traditional learning activities assume the student is learning alone or in isolation. Yet, research has shown that engaging students in activities and dialogue with other students can improve student performance.

### **Instructor**

As teaching and learning strategies continue to evolve, the role of the instructor has shifted from the sole source of knowledge to the facilitator of learning experiences. In many learning activities, the instructor may not be directly involved. At the other end of the spectrum, such as with one-on-one tutoring, the instructor is highly engaged.

### **Community**

In the past, learning was confined to the classroom. In today's "Internet-ready" world, there are many more opportunities to engage students in learning activities that positive impact on their communities.

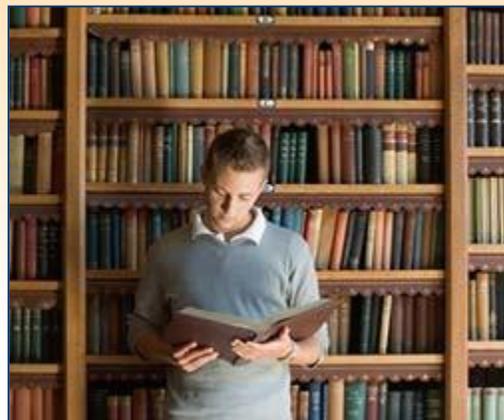
## **What**

### **Content**

As discussed in another section, **content** is what is being taught. The content can take many different forms. From an interactive perspective, students are more highly engaged with the material when they are given learning activities that promote the higher-order thinking skills associated with top level of Bloom's taxonomy: analyzing, evaluating, and creating.

### **Instructor Preparation**

Some learning activities require little or no instructor participation. Learning activities that require significant instructor preparation allow the instructor to customize materials for their specific students, and to emphasize key points based on their unique perspective.



## Reflection

**Reflection** is critical aspect of the learning process. Students reflect on what they have learned, and instructors reflect on how well they have taught. Reflection may be informal, or it may include formal assessments such as quizzes and exams.

## How

### Context

Learning activities designed as "one size fits all" tend to ignore **contextual factors**. When considered, these contextual factors can highly influence how materials are presented.

### Presentation

There are many **presentation options** from which to select when designing a learning activity. Static presentations offer limited opportunities for interaction, while adaptable presentations can be personalized. Ideally, materials are presented using a variety of mediums and can be accessed from different platforms.



### Technology Integration

There are many learning activities that require no **technology integration**. In others, technology is used to simply present the materials. Technology integration is most effective when students use the technology as a tool, or as an application to create their own materials.

## Reflecting on the Results

Teaching is an ongoing process. Taking time to reflect is an opportunity to assess both what has worked as well as determine what could be changed. Reflection is important for both students and instructors and can be implemented throughout the learning cycle and not just at the end of a course.

### Internal Reflection

Teaching and learning is most effective when the student takes full responsibility for the learning and the instructor continues to evaluate his or her performance using a variety of approaches. The most important questions for each to ask are outlined below:

#### ***Students ask:***

- What have I learned?
- What do I still need to learn?
- What do I need, or what must I do, to improve my learning?

#### ***Instructors ask:***

- Have the students learned what I intended?
- What do I still need to teach?
- What do I need, or what must I do, to improve my teaching?

### Written or Recorded Strategies

Nearly all courses include some form of written or recorded assessment or evaluation, and it can take many different forms. Clearly documenting student and instructor performance is important and can be used to:

- Build portfolios for both students and instructors
- Track skill improvement over time
- Support institutional accreditation efforts

***Commonly used strategies:***

- Quizzes
- One-minute papers
- Rubrics
- Exams
- Reports
- Wiki
- Discussion Board
- Audio feedback
- Instructor comments on assignments
- Peer evaluations
- Grades
- Mid-term evaluations
- Course evaluations

**Real-time Strategies**

Immediate, or real-time, feedback is usually more effective than a delayed response. Real-time interactions allow a student to be corrected or redirected by an instructor, his or her peers, or electronically when the student is most receptive and the feedback is most beneficial.

***Commonly used strategies:***

- Face-to-face or Virtual class discussion
- Small group interaction
- Peer interaction
- Chat
- Adaptive release rules for online content and testing
- Feedback with online testing
- Individual or group presentations
- One-on-one sessions with instructor
- Tutoring

## Empowering through Technology Integration

Technology is the foundation upon which dynamic and engaging learning experiences are built and designed for students. It plays an integral role and can be an essential element for all types of learning situations: face-to-face instruction, online only courses, or hybrid approaches. In the context of teaching and learning, technology is used by instructors to enhance their teaching and by students to deepen their learning experiences.



### Basic Applications

- Web Browser
- Working Remotely
- Word Processing
- Slide Presentation
- Spreadsheets
- Database



### Communication Tools

- E-mail
- Announcements
- Secure Messaging
- Blog



### Class Management Tools

- Learning Management System
- Enrollment
- Grades
- Early Warning System



### Presentation Tools

- LCD Projector
- Document Camera
- Electronic Whiteboard
- Learning Management System Content Area
- Lecture Capture
- Video
- Podcast
- iTunes



### Interaction Tools

- Clickers
- Discussion Board
- Chat
- Virtual Classroom
- Social Media



### Collaboration Tools

- Virtual Group Tools
- Shared Online Editing Tools
- Wiki



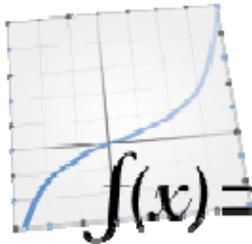
### Multimedia Tools

- PDF Creator
- Image Editing
- Web Site Development
- Audio Recording and Editing
- Video Recording and Editing
- Digital Storytelling
- Media Conversion
- YouTube



### Reflection Tools

- Reflective Blogging
- Rubric Creation
- Online Surveys
- Online Testing
- Test Creation
- Plagiarism Detection
- ePortfolios
- Online Course Evaluations
- Respondus LockDown Browser & Monitor



### Research Tools

- Bibliography Management
- Statistical Analysis



### Specialty Software Tools

- Varies by discipline

## Faculty Support Center

The Faculty Support Center is a one-stop solution for faculty members. This is what you'll find when you visit:

- Best practices for Teaching, Research, and Service
- Tools for guiding faculty to improve their performance
- Mastery modules to build essential skills
- Resource Library of quality references and tools.