2.4.13 Overview of Learning Activities

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The core unit of instructional design is a *learning activity*; it organizes a unit of time, in or out of class, to address a subset of course learning outcomes. Learning activities vary widely, from the delivery of knowledge (lecture) to the development of student learning skills (problem solving). Activity design is most effective when it produces a guide for the instructor that includes pre-planning, a plan for presentation and facilitation, and a plan for assessment of the learning. This module provides a table of more than fifty different activity types. It also provides recommendations for selecting the activity types that are best done inside or outside of class.

Need for Activity Design

Learning activities are those in which actual student learning occurs. In designing learning activities, one must take into account how learners make sense of new information, how they acquire new skills, or how they develop a new way of being (Bransford, Brown, & Cocking, 2000). Learning activities must also be designed so that the learning leads to the achievement of the course and program outcomes. *Activity design* is the process by which learning experiences are planned to systematically accomplish those two goals.

Characteristics of Effective Learning Activities

1. **Align with course outcomes**

   Learning activities are designed to develop learning that supports course outcomes. All learning activities should support course outcomes, and all course outcomes need to be supported by learning activities.

2. **Focus on student learning**

   The purpose of any learning activity is student learning; all components of the activity should focus on that goal (*1.1.3 Efforts to Transform Higher Education*). All lectures and reading should support the learning outcomes identified for the activity. The teacher should not do anything for the students that they can do for themselves (Weimer, 2002).

3. **Have a compelling purpose**

   Activities cannot be successful if the students do not recognize their value and importance. *3.1.6 Obtaining Shared Commitment* and *3.1.5 Getting Student Buy-In* both address processes for communicating the purpose of the activity to students.

4. **Have clear objectives**

   Each activity has the potential to provide a combination of information, solution methodologies, and the opportunity to develop specific learning skills. These objectives need to be specifically identified. Effective

Table 1   Characteristics of Effective Learning Activities

1. Align with course outcomes
2. Focus on student learning
3. Have a compelling purpose
4. Have clear objectives
5. Support the type of learning desired
6. Balance content and skill development
7. Support the needs of diverse learning styles
8. Include assessment of student learning
9. Include assessment of the activity
10. Result from an explicit design methodology

techniques for writing quality learning outcomes and objectives are described in *2.4.5 Learning Outcomes*.

5. **Support the type of learning desired**

   The learning activity must be appropriate for the type of learning called for in the learning objectives. Not all concepts, tools, processes, contexts, ways of being, or rules are well served by the same types of learning activities. *2.3.3 Classification of Learning Skills* describes different types of learning; it is helpful to use in selecting the right type of activity.

6. **Balance content and skill development**

   Learning objectives should specify the proper balance between content and skill development. When a learner is exposed to something for the first time, content will typically receive most of the attention. Later, the learner will want to focus on developing skills by applying this new content.

7. **Support the needs of diverse learning styles**

   Learners have a variety of preferences for how they learn new material (Felder & Silverman, 1988). When

constructing an activity, it is important to consider which types of activities will address the preferences of multiple learning styles. It is also critical to use a variety of learning activities in a single course to be inclusive of all learning styles.

8. **Include assessment of student learning**

If student learning is the goal of an activity, then assessment of student learning should be integrated into the activity itself (Wiggins & McTighe, 2005). An activity cannot be successful if it has not produced the targeted student learning. Learning must therefore be assessed based on predetermined performance criteria.

9. **Include assessment of the activity**

Upon completion of an activity, facilitators and learners should assess the learning activity itself. The results of this assessment should strengthen the future development and application of the activity.

10. **Result from an explicit design methodology**

A strong activity design methodology will support the designer in achieving the characteristics of effective learning activities outlined here. *2.4.14 Designing Process-Oriented Guided-Inquiry Activities* provides an excellent example of such a methodology.

Instructor's Guide

Activity design should include a facilitation plan for instructors that specifies the required resources for the activity and provides prompts for successful facilitation. Activities may require varying amounts of time, space, materials, or technology. Prerequisite knowledge for the learners should also be provided. The modules *3.2.5 Creating a Facilitation Plan* and *3.2.3 Facilitation Methodology* provide resources for creating a sound facilitation plan. Inasmuch as activities are increasingly shared amongst faculty, a facilitation plan is an essential product of the activity development process.

Learning Skill Development

Learning activities should result in the development of transferable learning skills. Several modules describe a variety of learning skills across cognitive, social, affective, and psychomotor domains (*2.3.3 Classification of Learning Skills*, *2.3.4 Cognitive Domain*, *2.3.5 Social Domain*, and *2.3.6 Affective Domain*). In addition to the disciplinary outcomes of the learning activity, the activity can focus on specific learning skills that are important in general education or specific degree programs.

Activity Type Selection

There are many types of activities that can facilitate student learning: Table 2 lists more than fifty. Activities may focus on the work of individual students or teams. Some activities are best used during formal class sessions, while others are best used outside of the classroom. Whatever types of activity are used, it is crucial that they support intended learning outcomes. It is suggested that, throughout the semester, instructors consider using five to ten different types of activities in the design of the course.

Table 2   ***Activity Types and Appropriate Venue***

In Class ONLY	Both INSIDE and OUTSIDE of Class	Outside Class ONLY
competition/quiz show	artistic expression	clinicals
concept mapping	brainstorming	field trips
cooperative learning	case studies	job shadowing
debate	collaborative learning	portfolio building
demonstration	consulting	reading
fishbowl	critique	scavenger hunt
group discussion	drill and practice	self-study
guest speakers	event production	service learning
guided-discovery learning	interviewing	
interactive lecture	journaling	
jigsaw	peer assessment	
just-in-time lecture	planning	
laboratory	presentations/skits	
panel discussion	problem solving	
poster session	projects	
rubric design	research	
simulations	reviewing	
story telling	role playing	
	self-assessment/ reflection	
	self-validation	
	student teaching	
	supplemental instruction/tutoring	
	surveys	
	team building	
	technology	
	videos	
	writing	

Common Activity Types

A brief discussion of widely applicable learning activities follows.

1. **Guided-Discovery Learning**

   This type of activity requires students to construct knowledge in one of five forms: conceptual, process, tool, context, or way of being. Typically, the level of knowledge attainment for students is at the working-knowledge or problem-solving level (*2.2.1 Bloom's Taxonomy—Expanding its Meaning*). In guided-discovery activities the instructor identifies key resources, models, and background information, and provides a set of critical-thinking questions that guide students' thought processes in constructing knowledge at the desired level (*2.4.14 Designing Process-Oriented Guided-Inquiry Activities*).

2. **Interactive Lecture**

   This is an alternative to an uninterrupted lecture that lasts for an extended period of time. The goal is to build in checkpoints during the lecture during which students test their understanding of what has been presented. Techniques for generating interactivity include giving a short quiz at the end of class; providing a set of critical-thinking questions that are intended to be processed during the lecture; taking breaks during which teams of two or three students think, pair, and share responses to interesting questions; assigning homework problems; and asking students to write one-minute papers in which they identify main points or muddiest points in what has been presented (Angelo & Cross, 1993).

3. **Student Teaching**

   Educators know that those who teach learn the most, and that the true test of understanding comes when a person is put in a position of teaching others. The more often students are put in the role of teacher, the more responsibility they will feel for the important learning outcomes in the course. The measure for assessing the performance of student teaching should be based on the ability of learners to perform using the knowledge associated with the activity, not on whether the faculty member likes the quality of the presentation or the level of understanding demonstrated by the student teacher (*2.4.5 Learning Outcomes*).

4. **Problem Solving**

   These activities require students to apply knowledge to new contexts, integrating complex relationships with prior knowledge (*3.3.4 Problem-Based Learning*).

Problems should be relevant, challenging, and motivating; they should integrate knowledge gained in the class, and should require the use of a problem-solving methodology. This type of activity also lends itself well to team competition and games.

5. **Projects**

   Compared to problem solving, projects involve even greater amounts of problem identification and definition, they occur over longer periods of time, and they place more emphasis on communicating the results in a formal manner (*2.2.3 Developing Working Expertise (Level 4 Knowledge)*). Projects that involve team formation and development can promote the development of learning skills in the social and affective domains (*3.4.3 Teamwork Methodology*). An excellent way to celebrate project success is to create a poster session that is open to faculty and students outside of class.

6. **Self Assessment and Peer Assessment**

   If student learning is the goal of an activity, then assessment of student learning should be integrated in some form into almost every learning activity (Wiggins et al., 2005). A variety of assessment tools and methods are found throughout the *Faculty Guidebook* that can be incorporated in free-standing activities or supporting components of other activities (*4.1.4 Assessment Methodology*, *4.1.9 SII Method for Assessment Reporting*, and *3.4.4 Team Reflection*).

7. **Student Presentations**

   This can be a less formal variant on student teaching. Students display some aspect of part of a performance in the class, such as homework solutions, answers to quizzes, findings from reading assignments, peer assessments, and team assessments. A higher-stakes variation of the student presentation is a *fishbowl* situation in which a team of students works through a problem while the rest of the class watches and assesses what they see. An important part of any public performance by students is a class-wide discussion that acknowledges strengths, constructively suggests improvements, and generalizes lessons learned.

8. **Self-Study**

   The nature of this activity is to allow the student to self-facilitate his or her own learning to meet the performance criteria. The facilitator's role is to provide the learner with a complete set of resources, performance criteria, and assessment tools. When using the self-study technique it is important to make sure

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that the scope of the activity is within the boundaries of the learner's performance capabilities, that the activity is self-contained, that there are measures for assessing performance, and that the learner has an opportunity to apply the knowledge in a relevant context.

9. **Reading**

In this type of activity students are responsible for comprehending written material, but typically they do not understand what they are supposed have learned or what they should be able to do as a result of reading the material. Quizzes and short essay questions can be used to motivate students to come to class better prepared when a reading has been assigned (***3.4.7 Using Reading and Lecture Notes Logs to Improve Learning***).

10. **Technology**

Computer-based and internet learning systems, called *interactive learning systems*, offer an asynchronous environment in which students interact with the computer and with classmates as they think through, practice, and synthesize new knowledge. This taps into an emerging part of youth culture that may engage students whose learning styles lead them to be less vocal in the classroom.

11. **Role Playing**

Students are encouraged to consider new perspectives and issues associated with a situation when they engage in role playing. The instructor creates a scenario, assigns appropriate roles, provides information, and asks the groups to enact that scenario being faithful to their roles and using their knowledge of the subject. The module on ***Cooperative Learning (3.3.2)*** has more information about using formal roles in learning activities as well as case studies and jigsaw sessions.

12. **Consulting**

This is a popular alternative to lecture where faculty members lend their expertise to questions and problems posed by students. While this can be a very effective starting point for a just-in-time lecture, faculty are advised to limit the time they spend consulting and redirect this effort to assessing learning. The quality of student thinking can be improved if students are challenged to process information prior to consultation and are limited in the number of questions they can ask.

Concluding Thoughts

The creation of effective high-quality learning activities begins with adherence to an explicit design process.

During and after each activity, student learning must be assessed to verify that the activity produced the depth of understanding that was desired. The activity should also be assessed to determine ways to strengthen it for future application.

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