Course Design Cycle

Fowler, D., Sandoval, C., Layne, J., & Macik, M. (2011). *Course design cycle.* Retrieved from
www.cte.tamu.edu

COURSE DESIGN CYCLE
Personal Instructional Strategy

REFLECTION

1

COURSE LEARNING OUTCOMES:
What will the students know, be able to do, and what will they value when they complete my course?

ASSESSMENT:
What evidence do the students and instructors have of success?

5

ANALYSIS & ACTION:
What is working and not working in my course? What changes will be incorporated in the next offering?

CONTEXT:
(e.g., class size, student background)

2

LEARNING ACTIVITIES:
How will I conduct class to assist students in their learning/success?

REFLECTION

ALIGNMENT & SYLLABUS:
Do the assessments and learning experiences align with learning outcomes? Is the workload for myself and students reasonable and sustainable? Do I communicate course organization?

4

3

REFLECTION

Texas A&M University Center for Teaching Excellence | cte@tamu.edu | cte.tamu.edu

Introduction

When designing a course, the natural inclination is to begin by examining the course material and developing class lectures according to the selected texts. This approach makes content the focus of the course and may leave the knowledge, skills, and values we want students to have upon completion of the course undefined. Whether designing a new course or modifying an existing one, thoughtful planning during the design stage can help instructors develop a successful course.

Expectations and Course Context

Prior to developing course learning outcomes, time must be taken to reflect upon the key expectations that we have of our students. What are three to five crucial concepts that we hope the student will recall, not only at the end of the course, but five years after they graduate? The current or prior knowledge that the student brings to the classroom must also be considered. What is the knowledge foundation that we will build upon with the students? Or, what is the background knowledge students are lacking in some content areas that must be identified so that we can help the students determine if they need further development and direct them to supporting resources? Have we designed a knowledge survey to determine this information the first day of class? At this stage, there are several situational factors to consider before identifying learning outcomes (Fink, 2005). Questions related to the context of the course, the students, the institution, and the environment can help define the course context before determining the learning outcomes for the course. The Course Design Cycle is a useful tool in thinking and working through the development, assessment, teaching and learning strategies, and continuous improvement of course design.

Stage 1: Course Learning Outcomes

The Course Design Cycle starts with the end in mind asking the questions: What do we want students to know, be able to do, and what will they value when they complete my course? Thinking through these questions and developing learning outcomes based on these identified results is the first stage in what Wiggins & McTighe (2005) refer to as Backward Design. All courses are tied to an overall program curriculum and oftentimes there are external certification or accreditation standards that students must be able to achieve by the time they complete the degree program. Before identifying learning outcomes, it is important to know the overall

program level outcomes, as well as the accreditation or certification standards, and develop learning outcomes that are aligned with those expectations. Program level outcomes are available through the department assessment database and/or leader and align with all courses offered in the department.

Accreditation processes exist to determine if educational programs meet defined standards of quality. The national certification or accreditation requirements can be located through the professional organization in the discipline. For example, the Society of American Foresters (2007) has a set of accreditation standards for all institutions who wish to be accredited educational programs in professional forestry. Another example, ABET, accredits programs in applied science, computing, engineering, and engineering technology. Aligning to such processes will ensure that your course is intentionally integrated into the broader educational context in which it resides.

We also need to consider our own expectations for students, prioritize and narrow the content so that it is manageable within the allotted timeframe, and consider the degree to which our students should learn the material. Bloom's revised taxonomy (Krathwol & Anderson, 2001) can be helpful when determining the level of complexity of our educational goals and students' demonstration of achievement. For example, do we want students to be able to recall information, apply concepts, or create new knowledge? Students also have unique needs that warrant consideration such as learner readiness and academic skills, prior knowledge and experience with the topic, and interests and purpose for taking the class. While knowledge about students' characteristics may be incomplete at this stage, we can build early formative assessments into our course design and make adjustments if necessary. Clear learning outcomes

give us and our students a path to follow throughout a course and a vision of where we would like to be at the end.

Stage 2: Assessment

The next stage in the Backward Design model that informs the Course Design Cycle is to determine evidence that will demonstrate what students are learning (Wiggins & McTighe, 2005). This evidence can be gathered through ongoing feedback for student learning improvement (formative assessment) and feedback for a grade (summative assessment). In the context of the Course Design Cycle, assessment can be understood as an ongoing process of ascertaining, understanding, and improving student learning. Assessment can come in many forms. For example, homework assignments, written reports, presentations, exams, portfolios, learning journals, and class discussions can all be used to assess student learning. It is important to keep in mind that the information we gather through our assessment techniques is not only feedback for our students in how well they are performing and how much they are understanding the material, but it is also feedback for instructors in terms of what teaching strategies may or may not be working. If we wait until the end of the class to assess student learning, we miss an important opportunity to identify what students are mastering or struggling with, as well as an opportunity to modify our instruction to better meet student needs. Identifying effective assessment strategies throughout our course can assist us and our students in ongoing evaluation of how successfully learning outcomes are being met.

Stage 3: Learning Activities

Identifying appropriate learning activities is the next step in course design. Knowing what the expected learning outcomes are and what evidence we will require of students to show how well they are achieving the learning outcomes makes instruction planning targeted and

purposeful. Teaching methods, instructional materials and resources, organization, and sequencing of lessons are all considerations that need to be made with the intent of providing students with learning experiences that will help them achieve success with the learning outcomes. Learning activities may include transformational experiences or High-Impact Practices (Kuh, 2008; AAC&U), such as collaborative assignments and projects, undergraduate research, diversity/global learning, service or community-based learning, and capstone projects. When planning learning activities, engagement with the material (active learning) should be one of the fundamental considerations. There are many pedagogical choices when planning instruction and our choices should be guided by our expectations of our students and ourselves as instructors.

Stage 4: Syllabus Alignment

How do we make these components in course development explicit for our students? This is one of the major goals of the syllabus. The syllabus should describe the expected knowledge and skills entering the course; the knowledge, skills and values to be gained in the course; the assignments and assessments to allow demonstration of the learning outcomes; and finally a plan of what students will do to achieve the learning outcomes. The syllabus is a very effective communication tool for us and the students entering our course. The tone for the course is often set by the tone in the syllabus, so keep this in mind as you communicate the course expectations to your students.

Stage 5: Analysis & Action

Once learning outcomes, assessment strategies, and learning activities have been designed and integrated, it is tempting to consider our course design complete. However, continuous inquiry into how our students are performing and what is working or not working in

our course is an important component in the Course Design Cycle. Thus, the process of course design continues with an analysis of the information gathered throughout a course including, for example, formal and informal assessments conducted, reflections on teaching strategies used, and student reactions and responses to course activities and expectations. This analysis can help us identify potential challenges early on and make adjustments to the course if necessary. It can also help us document what is working well and record successful teaching strategies we can use in future courses.

Reflection

As the Course Design Cycle indicates, reflection is integrated throughout the process. The significance of reflection on teaching and learning has been well-documented in the education literature (Boud, Keogh, & Walker, 1985; Boud, & Walker, 1993; Boyd, & Fales, 1983; Brookfield, 1990, 1995; Dewey, 1933; Mezirow & Associates, 1990; Mezirow, 1991; Schön, 1983, 1987). Engaging in a process of continuous reflection and improvement is essential to the practice of good teaching—teaching that is responsive and accountable to student learning. Reflecting on what we and our students are doing and learning throughout and at the completion of a course can help us understand better how learning works, which can help us improve our practice and give us insight into helping students become more independent and self-directed learners. Teaching in higher education can be a daunting task, especially if you are teaching for the first time. We have made an attempt to simplify the critical steps involved in course design as you influence the knowledge, skills, and values of our students.

References

Anderson, L. W. & David R. Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of educational objectives*. New York: Longman

Boud, D., Keogh, R., & Walker, D. (1985). Promoting reflection in learning: A model. In D. Boud, R.Keogh, & D.Walker, *Reflection: Turning experience into learning* (pp. 18–40). London: Kogan Page.

Boud, D., & Walker, D. (1993). Barriers to reflection on experience. In D. Boud, R. Cohen, & D.Walker (Eds.), *Using experience for learning* (pp. 73–86). Bristol, PA: The Society for Research into Higher Education and Open University Press.

Boyd, E., & Fales, A.W. (1983). Reflective learning: Key to learning from experience. *Journal of Humanistic Psychology*, *23,* 99–117.

Brookfield, S.D. (1990). Using critical incidents to explore learners' assumptions. In J. Mezirow & Associates (Eds.), *Fostering critical reflection in adulthood* (pp.177–193). San Francisco: Jossey-Bass.

Brookfield, S.D. (1995). Becoming a critically reflective teacher. San Francisco: Jossey-Bass.

Dewey, J. (1933) *How we think: a restatement of reflective thinking to the educative process (2*nd ed.*).* Boston: D.C. Heath & Company.

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

Kuh, G.D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, D.C.: Association of American Colleges & Universities

Mezirow, J., & Associates. (1990). *Fostering critical reflection in adulthood: A guide to Transformative and emancipatory learning.* San Francisco: Jossey-Bass.

Mezirow, J. (1991). *Transformative dimensions of adult learning.* San Francisco: Jossey-Bass.

Schön, D.A. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schön, D.A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* San Francisco: Jossey-Bass.

Society of American Foresters. (2007). *Accreditation handbook: Standards, procedures, and guidelines for accrediting educational programs in professional forestry*. Bethsheda, MD: Society of American Foresters.

Wiggins, G. & McTighe, J. (2005). *Understanding by design*. (2nd ed.). Upper Saddle River, NJ: Pearson.