Workshop Activities and Resources

Designing and Developing a Learner-Centered Course

Presented to SQU Faculty by Seward Incorporated International

May 15-19, 2010

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Contents

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Agenda

May 15, 8:30 – 2:30

Large Group Meeting at the Intercontinental Hotel

8:30 – 10:15 Introduction; Course goal; Analysis
10:15 – 10:30 Break
10:30 – 12:00 Course objectives
12:00 – 1:00 Lunch
1:00 – 2:30 Course organization; Work plan; End-of-day evaluation

Outcomes

- Course goal
- Course objectives
- Course structure
- Work plan for Sunday, Monday, and Tuesday

May 16-18

Small Group and Individual Meetings at SQU

May 16 Lesson objectives
May 17 Assessment methods
May 18 Review your colleagues' work

Outcomes

- Lesson objectives
- Assessment plan
- Development of Moodle skills, as requested

May 19, 8:30 – 2:30

Large Group Meeting at the Intercontinental Hotel

8:30 – 10:15 Follow-up discussion; Lesson structure
10:15 – 10:30 Break
10:30 – 12:00 Learner-centered activities
12:00 – 1:00 Lunch
1:00 – 2:30 Work plan for remaining tasks; End-of-day evaluation

Outcomes

- Lesson structure
- Activities for each lesson objective
- Work plan for course development

Documents Available for Download

Go to this URL: http://client.sewardinc.com/may_2010_workshop/

Files available

- Workshop_Activities_Resources
- Course_design_template
- ID_Model
- 4012_LessonStructure
- Lesson_writing_template

Writing Your Course Goal

1. Imagine one of your students six years from now, as a teacher in a classroom of her own. Imagine that she is talking with her colleagues about her education at SQU. What do you want your former student to say about your course? Fill in the blanks in the speech balloon.

2. Consider your response to Question 1, and write an overarching goal for what **students** will be able to **do** upon completion of the course. Think broadly. The goal does not have to be measureable.

   Upon completion of the course, the student will be able to:

   _____

   _____

Learner Analysis

Area	Skills Required for Successful Learning	Has little or no skill	Has some skill	Is highly competent
Self-management	Sets one's own learning goals			
	Task management and problem solving 1. Analyzes a task or defines a problem 2. Determines a plan or a solution 3. Implements the plan or solution 4. Assesses results			
Interacting with information	Finds and evaluates quality sources of information			
	Identifies important ideas			
	Organizes ideas			
	Is a metacognitive thinker (monitors one's own understanding of information and adapts personal learning strategies as necessary)			
Interacting with others	Communicates respectfully with instructors			
	Respectfully listens and interacts with peers			
	Actively contributes to group work			
Presenting the outcome of one's learning	Writing papers and reports			
	Giving oral presentations			
	Organizing debates			
	Peer teaching			
Assessment	Working with rubrics			
	Peer assessment			
	Self assessment			
	Writing rubrics			

Course Objectives – First Draft

The student will be able to [verb] [noun phrase].

1.

2.

3.

4.

5.

6.

7.

8.

The Taxonomy Table

From page 28 of the book *Taxonomy for Learning, Teaching, and Assessing*, edited by Lorin W. Anderson and David R. Krathwohl, © 2001 by Addison Wesley Longman, Inc.

THE KNOWLEDGE DIMENSION	THE COGNITIVE PROCESS DIMENSION					
	1. REMEMBER	2. UNDERSTAND	3. APPLY	4. ANALYZE	5. EVALUATE	6. CREATE
A. FACTUAL KNOWLEDGE						
B. CONCEPTUAL KNOWLEDGE						
C. PROCEDURAL KNOWLEDGE						
D. META-COGNITIVE KNOWLEDGE						

The Major Types and Subtypes of the Knowledge Dimension

From page 29 of the book *Taxonomy for Learning, Teaching, and Assessing*, edited by Lorin W. Anderson and David R. Krathwohl, © 2001 by Addison Wesley Longman, Inc.

MAJOR TYPES AND SUBTYPES		EXAMPLES
A.	**FACTUAL KNOWLEDGE**—The basic elements students must know to be acquainted with a discipline or solve problems in it.	
Aa.	Knowledge of terminology	Technical vocabulary, musical symbols
Ab.	Knowledge of specific details and elements	Major natural resources, reliable sources of information
B.	**CONCEPTUAL KNOWLEDGE**—The interrelationships among the basic elements within a larger structure that enable them to function together	
Ba.	Knowledge of classifications and categories	Periods of geological time, forms of business ownership
Bb.	Knowledge of principles and generalizations	Pythagorean theorem, law of supply and demand
Bc.	Knowledge of theories, models, and structures	Theory of evolution, structure of Congress
C.	**PROCEDURAL KNOWLEDGE**—How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods	
Ca.	Knowledge of subject-specific skills and algorithms	Skills used in painting with watercolors, whole-number division algorithm
Cb.	Knowledge of subject-specific techniques and methods	Interviewing techniques, scientific method
Cc.	Knowledge of criteria for determining when to use appropriate procedures	Criteria used to determine when to apply a procedure involving Newton's second law, criteria used to judge the feasibility of using a particular method to estimate business costs
D.	**METACOGNITIVE KNOWLEDGE**—Knowledge of cognition in general as well as awareness and knowledge of one's own cognition	
Da.	Strategic knowledge	Knowledge of outlining as a means of capturing the structure of a unit of subject matter in a textbook, knowledge of the use of heuristics
Db.	Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge	Knowledge of the types of tests particular teachers administer, knowledge of the cognitive demands of different tasks
Dc.	Self-knowledge	Knowledge that critiquing essays is a personal strength, whereas writing essays is a personal weakness; awareness of one's own knowledge level

The Six Categories of the Cognitive Process Dimension and Related Cognitive Processes

Adapted from page 31 of the book *Taxonomy for Learning, Teaching, and Assessing*, edited by Lorin W. Anderson and David R. Krathwohl, © 2001 by Addison Wesley Longman, Inc.

PROCESS CATEGORIES		EXAMPLES OF OBJECTIVES
1.	**REMEMBER**—Retrieve relevant knowledge from long-term memory	
1.1	**RECOGNIZING**	Recognize the dates of important events in U.S. history
1.2	**RECALLING**	Recall the dates of important events in U.S. history
2.	**UNDERSTAND**—Construct meaning from instructional messages, including oral, written, and graphic communication	
2.1	**INTERPRETING**	Paraphrase important speeches and documents
2.2	**EXEMPLIFYING**	Give examples of various artistic painting styles
2.3	**CLASSIFYING**	Classify observed or described cases of mental disorders
2.4	**SUMMARIZING**	Write a short summary of the events portrayed on
2.5	**INFERRING**	In learning a foreign language, infer grammatical principles from examples
2.6	**COMPARING**	Compare historical events to contemporary situations
2.7	**EXPLAINING**	Explain the causes of important eighteenth-century events in France
3.	**APPLY**—Carry out or use a procedure in a given situation	
3.1	**EXECUTING**	Divide one whole number by another whole number, both with multiple digits
3.2	**IMPLEMENTING**	Determine in which situations Newton's second law is appropriate
4.	**ANALYZE**—Break material into its constituent parts and determine how the parts relate to one another and to an overall purpose	
4.1	**DIFFERENTIATING**	Distinguish between relevant and irrelevant numbers in a mathematical word problem
4.2	**ORGANIZING**	Structure evidence in a historical description into evidence for and against a particular historical explanation
4.3	**ATTRIBUTING**	Determine the point of view of the author of an essay in terms of his or her political perspective
5.	**EVALUATE**—Make judgments based on criteria and standards	
5.1	**CHECKING**	Determine whether a scientist's conclusions follow from observed data
5.2	**CRITIQUING**	Judge which of two methods is the best way to solve a given problem
6	**CREATE**—Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure	
6.1	**GENERATING**	Generate hypotheses to account for an observed phenomenon
6.2	**PLANNING**	Plan a research paper on a given historical topic
6.3	**PRODUCING**	Build habitats for certain species for certain purposes

Alternative Names for Cognitive Processes

Adapted from page 67 of the book *Taxonomy for Learning, Teaching, and Assessing*, edited by Lorin W. Anderson and David R. Krathwohl, © 2001 by Addison Wesley Longman, Inc.

Categories and Cognitive Processes		**Alternative names**
1.	**Remember**—Retrieve relevant knowledge from long-term memory	
1.1	**Recognizing**	Identifying
1.2	**Recalling**	Retrieving
2.	**Understand**—Construct meaning from instructional messages, including oral, written, and graphic communication	
2.1	**Interpreting**	Clarifying, paraphrasing, representing, translating
2.2	**Exemplifying**	Illustrating, instantiating
2.3	**Classifying**	Categorizing, subsuming
2.4	**Summarizing**	Abstracting, generalizing
2.5	**Inferring**	Concluding, extrapolating, interpolating, predicting
2.6	**Comparing**	Contrasting, mapping, matching
2.7	**Explaining**	Constructing models
3.	**Apply**—Carry out or use a procedure in a given situation	
3.1	**Executing**	Carrying out
3.2	**Implementing**	Using
4.	**Analyze**—Break material into its constituent parts and determine how the parts relate to one another and to an overall purpose	
4.1	**Differentiating**	Discriminating, distinguishing, focusing, selecting
4.2	**Organizing**	Finding coherence, integrating, outlining, parsing, structuring
4.3	**Attributing**	Deconstructing
5.	**Evaluate**—Make judgments based on criteria and standards	
5.1	**Checking**	Coordinating, detecting, monitoring, testing
5.2	**Critiquing**	Judging
6	**Create**—Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure	
6.1	**Generating**	Hypothesizing
6.2	**Planning**	Designing
6.3	**Producing**	Constructing

Course Outline

Lesson	Main Topic/Theme
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Rough Draft of Lesson Objectives

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Lesson ___ Main topic _____

Lesson Objectives	Correlation with Course Obj.

Tasks for May 16-18

May 16 **Lesson objectives**

1. Write the lesson objectives.
   Record them on pages 6-21 of the Course Design Template.
2. Correlate lesson objectives with course objectives.
   Record the correlation on pages 6-21 of the Course Design Template.
3. Classify the lesson objectives on the Taxonomy Table.
   (use photocopy)

May 17 **Assessment methods**

1. Decide how each lesson objective will be assessed.
   For ideas about assessment methods, see page 14 of this document.
   Record your decisions on pages 6-21 of the Course Design Template.
2. Classify the assessment methods on the Taxonomy Table, to be certain that the assessment methods and objectives align.

May 18 **Group discussion**

1. Meet with others in your department to review your work.
2. Revise as necessary.

Assessment Methods and Opportunities

ASSESSMENT METHODS

- Performance assessment*
    - Designing and carrying out experiments and reporting the findings
    - Collaborating with others to accomplish tasks
    - Demonstrating competence in using a piece of equipment or a technique
    - Building physical and virtual models
    - Developing, interpreting, and using maps
    - Making collections
    - Writing term papers, critiques, poems, or short stories
    - Delivering speeches or oral presentations
    - Participating in oral examinations
    - Teaching others
    - Planning an event
    - Designing a product
    - Solving problems
    - Resolving cases
- Teacher observation
- Conferencing
- Self-assessment
- Peer assessment
- Portfolio assessment
- In-class, take-home, and online tests
    - Essay
    - Short answer
    - T/F, multiple choice, matching

*Performance assessment examples are adapted from page 127 of *Helping Students Learn in a Learner-Centered Environment* by Terry Doyle. © 2008 by Stylus Publishing, LLC.

RUBRICS

Rubrics are a set of criteria defining performance at various levels.

For help writing rubrics, go to http://rubistar.4teachers.org/

TIP FOR WRITING TEST ITEMS

Most often, multiple choice test items address cognition only at the Remember and Understand levels. To address higher cognitive processes, you might:

- Create a short situation/story that the learner reads before answering the question.
- Present a case study that the learner reads before answering a set of questions.

Notes about Lesson Structure

Notes about Activities

Design/Development Checklist

- ○ **1.** If the course has previously been taught, collect all of the materials.
- ○ **2.** Write a course goal.
- ○ **3**. Decide how the new course will be learner-centered.
- ○ **4.** If you are using an online delivery system (Moodle), learn about its constraints and capabilities. Make a plan for how you will use the system.
- ○ **5.** Conduct a learner analysis. Consider which learning skills the students will already have and which skills they will be developing in your class.
- ○ **6.** Write the course objectives. Be sure to consider the course goal, the characteristics of learner-centered teaching, Moodle's capabilities, and the needs of the learners.
- ○ **7.** Organize your course into lessons/sessions. Decide on a main topic for each day.
- ○ **8.** Write learning objectives/outcomes for each lesson, and correlate them with the course objectives. Classify the lesson objectives in Anderson and Krathwohl's Taxonomy Table.
- ○ **9.** Plan the assessment methods, ensuring that they align with the objectives.
- ○ **10.** Plan the lesson structure.

  TIP: Set up a lesson writing template based on the lesson structure. Working from a template ensures consistency among the lessons, especially if more than one person is doing the writing.

- ○ **12.** Identify the activities that correlate with the objectives and assessment.
- ○ **13.** Write the lesson plans.
- ○ **14.** Develop the lesson materials, such as the syllabus, PDF documents, handouts, tests, and PowerPoint slides.
- ○ **15.** If you are using an online delivery system such as Moodle, produce the course electronically.

Decisions for Development

If you are developing the new course **as a team**, there are some additional decisions to make:

- What process will you use for deciding upon the course goal and outline?
- Who will set up the writing template?
- How will you divide up the responsibility for writing the objectives and the lessons?
- What process will be used for reviewing your colleagues' work?
- Will the group come to consensus for all decisions, or does one person have the final say?
- What process will you use for writing the midterm and final exams?
- Who will put the course on Moodle? Be sure to set up a consistent look and structure for every lesson, so that students can easily find what they are looking for.